

HOW NATURE COMES TO BE THOUGHT: SCHELLING'S PARADOX AND THE PROBLEM OF LOCATION

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As for me, I rather think Nature first produced the things to its own liking and then created human reason.¹

In his *Predication and Genesis*,² Wolfram Högbe reconstructs Schelling's *Ages of the World*³ along the lines of a theory of predication, while asking, with Schelling, how it is that predication or judgment comes about. In one sense, therefore, the work asks, 'how does reasoning arise in nature?' In another, it affirms that "the world lies caught in the nets of reason; but the question is: how did it come to be in these nets?"⁴ A *philosophy* of nature, in that it seeks precisely to embrace nature in reason or affirms that nature cannot – since "nature is incognizable" is a cognition – be considered a priori unsusceptible to all cognitive strategies without begging the question, can neither avoid therefore the problem of the identity of nature in thought with nature before thought. While the first question posits that reasoning is contained in nature and the second, conversely, that nature is contained in reasoning, and since the two contradict one another, one can only be true if the other is false.⁵ With Schelling, however, I will argue first, that both are true and second, that it is because reasoning occurs in nature that nature comes to be contained in reason and that it is the reverse of this order that is importantly false. Otherwise, either reasoning, if it occurred in a world, could not reason about nature or it could only catch nature in its nets if that reasoning were other than the world in which it occurs.

It is precisely because thinking starts in nature from the actuality of which thought is part that a philosophy of nature must oppose the idea that nature is identical with its concept. What identity there might be cannot therefore be consequent on the conceiving, but consists in what we might call the common root of their emergence, or the *containment* of the concept in the nature prior to its being conceived. Ontological identity therefore entails essential difference. Yet the opposition cannot be simple unless a line can be drawn, either from within the concept or from within nature, beyond which lies the one and before which the other. If such a line is drawn in a medium, let us say for example in reason, then while it may consistently be drawn, the consequence is that nature and the concept lose exactly what is specific to each, i.e. any predicates other than being opposed to one another. The philosophy of nature therefore opposes the idea that nature is to be identified with its concept in two ways. Firstly, in the sense that just as no chain of reasoning terminates in Being, nor is

'existence' sufficiently discriminating to be predicated informatively of any one subject, because it is predicable of all possible subjects, so neither is nature the result or consequence of reasoning, nor a discriminative predicate in any judgment. Secondly, a philosophy of nature opposes the identity of nature and its concept not insofar as it seeks a demarcation line between them but insofar as any concept of nature that has nature as its subject must acknowledge its partiality. This is because the judgment that nature is thus and so is itself an expression of the nature in which that judgment arises, and to this extent is consequent upon a nature that leaves the concept *naturally* porous, so to speak, towards its underside, towards what is not it or better, towards what *is not it*. In other words, the difference between nature and concept is not a difference between nature and one or several concepts of nature, but between it and the concept as such regardless of its content. Concepts are consequent upon the nature of which they are, *qua* concepts, late expressions. If this is accepted, then while a philosophy of nature opposes the *idea* that nature is to be identified with its concept, it also affirms the identity of nature and concept without which the concept would not be at all. The identity of nature and the concept lies therefore at the level of the ultimate subject of any proposition whatever, but does not in consequence conclude an identity of nature and the concept from the concept. The subject of a proposition is ultimate, that is, to the extent to which its predicates never supplant that subject's primacy with respect to the judgments made upon it.

It is not that we may therefore affirm that nature is *that which* exceeds the concept or the totality of conceptual possibilities, since nature only is nature to precisely the extent that it is thus 'exceeded' not only by the concept but by any of its consequents, from planets to bacteria. It is rather that inherent in the relation between nature and concept, or, since this 'relation' is too imprecise, in the concept of nature itself, there is an irreversible asymmetry which means, for the concept of nature, that the nature embraced in the concept *is* nature insofar as the concept can embrace nothing else, and is *not* nature insofar as it is *from* it that the concept arises. The philosophy of nature therefore requires a conceiving of nature that extains⁶ more than it contains, and it is in this that its nature lays.

1. From Nature to (Nature and Logic)

The problem of whether reason is in nature or nature in reason arises *because* there is reason and reason has content. But reason arises because there is nature. What is inside and what is outside reason and/or nature is therefore a local problem in the sense that it is consequent upon one thing being consequent upon another. According to Gilles Châtelet, the problem of inside/outside is a "reducibly local tension from which ontology unfolds".⁷ Ontology unfolds from this tension because a judgment concerning being arises in consequence of a

prior partition of being, separating it into the being antecedent to the judgment and the being consequent upon it. A proposition therefore minimally introduces a locality, a position into what, according to the hypothesis, was without one. The being consequent upon the judgment is accordingly not identical to the being antecedent to it, since a logical space has now formed in which the subject of the proposition is a creature of that proposition. The primary division of being effected by the judgment is insuperably its multiplication. What the judgment cannot articulate without self-contradiction therefore is that despite its operation, being remains unsundered, since even this claim augments the partitions it expressly denies, albeit, for the same reason, not of the same subject.

Yet it is clearly true that being does not for its part exclude the judgment made upon it, that (according to a further judgment) being now contains that judgment or is expressed as it. It is precisely the problem therefore of articulating the inside and the outside of the terms of the judgment – what is contained in the subject and in the predicate, on the one hand, and what contains them, on the other – that the judgment itself introduces as a problem of position, and it is in this sense a local problem, albeit subject in principle to non-finite iteration. Because the subject of any judgment, even if it treats of a judgment antecedent to it, entails the production of a new position, it cannot be said that there is one ultimate subject or substrate of judgment that is divided with each judgment upon it.

Nor can we conclude from this that locality is insuperable to any outside on the grounds that it first articulates this and is subject to iterative operations; rather it is the positive emergence of locality that, as we have seen, iteratively distributes an antecedent and a consequent of the logical space articulated in the judgment. Judgment accordingly multiplies positions in localities, such that being is *only* said in many ways, one of which being that, for example, being is univocal. What then happens between being and its expression? If before answering this question we now consider the problem of locality in terms of the philosophy of nature, the implication is clear: what 'nature' remains that could furnish the ultimate subject of all judgments? Yet just because no two judgments may have the same subjects it does not follow that a single judgment may not have as its subject precisely an ultimate subject that underlies all judgments. What it does mean is that such a subject must itself be consequent upon any such ultimate subject to which it refers, and so is not identical with that subject. Just as the problem of locality discussed above highlights the production of position or emergence, along with all the boundary formations this entails, so too the production of such an ultimate subject is consequent upon the emergence of locality where none was. Thus while an environing nature is not itself at risk of elimination by being judged, the concept of such a nature is importantly distinct from the ultimate subject with which it might seek to claim

identity simply because its consequent nature entails, if there is a judgment at all, that it emerges as one precisely by being consequent upon an antecedent in which judgment was not included.

