

## **Bringing Nature to Light: Schelling's *Naturphilosophie* in the Early System of Identity**

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Light is already a completely ideal activity that deconstructs and reconstructs objects just as the light of idealism always does—and so *Naturphilosophie* provides a *physical explanation of idealism*, which proves that at the boundaries of nature there *must* break forth the intelligence we see break forth in the guise of humanity [*Person des Menschen*].

Schelling, *General Deduction of Dynamic Process*, § 63<sup>1</sup>

In November of 1800 the issue of the reality of nature and its meaning for a transcendental philosophy interrupts, or rather heats up, the exchange of letters between Fichte in Berlin and Schelling in Jena. Fichte has faint praise for the latter's *System of Transcendental Idealism* and marks as problematic the way it sets nature alongside of consciousness as the subject of a genetic deduction. For transcendental philosophy, he insists, nature can only be something *found*, finished, perfect because lawful, but whose lawfulness is not its own, but that of the intelligence which beholds and explains.<sup>2</sup> Schelling responds with a long recital of his philosophical development and poses several alternative ways that philosophy of nature might coincide with *Wissenschaftslehre*, the most radical of which suggests that philosophy of consciousness must be based on natural philosophy, not the reverse. Schelling refers to the final paragraphs of the second part of *General Deduction of the Dynamic Process* as a brief summary of his position.<sup>3</sup> They read as if they were penned for Fichte's eyes, or those of his stand-in, Carl Eschenmayer. Beiser is correct in viewing Schelling's writings on

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<sup>1</sup> Friedrich Wilhelm Joseph Schelling, *Historisch-kritische Ausgabe der Bayerischen Akademie der Wissenschaften* (Stuttgart-Bad Cannstatt: Fromann-Holzboog, 2004), I, 8, 84. Hereafter cited as AA, with appropriate series, volume, and page numbers.

<sup>2</sup> Fichte to Schelling, November 15, 1800, *Correspondence (1800-1802)* in J.G. Fichte/F.W.J. Schelling, *The Philosophical Rupture between Fichte and Schelling: Selected Texts and Correspondence (1800-1802)*, ed. and trans. Michael Vater and David W. Wood (Albany: SUNY Press, 2012), 42. The volume is cited hereafter as PRFS.

<sup>3</sup> Schelling to Fichte, November 19, 1800, PRFS, 45-46.

nature of 1799 and 1800 as an outright realism or naturalism, quite consistent with the Spinozism of the 1801 *Presentation of My System*.<sup>4</sup>

This paper will present a brief overview of three critical texts of the early so-called Identity-Philosophy—the 1800 *Dynamic Process*, the 1801 *Presentation of My System*, and the posthumously published 1804 lectures on *The Entire System of Philosophy and the Philosophy of Nature in Particular*. I concur, however, with Schelling’s later judgment on his work when he deems the whole of his early philosophy *Naturphilosophie* and again refers to light as the phenomenon that links the world studied by the physical sciences with philosophy of spirit.<sup>5</sup> The human is the one being where nature has come to light or where a God different from Spinoza’s *deus sive natura* begins to manifest. All three of these ‘earlier’ works on nature contain passages that could have been lifted, were it not for time’s arrow, from the 1809 *Essay on Freedom*.

One need not rehearse Schelling’s early essays on the philosophy of nature.<sup>6</sup> Suffice it to say that given the state of what we now call the physical sciences—where in physics the materialism and experimentalism of Newton’s followers overtopped the vitalism of Leibniz and Goethe, where few but important chemical elements were identified but largely left explained, and where biology was but a gleam in the eye of poets and philosophers—every essay was a new beginning and one was forced either to begin with Kant’s construction of matter or to start at the other end and look to biological phenomena such as the self-reverting and self-transforming activity which Schelling calls “irritability” or “excitability” to find a general pattern to display the order of nature that intellectual intuition discovers in philosophical construction.<sup>7</sup> Though Schelling

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<sup>4</sup> Frederick Beiser, *German Idealism: the Struggle against Subjectivism—1781-1801* (Cambridge: Harvard University Press, 2002), 557.

<sup>5</sup> See *On the History of Modern Philosophy*, trans. Andrew Bowie (Cambridge: Cambridge University Press, 1994), 119-120. Also Ian Hamilton Grant, *Philosophies of Nature after Schelling* (London, New York: Continuum, 2006), chapters 2 and 3, 26-118.