While it may seem as if this successfully eliminates the possibility of access to a nature beyond the concept, such that the only nature conceiving beings can conceive is a conceptual one, we must recall the second part of Högrefe's question, which asks *how* nature comes to be caught *in* reason, not *whether* it is. The question is reiterated in *On the History of Modern Philosophy* (1836-7), with an important addition:

The whole world lies, so to speak, in the nets of the understanding or of reason, but the question is *how* exactly it got into those nets, since there is obviously something other and something *more* than mere reason in the world.⁸

The difficulty here is clearly expressed: it is the *whole* world (WW) that reason captures and there is more than reason in the world (W). But if W contains "more" than WW, then either reason, being part of W, does not for that reason contain WW and the statement simply contradicts itself, or the wholeness of the world is an artefact of the reason that contains it, so that the "whole world" is *less than* the world, an abstraction from it, perhaps. Now Schelling's "how" question is asked in two registers: the first asks what the WW that is in reason is; the second asks by what means the WW that is in reason got there. Taking these questions in order, it is clear that, since the option of taking the whole world in reason and reason to be in the world to form a contradiction is effectively ruled out by the formulation's concision on the one hand and the fact of its exact repetition after a decade and a half on the other, WW must be considered an artefact, and the assumption will be that if it is an artefact, then it is one of reason, i.e. simply a concept.⁹ Yet this presupposes an answer to the question, which appears at first sight to concern the passage from nature to reason, namely, that there is no transition from W to WW, since W is not, and WW is, such an artefact. In other words, neither are we to learn of how it comes to be either that this transition arises or, if it does not, then by what means the entire situation is to be logically reconstructed; nor of how, if this is not the case and the transition does take place, the reason from which WW arises itself arises.

The second register of the question therefore arises by countering the assumption that the *produced* nature of WW entails that it is an artefact of reason. We have already noted the manner in which the emergence of a judgment constitutes the multiplication of the subject of that judgment. Accordingly, that the world is to be qualified as "whole" entails that it is the subject of a judgment: "the world is whole" or "this is the whole world in the concept". But it also indicates that such a "whole" world is so only if its locality is denied so that its antecedent is eliminated, in which case its wholeness would be a consequence of the elimination of its production, which is contradictory. To reinstate this latter therefore demonstrates that WW is by the extantment of

antecedence and consequence, and this reinstatement occurs precisely in the second register of the question. If, that is, $W \square WW$ occurs, it is because the predicate “is whole” is consequent upon what is antecedent to the judgment in the event that the judgment occurs. In other words, it is not that W becomes WW , but rather that WW arises after W , and that this process is precisely the process by which reasoning comes to be in the world: by being *after* it. The world as it is, that is, is not whole except in consequence of a judgment, such that its conceiving is precisely that means by which the concept WW arises, and augments the W in which it does so. In consequence of the judgment that it is, and of this judgment being itself consequent, the world that is more than reason is so precisely in the sense that (a) the world does indeed acquire more than itself insofar as the judgment “the world is whole” is not included in the world so judged and so is not whole without it; and (b) if it is not whole without consequents, this is because the world is not whole but is more than what is judged in the judgment since it is precisely what it is that does the judging, that is judged, and that antecedes judging as such. In other words, because it is by nature that the judgment is consequent upon what it is that the judgment concerns, judgment precisely exhibits the process of nature insofar as nature is creation, or that which is not what it is unless emergence occurs. WW is not derived from the *partition* of nature so much as from its *multiplication*, nature’s augmentation by the dimension of the concept. The truth of reason, so to speak, that the subject of the proposition is not logically identical with, or the same thing as, the referent of that proposition, coincides with the truth of fact that the nature there is has as one of its consequences the making of judgments within it. It is the consequent nature of the consequent that makes the antecedent necessarily insurmountable by it. It is, as Schelling says, “unprethinkable being [*unvordenkliches Seyn*]”:

[O]ne must certainly call Being [...] unprethinkable, antecedent to all thinking. [...] One could also say that what is antecedent to thinking is without a concept, inconceivable. But philosophy makes what is a priori inconceivable a posteriori into something conceivable.¹⁰

Here the *involution* implicit in the thinking of the world is made explicit: conceiving entails the transformation of what is not conceived, which conceiving always entails a consequent extantment, an “unprethinkable”. But so too is the realism of the account. The contradiction of the world thought whole within a world of which thought is part appears as such due to the logical insuperability of the reference to a nature within which both occur, but only in one direction at a time. It is only if thinking about nature always involves more nature than can be thought that nature is in fact being thought. This is why something’s being conceived is not identical to its containment. That something is conceived *does* entail that something is contained in the conceiving; but this does not mean that what is antecedent to the conceiving is conceived or contained in the conceiving. There are two reasons for this. Firstly,

there is more to the thing thought than its being thought, or, there is more than reason in the world. Secondly, the conceiving is a consequent in that world, as we have seen. Accordingly, what it is that is thought extains its being-thought just when its being-thought contains that extainment as extaining precisely its being-thought.¹¹ Neither does containment 'denature' extainment, so to speak, or reduce it to a dimension of the contained; nor does extainment make containment impossible. Transposed back to the question of what it is that is conceived in the conceiving and how it is that this conceived is related to what is antecedent to the conceiving, it is now clear why it is neither false (a) that what is conceived is contained in the conceiving nor (b) that what it is that is conceived in the conceiving is not what is conceived, or why it is that the whole world is caught in the nets of reason and that reason is part of the world. This is because, as Kauffman states, extainers are "entities open to interaction and distinguishing the space that they are not".¹² In other words, the containment of containment must contain extainment if something is to be contained at all, or containment does not self-contain without iteration ($C_1 \square C_2$), and the iteration presupposes the extainment of the container by the contained. A cube, for instance, may be contained within a cube just when the contained cube extains its container, since otherwise, a cube would not be *in* another and there would only be one cube. Similarly, the extainment of extainment extains containment since this is precisely what extainment is. The extainment of the containing cube by the contained does reduce the extained space to the content of the difference of the two cubes, since extainment is operative on both sides of the container. Extainment continues following its interruption by containment and articulates the outward trajectory against which the container's outer surface is turned. So conceived, extainers do not contain but rather extain containers.¹³ In the extainer/container contrastive pair, in other words, there would be no negative and positive space. Rather, all parts of space are actors. The interaction between them, in other words, is importantly not linear, as the one *involves* the other in the production of boundaries, such that complex forms like knots¹⁴ are themselves neighbourhoods formed of iterations of this couple. Moreover, as a logic of form in general, it is indifferent to the domain it spatialises or is, as Châtelet puts it, it is "autospatiality".¹⁵ In other words, this is the localisation process that effects any entity whatever, the only constraint being therefore that its universality ensures that it neither begins nor ends in a form of all forms or in a featureless universe. It is because the All is precisely not local, precisely non-extaining, that, according to Roland Omnès, it is a "basic tenet of science" that it investigates "an isolated part of the world by itself".¹⁶ How then is the question, "What is the nature of nature?" to be answered? How, from the "reducibly local tension from which all ontology unfolds", can there be derived "the possibility of capturing the power enveloping a field"?¹⁷ How, again, can "the whole world" be conceived?

If the whole world does indeed come to lie in the nets of reason, but if it is not of another nature than the reason that arises in the world, it is importantly *not false* that the whole world is indeed contained in reason, as a multiplication or 'potentiation' of the world as that world in which reason arises. Yet the whole world is not only thinkable, but also, since the localisation of this 'whole world' is consequent upon its being a consequent, in the sequences of antecedence and consequence necessitated if there is emergence in nature at all, its being thought is precisely a consequence of the nature so thought. That there is such emergence is locally exemplified in the fact of conceiving. The "whole world" is therefore involved in the sequence of creation over which that world does not wholly extend. That is, the whole world is thinkable on condition that it is thought precisely as a midpoint of itself, as within the world and therefore as entailing extantment.

Yet this account carries with it the risk that thinking nature is wholly extant from the nature being thought. That is to say, that thought as such is overly localised within the world in which it takes place. The resultant "near ontology"¹⁸ restricts thought to what is local to it, rather than situating it in the world. Two examples will make the point clear. The first stems from Novalis' account of nature, and the second, from Schelling's account of the relation between localisation and dimensionalisation. The two examples will coincide in what the latter calls, following Bacon, a "central phenomenon".¹⁹

One of Novalis' fragments asks, "What is the nature of nature?". This question is immediately preceded by another: "Where is the primal germ, the type of the entirety of nature, to be found?"²⁰ From this may be distinguished a reflective or transcendental question of nature's nature from an empirical question of the *Urkeim*, the "primal germ", and the problem of its discovery.²¹ If it is to be discovered, the question stipulates, it must lie *somewhere*. Insofar as it a *germ*, however, it is the nature of nature insofar as generation issues from it. Yet since in nature "everything is a seed-corn"²² that generates, no *primal* germ of the whole may be discovered. Since any candidate form must minimally therefore be four- rather than three-dimensional, the investigation of primal forms cannot be pursued in space alone. Yet precisely because the primal is primal with respect to nature as such, the "metaphysics of nature" deals with "nature before it becomes nature".²³ From this, Novalis formulates a rule of nature's primacy as much as for primals in nature: "Nature goes from *a priori ad posterius* – *at least for us*."²⁴ This transcendental addendum to the characterisation of the nature of nature introduces a curvature around the concept, reducing its neighbourhood not only to *what* the concept is near to, but isolating it against what it is not. Yet it does not stipulate *only* but rather *at least* for us, that is, it states that what is prior is so *because* it is "more knowable in relation to us".²⁵ This "near ontology" stipulates that as far as our knowing

extends, nature goes from *prius* to *posterius*, from antecedent to consequent or from Nature 1 to Nature 2 ($N_1 \square N_2$). And Novalis has already provided some reasons for this: the search, namely, for the primal germ of nature reveals nature as a plenitude of germs, none of which are primal but all of which generate. If empirical natural science therefore orients its inquiry with respect to nature's primals, then "we look everywhere for the unconditioned [*das Unbedingte*] but only ever find things [*Dinge*]." ²⁶ In the empirical investigation of nature, the things that we find are never indices of autochthony, of spontaneity, but always of an "adaptation, transformation, dissolution of the divine and human into unbound [*unbändige*] forces". ²⁷ It is precisely by way of the sensuous inquiry into first things or *Ursachen*, the "striving for grounding [*Streben nach Ergründung*]", that firsts turn out to sever things from the security of their emergence and pull "the organs of thought" back into the depths. ²⁸ Accordingly, the curvature to which antecedent and consequent are subject in the cognition of nature does not close around phenomena, but smears things back to the unfathomable vortices of their emergence – "at least for us". If "philosophy is grounded in the striving for the thought of the ground" ²⁹ – an *absolute* ground that must be, on Manfred Frank's reading, "impossible" ³⁰ – the ground Novalis introduces before thought, *by means of* the thought of nature, does not remain prior to thought precisely because the ground sought is consequent upon the antecedent-*but-ongoing* self-grounding of philosophy. This situation is precisely insurmountable despite and because of the endless striving for grounds in which, Novalis claims, philosophy consists.

Novalis' near ontology apparently settles two dimensions of extainment around the concept. The first isolates the field of the concept itself, such that no judgment made concerning nature can be made elsewhere than in and for that field. Thought is set within an interiority constituted by its extainment of what is not thought. The judgment, in other words, turns in its own circle and never strays from its neighbourhood. Yet as, according to Châtelet, Schelling knew, "thought is not in every case encapsulated in a brain[;] it could be everywhere... outside". ³¹ We will see the sense of this in what follows. The second, which establishes the first, is the "unfathomable ground" in the approach to which the judgment disintegrates, as do its objects. The attempt to ground concepts in things in response to the question of what is prior to them leads to the smearing of things and concepts alike into indiscrete states. The conceptual descent into the underworld of the concept leads neither to grounds nor to objects, but seeks to collapse the difference $N_1 \square N_2$, or antecedent and consequent *even when* the antecedent of the thought of N_1 is $N_1 \square N_2$. In consequence, the conceptual field – thought itself – can only be "ascendental" and futural: the question "what is the nature of nature?" takes its answer, formally, from the N_2 that is its product. Thus, of the two dimensions of extainment in the concept's neighbourhood, the one marks the ascent to consequence from N_1 and is secured by the other, the

dimension of depth or of antecedence. The difference between $N_1 \square N_2$ issues from the fact that if $N_1 = N_2$, no process is described. The process is moreover precisely transcendental insofar as it is not “descendental”. That is, even if it is concluded that in $N_1 \square N_2$, N_1 is the initial presentation of nature in thought, the thinking of N_1 entails that $N_1 \square N_2$ is reiterated because the thinking of N_1 is only occurrent as $N_1 \square N_2$: otherwise, N_1 cannot be thought. Thus the domain of the concept secured against that of nature by the concept of nature itself, because the apparent two dimensions of extantment turn out to be one: from nature to thought the passage is irreversible such that thought cannot think the nature prior to it. In consequence, the formula describes the operation Aristotle called “*metabasis eis allo genos*”,³² as performed on a nature that *will* turn out never not to have been a thought-nature, but which preserves as its possible future, like Parmenides’ way of opinion, the descent into chaos consequent upon its reflexively disabling reversal. To pursue this line is to secure a philosophy of nature that resituates the latter within the former alone, or to contain the “whole world” in reason precisely insofar as that is the only world there is for conceiving. As Schelling shows, this is the essential transcendental operation:

[...] if the world (under which Kant always understood only material nature, extended in space) is to be enclosed within limits, a positive cause is required, a cause that lies outside it, since it contains no ground of limitation. Now in so far as knowledge of this positive cause is lacking, the proposition that affirms finitude can only be grounded by the refutation of its opposite, and this too (the refutation of non-finitude) cannot occur by reference to a true cause of finitude and must accept the aid of a *metabasis eis allo genos*, a transfer into an entirely alien field, by calling on time.³³ The world cannot be [known to be] unlimited because there is insufficient time to effect a complete synthesis, which is why Kant silently presupposes what is only later expressly stated, namely, that the world consists in our presentation [*Vorstellung*] and can only exist as a whole in a complete synthesis produced by us.³⁴

The Novalis-problem, which we can now see concerns more than simply Novalis’ account of nature, turns around the localisation of thought *within* its own neighbourhood. In other words, there are no judgments that do not have judgments as their objects. The “whole world” so judged is simply therefore the totality of self-consistent judgments – the “space of reasons” or the “totality of facts”, depending on one’s inclination. That thought is not so localised is imperative therefore, if a philosophy of nature that does not reduce the latter to a dimension of the former is to be possible.