<sup>6</sup> See the admirable translation of Schelling’s *Ideas for a Philosophy of Nature* (1797) by Harris and Heath. The volume contains supplements from 1803 that the translators regard as “arcane.” Keith Peterson adds a brief but lucid introduction to his translation of the 1799 *First Outline of a System of the Philosophy of Nature*. Frederick Beiser’s eight chapters on Schelling in *German Idealism: the Struggle against Subjectivism—1781-1801* put Schelling’s ideas on nature in a manner accessible to current debates about materialism and neuroscience. Eckart Förster’s two chapters on Schelling provide valuable information on the influence of Baader and Eschenmayer on Schelling’s thinking at the turn of the century. See *The Twenty-Five Years of Philosophy: A Systematic Reconstruction*, trans. Brady Bowman (Cambridge, MA & London: Harvard University Press, 2012), chapter 9 and 10; hereafter cited as *Twenty-Five Years*.

<sup>7</sup> For the former alternative, see Schelling’s 1803 essay *Über die Konstruktion in der Philosophie* from *The Critical Journal*, in *Friedrich Joseph Wilhelm Schelling’s Sämtliche Werke*, ed. K. F. A. Schelling (Stuttgart & Augsburg: Cotta 1856-61), I/5, 126-140 [hereafter cited as SW series/volume, page] and also his 1802 essay “On Philosophical Construction and the Way to Exhibit All Things in the Absolute” in PRFS, 212-225. For the latter, see Schelling’s attempt to begin *Naturphilosophie* with organic systems rather than inorganic matter in the 1799 *First Outline of a System of the Philosophy of Nature*, trans. Keith Peterson (Albany: State University of New York Press, 2004), 53-69, and especially his comments on John Brown’s discovery of excitability, p. 66, n.<sup>#</sup> and pp. 67-69, n.<sup>§</sup>.

gives over his philosophy more and more to Spinoza, both in form and content, in the 1801 essay and the 1804 lectures, the heart of nature remains an archetype intuited in its ektypes or a pattern whose self-reinforced repetition (*Potenzierung*) expands to include all the ‘discoveries’ of the Newtonian “atomists” and “physicists.” One might smile at the naiveté of the philosopher with her few tools and cosmic ambitions, but even today physicists are sometimes heard to mumble strange things about the universe’s fondness for order or nature’s amenability to mathematics.

## I.

The 1800 *General Deduction of the Dynamic Process* appeared in the first two issues of Schelling’s *Zeitschrift für spekulative Physik*, the first half before the publication of the *System of Transcendental Idealism*, with the more ambitious second part following after. The first half has the aim of tightening the links between magnetism, electricity and chemical interaction that earlier versions of natural philosophy had suggested, replacing analogical connection with argument. The three levels of natural operation designate items which are primitive in nature but recursive, and as such can serve as categories of the utmost generality for the study of nature.<sup>8</sup> Schelling initially claims that these categories *correspond* to the three dimensions of space.<sup>9</sup> The second half strengthens the claim, maintaining that primary processes of magnetism, electricity, and chemical interaction *coincide* with the construction of matter, that is, determine matter’s occupation of space.<sup>10</sup> We shall return to this shortly.

Both sections of the *Deduction* stipulate that the endeavor of *Naturphilosophie* is to present a “genetic deduction” of nature’s primary process, the outbreak of difference within identity and its subsequent suppression, or “nature’s infinite striving to return to original identity.”<sup>11</sup> There must be at least two forces that are opposed in matter, as Kant had argued, and they cannot differ merely in direction, but in quality—as positive and negative—and posited in one subject.<sup>12</sup> The forces are never separated, so the deduction exhibits opposition within synthesis or synthesis within opposition,<sup>13</sup> the same structure evident in the *System of Transcendental Idealism* and generally in conformity with Fichte’s *Wissenschaftslehre*.

Schelling claims he is now able to advance beyond the analogical surmise of the *First Outline of a Philosophy of Nature* and establish by argument that magnetism is the primary form of natural operation, that it involves ‘action at a distance’ since both expansive (positive) and retarding (negative) forces are not localized but spread throughout matter, that the magnetic phenomena which are

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<sup>8</sup> AA, I, 8, 297-98.

<sup>9</sup> *Ibid.*, 298.

<sup>10</sup> *Ibid.*, 318.

<sup>11</sup> *Ibid.*, 300.

<sup>12</sup> *Ibid.*, 299-300.