A beginning in this direction can be made by considering Schelling’s account, in lecture 19 of his last work, *Presentation of Pure Rational Philosophy*, of Aristotle’s theory of dimensionalisation insofar as this is considered from the point of view of animal motion. Two problems remain importantly identified in Novalis’ philosophy of nature: firstly, that imposed by the *law of succession* that it institutes with regard to thought (if the thought of nature is always $N_1 \square N_2$, then how is N_1 thinkable?), and secondly, the

problem of the location or *topic* of thought with regard to nature's primals. We will concentrate firstly on the second problem.

Having discussed the near-ontological problem of "intelligible matter", which stems from on the one hand the universality of matter for any materialist philosophy of nature and, on the other, from consequences this has for the predictability or identity criteria of matter *itself*,³⁵ Schelling moves on to discuss the *local behaviour* of a material body *par excellence*, i.e., the animal. Schelling maintains from the outset that, as regards inorganic bodies, dimensions are derivative of their situation with respect to organic beings: what is above and below, for instance, is determined on the basis of the relation of what is so described by that being which judges them so, whether expressly or by action. Yet the problem of the ground of dimensionality or, as we have been discussing the problem, the emergence of locality, derives its necessity from the articulation of what Schelling had long since called the "categories of the dynamic process",³⁶ i.e. electricity, magnetism and chemism, that is from *material* processes rather than the situation of their recording or reference to another, cognizing being in which there first arises "the whole idea" (SW XI, 436). There is therefore a tension between the animal and the magnet, since a magnet arises only when opposing poles (north and south, positive and negative) are combined in a single material. Disregarding for the moment the question of the ultimate ground of dimensionality or localisation, Schelling's account of the emergence of dimensionality begins with the demonstration that the dimension of height is the principle of those of length and breadth. An animal located on a plane and whose head is therefore above that plane to a particular degree, is first in a position to determine its length and breadth, and with the latter, to determine right and left. Yet the determinability of these dimensions remains consequent upon a determination of height contingent upon the height actually instanced in the situation. It is not then from the "whole idea" that dimensionality stems, but from the situation from which the "whole idea" may be actualized. It follows that ideation and the dimensionality of relative motion emerge from a body in a particular situation relative to others. Moving from discussing *On the Progression of Animals* to *On the Heavens*, Schelling demonstrates the outward sweep of the problem of the ground of dimensionality, such that its ultimate reference is no longer the body in a situation, but rather the *proton hypokeimenon*, the "primary subject" not insofar as this is a conscious subject able therefore to articulate the dimensions in which she is involved, but insofar as it is that in reference to which dimensionality is articulated. Moreover, each set of dimensions is subject to a certain asymmetry. It is "against nature", Schelling cites Aristotle as claiming, that a bird flies backwards,³⁷ such that dimensions are themselves articulated according to certain relatively invariant forms of motion,³⁸ against which motions are themselves rearticulated.

There are three reasons why Schelling's examination of the ground of dimensionality begins with the animal body. The first is that the dimensions of its motions do not react on pre-given dimensions, but on dimensions issuing from animal motions and the dimensionalizing operations of their bodies (in the bird, forward parts or eyes and sternum, rear parts tail; upper and lower parts, or wings and feet, etc.), which remain constant in their motions, despite changes in direction, or in relation to the dimensions of before and behind, for example, as described in its initial path.³⁹ It is, in other words, not because animals are the only things capable of dimensionalisation, but because the latter emerges only through the *actions of things*, that the animal is the starting point of this analysis. Secondly, the direction of emergence as issuing from the more to the less complex demonstrates that localisation is a dynamic rather than a static process, since the form of a thing remains constant just when extantment is extant in its description, when it is reducibly therefore containment. But in such a case, nothing distinguishes form from ground, to which extent it can contain nothing, since nothing differentiates container from contained. Thirdly, from the animal body and throughout what Schelling calls the "serial transformation of organic beings", which stands "in direct proportion to the separation and actual differentiation of dimensions" (SW XI 436), there descends the dimension of the inorganic and ascends that of thought. The two coincide in the "*proton hypokeimenon*", in what is absolutely *under*,⁴⁰ or an ultimate subject riven only between being the content of thinking when thought thinks what is, on the one hand, and what thinking, insofar as it thinks, does not contain because it is consequent upon it, on the other.

The "ground of dimensionality"⁴¹ can only be thought consequent upon dimensionality, or, in other words, dimensionality is emergent, if it is at all, from what is not dimensional. This does not mean that there *are no dimensions prior to their thought*, but that there are none prior to the operation of dimensions such that only such a thought is capable of thinking the emergence of dimensionality from non-dimensionality as such. If this has not taken place, then dimensionality is either completely and entirely given and never rearticulated by the movements or progression of bodies of whatever nature, or there is no dimensionality at all. Moreover, since thought is that dimension of motion that causes the problem of the ground of dimensionality to be a problem, it is clear that thought is amongst the dimensions of the motions of bodies, or better, is precisely the totality of motions of which bodies are capable, i.e. the articulation of dimensionality itself.

Throughout his career, Schelling returned again and again to the magnet as a "central phenomenon" (SW XI, 445). What it is that makes a central phenomenon may be explained with reference to how Schelling progressively presents it. It assumes its first striking role in Schelling's *Presentation of my System of Philosophy*, where it appears as the diagram relating indifference, or the being

indifferent to all that is, to the poles of its differentiation, or the specific differences in being introduced by things of all kinds. It is presented in the 1801 *System* thus:⁴²

A+ = B A = B-
A = A₀

While Hegel, in his account of Schelling's philosophy in the *Differenzschrift*, makes great play of the coincidence of its poles, Schelling has a quite different understanding of it, namely, that since the poles are opposed, there are no inherent limits in the potentiation of either. In other words, the power of a pole is relative only to its difference from indifference (A=A₀), such that between them no finite magnitude of powers stand. The point is made explicit when Schelling writes that "the empirical magnet", which the diagram represents, "must be regarded as the indifference-point of the universal magnet [*Totalmagnet*]" (SW IV, 156, *Rupture* 171). The powers expressible within the universal magnet are infinite or subject only to their total insofar as the empirical magnet is precisely its indifference point. If the powers are limited only by their difference from indifference and operate in entirely opposed directions, rather than one (A+=B) limiting the other (A=B-), the magnet augments the number of infinities rather than limiting them.⁴³ It is into the context of this total magnet that empirical magnets are "involved". On the one hand, the "total magnet" extends the empirical magnet throughout all nature from which the empirical magnet is contracted in the first place. On the other, the conceiving of the total magnet augments the magnet's function in the direction of multiplying the thought of the powers contained in it. It is this *involution* of the empirical into the universal that makes a phenomenon central for Schelling. Accordingly, when in an 1832 lecture on 'Faraday's most recent discovery', he returns to magnetic phenomena, as central, for reasons best articulated by him:

The moment a body takes on magnetic properties, it becomes, not only across its whole surface but, by a more deeply penetrating force, even throughout its entire interiority and in every point of its extension, a double essence [*ein Doppelwesen*], as it were, in which, without excluding one another, two – how are we to name them? We cannot say "two bodies", but two *spirits* [*Geister*] or, if it seems more comprehensible, two *powers* [*Potenzen*], regardless of their opposition, or indeed precisely because of it, like two simultaneously born and raised twin brothers, sustain one another in such a form as, when in one direction one appears dominant, by a kind of mute compact, the other emerges as predominant in the opposite direction. This is the state into which a solid, electrically conducting body is set when placed within the closed pile; indeed, even this state is transitory and, when the pile is opened, disappears again. Thus the ever-extending galvanic chain has also taken magnetism into itself, and explicates itself as that *central phenomenon* that Bacon⁴⁴ wanted and predicted, and that, as closing all three forms in itself, can no longer be named according to one of them. (SW XI, 445-6)

Again, the passage begins from a body, one to whose extainment-containment relations magnetism shows itself indifferent insofar as it is both a superficial and a penetrating force. In consequence, the body is transposed between the two

powers proper to magnetism, the negative and the positive or the north and the south poles of the magnet, but also between body and spirit. What Schelling has in mind here is the effects of the Voltaic Pile on “ponderable matter”, that is, a body possessing substance and weight, or gravitation: as Humphrey Davy’s “conduction experiments”⁴⁵ had shown, the operation of the Pile or battery transposed ponderable matters – not only alkalis, acids and gases, but earths and even metals – from one pole to another, regardless of obstacles. The Pile thus “spiritualizes” in that everything ponderable, everything somatic or material, is transformed in it into a “play of forces” (SW XI, 441). The contentious term ‘spirit’ designates not simply what is other than body, but arises through the operation of the Pile as the releasing of the operative modes proper to powers themselves from the limited action repertoire a body presents. Spirit designates therefore *active* powers, which at the same time integrates those operations associated with mind into nature’s processes more generally. The point is neither that these processes should therefore be subject to anthropomorphism, nor that physics can be losslessly transformed into poetry, but rather that *thought is amongst the powers involved in a central phenomenon* insofar as the powers articulated by the experiment materialise the antitheses it involves just as the antithesis spiritualises bodies. Schelling’s point here is that thought does not arise in consequence of a thinker, but in consequence of what it is that is thought.⁴⁶ The thought involved therefore pursues precisely that integration of the “entire dynamic process of nature” (SW XI, 443) – that is, electricity, magnetism and chemism – into the galvanic chain that extends beyond that central phenomenon.

The experimental series that Schelling’s lecture narrates and that culminates in the confirmation of the electromagnetic field starts, as will the *Presentation of Pure Rational Philosophy*, with the connective tissue of animals. By applying current to these, Galvani had demonstrated the involvement of electrical phenomena in organic movement, whereafter Volta showed these to be merely incidental within a theory of nature in general. Davy followed this by demonstrating that chemical and metallic bodies followed physical rather than material laws – that is, that their composition is not exhausted by ponderable matter, but belongs rather to the domain of the co-articulation of forces – while Ørsted demonstrated that this larger domain was *electromagnetic*, such that magnetism could be derived from electricity. Faraday finally completes this series by demonstrating the reverse also true, that is, that electrical effects can be derived from magnetic phenomena. Electromagnetism thus opens the way for a unity of the sciences because it demonstrates the universality of its process throughout nature, a universality that impels its conceiving.

Thus the “centrality” of the phenomenon does not describe its locality in a specific domain of nature, nor does it situate it with regard to a given theory, but is central precisely to the extent that it contains bodies, in this instance, in

electromagnetic phenomena, which are in turn contained in the thinking of this series of containings, which containing is again contained in the “universal categories of the process of nature” (SW XI, 444). As we have seen, however, a contained is contained just when it extains its container, while the process itself extains these containments to the extent that it is not reducible to its containings. “The empirical magnet is the indifference point of the total magnet” (SW IV, 156; *Rupture* 171) because magnetism is such when it exceeds what it acts in and forms. Likewise, a phenomenon is centralising when it entails reconceiving nature as involving thought in those processes that exceed it in the direction of particulars, on the one hand, and in that of the extaining processes within and outside them.

The emergent dimensionality of magnetic motions is thus not linear, halting at the mere opposition of its poles, but rather constitutes a “double essence”. This follows Schelling’s account of essence or *Wesen*, in the *Freedom* essay, as “actually self-dividing into its two operative modes”.⁴⁷ One of its operative modes is the “ground of existence” of the essence. As such a ground, it is not *in* but *extains* essence, because “nothing individual has the ground of its existence in itself”.⁴⁸ It is because the ground of finite being lies always outside it that essence is (at least) double-essence, or entails that only in its second operative mode is it essence proper, i.e. merely what is, but which in consequence doubles again into ground and essence. Essence – what is – contains what is and its ground, but ground extains essence in turn, without which nothing would be. Thus an essent emerges because it depends on what is not it. An untidy or “indiscrete” ground issues therefore in and from the functions of essence, or those functions, more simply stated, in which the emergence of something consists. This function follows precisely from the dynamics evidenced in nature, its “identity with spirit”⁴⁹ entailing that the same doubling is found in logic and creation: that a consequent is precisely consequent upon its antecedent, on which it depends but with which it cannot, if it is genuinely consequent, be identical.