<sup>13</sup> *Ibid.*, 300-302.

observable are only initial and incomplete versions of chemical oxidation, hence that primary magnetism is a property of matter as such and not tied to any specific “magnetic material.”<sup>14</sup> What distinguishes the *Naturphilosophie* of 1800-1804 is a simultaneous drive toward ontological generality and toward the reduction of physical hypotheses, e.g., the notions of “magnetic” or “electrical matter,” or the isolation of the so-called galvanic phenomenon from electricity and chemical interaction. The construction of matter is the sole task of *Naturphilosophie*, and it is an idealistic one, in that matter is a *problem for philosophy to solve*, not the postulation of a self-existent entity.<sup>15</sup>

The bulk of the first half of the *Dynamic Process* essay is devoted to developing the similarities and differences between the array of positive and negative forces in primary magnetism and electricity. In the former, the dimension of length is established, with three points sufficient to establish magnetism: a positive pole, a negative, and a point where the two cancel each other out or attain indifference. In the latter, the positive charge must be conceived as not as continuous but as concentrated in a single point, whereas the negative must be conceived as counteracting this charge from all directions. The schema of magnetism is the line, that of electricity the angle; they manifest both the outbreak and the sublation of difference within identity, or the synthesis of the two forces. Whereas magnetic forces work continuously through the length of a body, electrical forces work on the surfaces of bodies.<sup>16</sup> Magnetic force is communicated by contact between bodies, electrical by “dispersion” or reciprocal attraction.<sup>17</sup>

Schelling opens the second part of this essay with some methodological reflections. The genetic method speculation employs takes the all-at-once or finished character of nature apart and displays its individual moments as a series of stages the subject moves through. Instead of starting out with a conceptual analysis of matter dependent on some definition, e.g., something impenetrable or occupying space and endowed with two opposing forces, one of which repels influence from without and one which posits an outside (or attractive) force to an equal degree—a synthetic deduction (or construction) will show in discrete stages how space is occupied to a determinate degree and will reveal the mechanism that effects the relationship of the two forces.<sup>18</sup> Of course, it is Kant’s deduction of matter in the *Metaphysische Anfangsgründe der Naturwissenschaft* that Schelling means to criticize and supplant. Hitherto, e.g., in the 1797 *Ideas for a Philosophy of Nature*, he had adopted both Kant’s starting point, the deduction of matter, and its analysis, something that occupies space as a result of the equilibrium of opposing expansive and retarding forces, although he noted that Newton himself was hesitant about the ontological standing of the retarding (attractive) force, unwilling to confess either it was an occult quality or to

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<sup>14</sup> Ibid., 304-305.

<sup>15</sup> Ibid., 324-325.

<sup>16</sup> Ibid., 309-312.

<sup>17</sup> Ibid., 317.

<sup>18</sup> Ibid., 318-19.

concede it was a pure postulate lacking an empirical basis.<sup>19</sup> In 1798 Franz von Baader published *On the Pythagorean Square in Nature, or the Four World-Regions* and took Schelling to task for his uncritical acceptance of Kant's analysis. Repulsive and attractive forces themselves were unable to account for the *filling* of space without the addition of a synthetic third item, gravity proper.<sup>20</sup>

Schelling takes over Baader's argument and amplifies it, but not without subjecting Kant's position to a detailed critique. To get space filled by the two available forces, Kant supposes that the expansive one penetrates a body and works outward against another at a point of contact, while a second, retarding one is imagined as working upon the first from all directions. The supposition accurately describes the two electrical forces, but it fails as an explanation of matter, since it presumes the existence of a body, which was the very item to be explained.<sup>21</sup> A second criticism objects to Kant's adoption of empirical data about the expansive force to support the postulation of the opposite attractive force that is supposed to limit it. This can neither provide a determinate degree of limitation for the two forces nor a determinate degree of a body's occupation of space.<sup>22</sup> A third criticism notes that if Kant had avoided begging the question by supposing something already existing, there is no way the postulated forces could remain proportional and not suppress each other or reach a point of nullity.<sup>23</sup>

Schelling gets to his (and Baader's) solution of adding gravity as the third force by demanding that the construction of space move forward and reconcile the apparent linear opposition of the forces in the first dimension to their surface-to-surface opposition in the second dimension. The construction moves from line to square to cube: the third unifies the first two, just as gravity comprehends and unifies repulsive and attractive forces. More exactly, the definitional "impenetrability" of matter results from a determinate degree of repulsive force spread over a spatial something, countered by a proportional degree of attractive force working at a distance or from all points. Schelling concludes that matter is therefore not something that exists in itself, but as a solution to the metaphysical problem of the construction of the spatial dimensions. And the same holds for authentic science: matter is not a reality in itself, but a solution to the mathematical problem of the relation between the two forces.<sup>24</sup>

What has Schelling's construction accomplished? It has achieved nothing more than the genetic explanation of space and its occupation by 'something.' Only with gravity do we have a phenomenon capable of empirical notice, while repulsion remains behind the scene as what fills space and attraction functions as

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<sup>19</sup> See *Ideas for a Philosophy of Nature*, trans. E. Harris and P. Heath (Cambridge: Cambridge University Press, 1988), 143-49, 153-57.