That what is self-divides or doubles is precisely evident in the opening and closing of the Voltaic Pile: the properties a body has when placed in the closed battery are distributed between the poles, a distribution which, when the battery is opened again, disappears. If therefore the dynamic process is universal in the manner experimentation suggests, then everything that undergoes this electromagnetic doubling, in which, as we see from the battery in its open state, the phenomenon of ponderability, of material or somatic being, also consists. The problem therefore of the “ground of dimensionality” (SW XI, 435) is resolved by a central phenomenon to the extent that the dimensions a phenomenon articulates centralize that phenomenon *in* a field the dimensions of which extend to the “ultimate subject”. That, in other words, there is a ground *prior* to electromagnetic operations is shown by successive experiments to be

precisely false: grounds are themselves consequent upon the articulations of the field from which they issue. The thinking of this field, in that the phenomenon around which it centres and from which it issues is itself central to the extent that it is in turn centred in the process from which that field issues, is that dimension of the field from which the ground of what exists first arises as other than that field. The thinking of the central phenomenon therefore thinks the process of nature that extends beyond the phenomenon under consideration. This is why the causal histories of objects must necessarily exceed the production of those objects insofar as the further back that history reaches, the less discretely a cause will be responsible for the particular effect.⁵⁰

3. *From Electromagnetism to Field Ontology*

For what I mean by matter is precisely the ultimate underlying subject, common to all the things of Nature, presupposed as their substantial and not accidental constituent. (Aristotle, *Physics* 192a32-4)

Aristotle's account of matter conflates logical and physical grounds or *subjects*, as what "ultimately underlie" not only all natural substances or concrete wholes, but also as what is presupposed in all judgment. As a result, matter is irreducible to the ponderable 'stuff-ness' of things since it is necessarily involved, as the ultimate logical subject, in all judgments. Equally prior to the accidents expressive of natural particulars and presupposed in judgments whose ultimate subject it thereby furnishes, matter is *expressive* mass. As a result, the explication of what is contained in the logical subject extends exactly as far as do the substantial accidents of nature. Neither is reason consequent upon nature nor nature upon reason, since the two inhere in a single subject. Even if it is objected that the logical subject merely presupposes the matter underlying nature's capacity for accidents and, as such, does not constitute an identity, it remains the case that *what* is presupposed in all judgment cannot be other than the matter underlying the things of nature, so that what grounds the judgment and what grounds nature's accidents is the same.

Yet if matter consists in the identity of the logical and natural subject, the relation between substance and accident, like that between subject and predicate, is one of containment, such that Nature is the explication of what is contained in its subject. In this sense, the Aristotelian theory of matter is that the logical subject contains precisely what is explicated in nature's accidents. In asking how the world comes to be caught in the reason the world contains in turn, I follow Schelling in disputing three things in this formulation. Firstly, that the logical subject contains, explicitly or implicitly, everything that nature expresses; secondly, that what underlies nature and what is thought in the judgment are identical, and thirdly, that matter is prior and fundamental. By contrast, I have argued that nature is what it is insofar as it is asymmetrically prior to the thought of nature, not insofar as it is thought. When

therefore nature is thought, it is so consequently upon the nature that is. Due to the asymmetry of the relation, when the consequent character of the thought of nature conceives, by this means, precisely the nature that thought is not insofar as nature is *being* thought, it does so consequently. In other words, the nature that is thought does not issue from the thought of it; rather the thinking of that nature has the character it has precisely insofar as nature is the ground of which its being thought is the consequent.

Yet what is antecedent is not for that reason ground. Grounding is operative only where there are consequents, so that the conclusion that ground is itself consequent upon consequents rather than prior to them seems inescapable. If grounds arise in this way, their arising seems to entail a degree of circularity that undercuts the asymmetry of the relation, rendering ground and consequent codependent. Just as Schelling argues a phenomenon is central when it involves what exceeds it – when, for instance, the Voltaic Pile is demonstrated to localize or centralize the electromagnetic field that hosts it – a consequent is consequent just when it extains its ground, on the one hand, and when it is nevertheless dependent on that from which it arises, on the other. If it is not the case what just because X is antecedent that it is ground, nevertheless any candidate ground is such only when it is the ground of consequents. It is not ground that is consequent upon its consequent therefore, but the *co-dependency* of ground and consequent that is consequent upon it. The circle must therefore be thought as the extainer of the ground upon which that circle is consequent when this extainment is thought *in* the consequent. In other words, ground is antecedent regardless of the quantity of its iterations in thought or in the concept, since these too exist, and as such have the ground of their existence outside themselves.

Nature imposes on thought precisely this regimen if it is nature at all, that is to say, that actuality within which thinking starts as a part of it. The thinking of nature therefore involves precisely the introduction of locality within it *such that*, in this locality, extainment is also thought. No thought of nature is a thought of nature therefore that does not include what is outside the thought itself. Yet the same is true of any phenomenon. A phenomenon is central, Schelling argues, just when it involves what exceeds it, when its empirical character – that is, its particularity – is involved into constituents that, while they belong to that phenomenon, are not reducible to it. A ground is a ground not therefore when it “underlies”, when it is *hypokeimenon* or “ultimate subject”, but precisely when it is extained in the existent, both as antecedent to and as hosting that existent. It is not the case, therefore, that in philosophy, nature is “leveraged” into thought (against what would it be thus leveraged?), but rather that thought recovers its locality with respect the existents it extains and nevertheless conceives, although not without that conceiving extaining in turn. It is therefore because the identity of thought and nature is stipulated by

nature that thought occupies the consequent pole in the articulation of any phenomenon, giving in turn position, locality or *topos* to thought with respect to what is. Thinking this is precisely not to do “near” or “parochial”,⁵¹ but rather *field* ontology.

Conceiving ground as antecedent of consequent and yet not as ultimately underlying is itself consequent upon the beginnings of field-theoretical ontology Schelling describes in his account of the history of electromagnetic experiments. That *central* is precisely not *fundamental* is a lesson learned from the earth: ground, hard crust, is local, and dissolves into magma at the planetary core, and in turn into the magnetic field that maintains the contrary motion of the core with respect to the mantle, on the one hand, and maintains the atmosphere, on the other. The containing field that hosts the earth therefore is its ground precisely insofar as it exceeds it, on the one hand, and into which therefore planetary behaviours extend. Phenomena are central therefore when the behavioural repertoires of existents are augmented by the actions that antecede them, just as thought is centred or located precisely when it extains the grounds it nevertheless thinks.

This is how nature lies caught in reason; not insofar as it is self-contained, but precisely because it is self-extaining. *Field ontology* is iterative, therefore, not because this is a consequence of thinking, but because *there are fields*.

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References

1. Galileo, *Dialogues on the Two Chief World-Systems*, Dialogue II.
2. Wolfram Högbe, *Prädikation und Genesis. Metaphysik als Fundamentalheuristik im Ausgang von Schellings "Die Weltalter"*, Frankfurt: Suhrkamp, 1989.
3. F.W.J. Schelling, *Ages of the World*, hereafter *Ages*, trans. J.M. Wirth, Albany: State University of New York Press, 2000. Schelling's works will be referred to first according to *Schellings sämtliche Werke*, ed. K.F.A. Schelling, Stuttgart and Augsburg: Cotta, 1856-61, XIV vols., and then by translation. The *Ages of the World* appears in SW VIII, 195-344.
4. F.W.J. Schelling, *Initia philosophiae universae. Erlangen Vorlesungen 1820/21*, ed. Horst Fuhrmans, Bonn: Bouvier, 1969, p. 222.
5. This “would indeed be contradictory”, writes Schelling; but he resolves the contradiction not by demonstrating one false but both true: “it is not because there is thinking that there is being, but rather because there is being that there is thinking”, *Grounding of Positive Philosophy*, SW XIII, 161n, tr. Bruce Matthews, Albany: State University of New York Press, 2007, p. 203n. The same line of reasoning, augmented, also appears in SW XI, 587.
6. I draw the term ‘extainment’ from Gilles Châtelet’s discussions of the role of the local division of inside/outside, the *entrelacs*, and the theory of knots in *L'enchantement du virtuel*, Paris: Editions Rue d'Ulm, 2010, hereafter *L'enchantement*, esp. pp. 75-81, where he refers to the work of Louis H. Kauffman, a ‘biologist’ working on the relation between living systems and formalism. His ‘Biologic II’, in eds. Nils Tongring and R.C. Penner, *Woods Hole Mathematics: Perspectives in Mathematics and Physics*, Singapore: World Scientific, 2004, pp. 94-132, describes “extainers [as] entities open to interaction and distinguishing the space that they are not” (95). A concept ‘extains’ just when what it excludes is consequent upon what it contains. Since many things may be extained, conceptual and otherwise, extainment integrates the concept into its environment at the point of the concept’s emergence. In

consequence, the fields of extainment are mutually *indiscrete*, such that overlaps and shared distributions are contained in its concept. It is by extainment therefore that the concept gains its discrete character or, as Kauffman suggests, it is due to the recursion of extainment on itself that containment arises as the extained of the extained. On the discrete and the indiscrete, see Wolfram Hogrebe, *Metaphysik und Mantik*, Frankfurt: Suhrkamp, 1992, ch. IV, esp. pp. 116-7.

7. *L'enchantement*, p. 94.

8. SW X, 143-4, trans. A. Bowie, *On the History of Modern Philosophy*, Cambridge: Cambridge University Press, 1994, p. 147.

9. This is, moreover, the basis of Schelling's criticism of Hegel in his *History of Modern Philosophy*, from where the above citation is taken. See SW X, 126-164; *History*, pp. 134-163.

10. F.W.J Schelling, *Philosophie der Offenbarung 1841/2*, 3rd edition, ed. Manfred Frank, Frankfurt: Suhrkamp, 1993, p. 161. "Unprethinkable" occurs in bold type in the text.

11. "Extainers" arise, according to Louis H Kauffman's 'Biologic II' (hereafter 'Biologic'), in eds. Nils Tongring and R.C. Penner, *Woods Hill Mathematics. Perspectives in Mathematics and Physics*, Singapore: World Scientific, 2004, 94-132 in boundary mathematic, where there are no containers without extainers. The extainment/containment couple is therefore coextensive with the articulation of form, and their development demonstrates Kauffman's allegiance to the programme of investigating the "relationships of formal systems with biology" stemming from D'Arcy Wentworth Thompson's *On Growth and Form*, Cambridge: Cambridge University Press, 1917, itself a development, according to René Thom, in *Morphogenèse et l'imaginaire, Circé 8-9*, Paris: Les Lettres modernes, 1978, 55, of the *Naturphilosophie* of the late eighteenth and early nineteenth centuries. For a survey of recent contributions to this field, see Émile Noël, *Les sciences de la forme aujourd'hui*, Paris: Seuil, 1994.

12. Kauffman, Biologic, p. 95.

13. In Kauffman's formalisation: Let $E = \succ$ and $C = \langle$; then $EE = \succ\langle = \succ C\langle$ and $CC = \langle\rangle = \langle E\rangle$. See Biologic, p. 95.

14. For examples, see *L'enchantement*, pp. 77-79.

15. See *L'enchantement*, p. 78, where Châtelet notes the application of this topological function in quantum field theory.

16. Roland Omnès, *Quantum Philosophy. Understanding and Interpreting Contemporary Science*, trans. Arturo Sangalli, Princeton: Princeton University Press, 1999, p. 229.

17. *L'enchantement*, pp. 87, 161, respectively.

18. Bernard d'Espagnat, *On Physics and Philosophy*, Princeton: Princeton University Press, 2006, p. 29, defines realism as near when its criteria are drawn from clear concepts. A near ontology therefore, consists in the identification of concept and being.

19. SW IX, 'Über Faradays neueste Entdeckung', p. 445.

20. Novalis, *Die Christenheit oder Europa und andere philosophische Schriften*, ed. Rolf Toman, Köln: Könnemann, 1996, p. 440. "Wo ist der Urkeim, der Typus der ganzen Nature zu finden? Die Natur der Natur?"

21. The problem of the primal elements of nature preoccupied naturalists in the Romantic era. According to Goethe, the search therefore for the "primal plant" will conclude with precisely that plant from which all other plants derive. The "primal bone" will do the same for the skeleton. According to Steven Jay Gould, *Ontogeny and Phylogeny*, Cambridge: Harvard University Press, 1977, this becomes the Mekkel-Serres Law that "ontogeny recapitulates phylogeny, while according to Edwin Clarke and L.S. Yacyna, *Nineteenth Century Origins of Neuroscientific Concepts*, Berkeley CA: University of California Press, 1987, it is the precursor of the "genetic problem", the "search for the basal type of nervous organisation" (p. 18). For a discussion of the kinds of recapitulation theses current in the early nineteenth century, see my *Philosophies of Nature after Schelling*, London: Continuum, 2006, ch.4.

22. Novalis, *Werke* (hereafter *Werke*), ed. Gerhard Schulz, München: Beck, 1987, p. 389: "Alles ist Samenkorn".

23. *Werke*, 446. The passage has considerable interest. “Die transzendente Physik ist die erste aber die Niedrigste Wissenschaft – wie die Wissenschaftslehre. Eschenmayer nennt sie Naturmetaphysik. Sie handelt von der Natur, ehe sie Natur wird.”
24. *Werke*, 558: “Die Natur geht auch a priori ad posterius – wenigstens für uns.”
25. Aristotle, *Posterior Analytics*, 72a7: “prior and more knowable in relation to us”. The point is repeated in the *Physics* (184a24-6) where Aristotle distinguishes between abstracta that may only consequently be cognizable and the concrete whole that is “more readily cognizable by the senses”.
26. *Werke*, 323: “Wir **suchen** überall das Unbedingte, und **finden** immer nur Dinge.”
27. Novalis, *The Novices of Sais*, tr. Ralph Mannheim, New York: Archipelago, 2005, hereafter *Sais*; *Werke*, 105.
28. Novalis, *Sais*, 41-3; *Werke*, 105: “The effort to fathom [Streben nach Ergründung] the giant mechanism is in itself a move towards the abyss [ein Zug in die Tiefe], an incipient vertigo [beginnender Schwindel]” which ends with the “destruction of the organs of thought”.
29. Novalis, *Werke*, 312: “Dem philosophieren liegt also ein Streben nach dem Denken eines Grundes zum Grunde. [...] Alles Philosophieren muss also bei einem absoluten Grunde endigen. [...] Wenn dieser Begriff einer unmöglichkeit enthielte – so wäre der Trieb zu philosophieren eine unendliche Tätigkeit.”
30. Frank provides a rich and provocative reading of Novalis’ philosophy in *Auswege aus dem Deutschen Idealismus*, Frankfurt: Suhrkamp, 2007, pp. 30-35.
31. Gilles Châtelet, *Les Enjeux du mobile*, Paris: Seuil, 1993, p. 39.
32. Aristotle, *Posterior Analytics* 75b9, “transfer to another field”.
33. This prefigures Peter Rohs excellent project, in *Feld-Zeit-Ich*, Frankfurt: Klostermann, 1996, pp. 6, 17, which conjoins a “field-theoretical transcendental philosophy” with a “field theory of nature” by means of a theory of time, freedom and the subject which, insofar as physics does not account for these latter, entails its essential incompleteness.
34. SW X, 340, *Exhibition of the Process of Nature*.
35. Schelling summarizes the problem of intelligible matter at the outset of lecture 19, SW XI, 433. It is matter, “because it assumes all determinations without itself being determinable, and intelligible because these determinations are determinations of pure thought.” Nevertheless, abstract space remains both “intelligible, but also material”, so that the determinations of pure thought, while they do not coincide with the determination of matter, are nevertheless themselves material.
36. This nomenclature is explicit, for example, in the 1800 *Universal Deduction of the Dynamic Process*, SW IV, 1-79.
37. SW XI, 445, citing Aristotle, *On the Progression of Animals*, hereafter, *Progression*, 711a5-6, 712b18.
38. “The crab is the only animal that moves not forwards but obliquely” because “its eyes can move themselves obliquely”. Aristotle, *Progression*, 712b16, 20.
39. Schelling, SW XI, 435-6, puts the point simply: “we call ‘right’ what corresponds to our left, ‘before’ what is opposite to what is behind us, ‘behind’ what is turned away from us, without there being such distinctions in the objects themselves; for if we turn around, what is right becomes left, and what was behind becomes in front of us.”
40. SW XI, 442: “This ‘under’ is therefore one with that so-called prime matter that is the *primum subjectum* (*prwton upoceimenon*) that serially grounds and is concealed in everything corporeal, one with what is relatively nothing or that which does not have being [eins mit jenem relativen nichts oder nicht-Seyenden] from which everything becomes, with the contingency from which everything that has become from it acquires the character of the past; it is at any rate difficult to conceive precisely because it can be conceived *only* as the starting point, but is therefore not inconceivable, for something is inconceivable only if it is regarded as being an original, whereas for us it is something conceived, because it is derivative or consequent.”
41. SW XI, 435. The magnet returns in Schelling’s last work, the *Presentation of Pure Rational Philosophy*, XI, 435.

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42. SW IV, 137; trans. Michael Vater and David W. Wood in *The Philosophical Rupture Between Fichte and Schelling*, hereafter *Rupture*, Albany: State University of New York Press, 2012, p. 159.

43. It is in this sense that Carl August Eschenmayer’s *Experiment in the A Priori Derivation of Magnetic Phenomena*, Tübingen: Heerbrandt, 1st edn. 1795, 40, *passim*, provides the prototype of Schelling’s diagram. Following Châtelet’s reconstruction in *Enjeux*, 138, it reads:

1+ □4 □ 1-

□ □

1+ 1₃ 1₂ 1₁ 1₋₁ 1₋₂ 1₋₃ 1-□

1₀

Here, the symbol “□ □ □” indicates (a) the location of the empirical magnet and (b) the derivation of the total magnet from a pre-magnetic field. Eschenmayer’s *Versuch* takes this as the unconditioned form of dynamics in general, before proceeding to deduce the categories of Kant’s philosophy of nature from that unconditioned form. Schelling’s excitement at Eschenmayer’s work is evident in his 1797 *Ideas for a Philosophy of Nature*, SW II, 313-4n, trans. E.E. Harris and P. Heath, Cambridge: Cambridge University Press, 1988, p. 249.

44. Schelling’s reference to Bacon is to the *experimentum crucis*, which is crucial not merely in deciding between (at least two) theories, as Karl Popper puts it in *Conjectures and Refutations*, London: Routledge and Kegan Paul, 1963, p. 112, but insofar as it constitutes an enfolding of the empirical into the theoretical, or of nature into reason.

45. Now called 'electron-transfer' experiments.
46. "Spirit neither has being nor does not have being. It only has being in relationship to what is Being to it. It does not have being in itself." SW VIII, 264; *Ages of the World*, trans. J.M. Wirth, Albany: State University of New York Press, 2000, p. 46.
47. SW VII, 409, "the One essence divides itself in actuality into its two operative modes, in one of which there is *only* the ground of existence, and in the other only essence [*daß Eine Wesen in seinen zwei Wirkungsweisen sich wirklich in zwei Wesen scheidet, daß in dem einen bloß Grund zur Existenz, in dem andern bloß Wesen ist*]". Neither Gutmann's nor Love and Schmidt's translations capture the recursive characterization of *Wesen*, all the more important given the centrality of the latter to the late philosophy's distinction between the 'what' and the 'that' of being.
48. SW IV, 430, *Rupture* 155. The *Inquiries* contains an extended discussion of the "law of the ground" according to which finite being is "necessarily *in* another" (SW VII, 340), so that an individual is "something that has become, only through another" (SW VII, 346).
49. SW VII, 333. This claim, common throughout Schelling's nature and identity philosophy up to and including the *Freedom* essay, becomes progressively more complex, so that in the Faraday lecture, Schelling argues that the actions of the Voltaic Pile demonstrate that ponderable matter is reducible to forces, that is, to what is "ecstatic or spiritualizing in the Pile" (SW XI, 441), i.e. "spirits or powers" (SW XI, 445).
50. Werner Heisenberg, *Physics and Philosophy*, Harmondsworth: Penguin, 1989, pp. 49-50: "We know the forces in the atomic nucleus that are responsible for the emission of the a-particle. But... if we wanted to know why the a-particle was emitted at that particular time we would have to know the microscopic structure of the whole world including ourselves, and that is impossible."
51. David Bell's essay, 'Transcendental arguments and non-naturalistic anti-realism', in Robert Stern, ed. *Transcendental Arguments. Problems and Prospects*, Oxford: Oxford University Press, 1999, p. 192, accounts an ontology "parochial" when it adheres to the following, critical injunction: "The transcendental argument must not invalidly infer objective and/or unrestricted conclusions from purely subjective and/or parochial premises."