<sup>20</sup> See Eckart Förster, *The Twenty-Five Years of Philosophy*, 241-47.

<sup>21</sup> AA, I, 8, 319-320.

<sup>22</sup> Ibid., 328-331.

<sup>23</sup> Ibid., 332-33.

<sup>24</sup> Ibid., 322-325.

the motive force in gravity.<sup>25</sup> To arrive at a richer phenomenology and provide an account for magnetism, electricity, and chemical process in the narrower sense as operations affecting some parts of nature and capable of empirical measurement, all the first-order processes discussed to this point—which are indeed universal properties of matter—must be placed below the perceptual threshold and second-order correlates introduced for what we perceive.<sup>26</sup> Schelling recalls the categories of the *System of Transcendental Idealism* in naming the first-order dynamic processes “productive nature” and the second-order “reproductive.” Whereas first-order chemical process specified the “gravity” that makes matter fill space, second-order gravity is the light that distinguishes phenomena for perception.<sup>27</sup> And since light is close to thought, a “reproduction of reproduction” is possible in the organic world where the organism serves as the natural basis for intelligence.<sup>28</sup>

We cannot follow this text in further detail, but must look to its final section where Schelling voices his ideas about the relation of relation of *Naturphilosophie* and transcendental idealism—before they have been batted about in the combative back-and-forth of the *Correspondence* with Fichte. He makes at least seven distinct observations, none of which is tightly attached to the particular consideration of matter, space and dynamic processes previously discussed.

(1) Dynamics—the construction of matter—stands related to natural philosophy as transcendental explanation is related to philosophy as a whole. It does the heavy lifting.

(2) *The System of Transcendental Idealism* establishes parallels between dynamic features of inorganic matter and receptivity, sensitivity, and intuition in the ideal order. It thus functions as a *physical proof of idealism*.

(3) *Naturphilosophie* coincides with idealism inasmuch as it establishes the organism as the basis of reason. Idealism is nonetheless correct in maintaining that reason is self-positing.

(4) A person will learn that theoretical realism is identical with idealism when she comes to put her subjectivity aside. This remark is repeated in the Preface and the initial definition of reason in the 1801 *Presentation of My System*; the charge that Fichte’s rendition of transcendental idealism favored subjectivity becomes Schelling’s lifelong (stock-in-trade) criticism of Fichte.

(5) Nature can be viewed as the human species’ “transcendental memory” in something akin to Plato’s theory of *anamnesis*. The remark may prefigure the teachings of the later philosophies of freedom and of revelation that

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<sup>25</sup> Ibid., 330.

<sup>26</sup> Ibid., 335-36.

<sup>27</sup> That gravity and light, along with matter-in-space, serve both as archetypal principals of nature and epitomes of their domains perhaps explains why Schelling will single them out for special treatment in a “General Philosophy of Nature” in the 1804 *Naturphilosophie*. Gravity, light, and intelligence are the ultimate potencies.

<sup>28</sup> Ibid., 337-339.

humans originated in a “ground” of nature now posited as past, but will grow into a spiritual future.

(6) Parallels between qualities in matter and sensations in mind, between reactions and intuition in the two orders, and between animate beings and reason recall the old doctrine of the human being as the center of creation. This view becomes central to the philosophy of freedom in 1809 and the philosophy of revelation of Schelling’s later philosophy, which he began to expound in the 1820’s.

(7) Philosophy can travel two paths—from us humans towards nature, or from nature to us—but the true path is the one that nature has *actually* followed. This last comment is explicitly naturalistic. It is interesting that in 1804 lectures on nature Schelling begins to use the Anglophone word *Evolution* to indicate potentiation or level-jumping development within a given “potency” or in nature as a whole.<sup>29</sup>

## II.

Although Schelling intended his 1801 *Presentation of My System of Philosophy* to be a complete *more geometrico* exposition of the entire system, difficulties with Christian Gabler, the publisher of his *Zeitschrift für spekulative Physik*, forced him to truncate the essay and postpone its projected completion—the organic nature section of the *Naturphilosophie* and the philosophy of spirit. A note where the 1801 exposition breaks off—and the 1804 *Entire System* lectures which conclude with a “Construction of the Ideal World and Its Potencies”—provide a fair clue as to what the missing sections might have looked like,<sup>30</sup> especially since the 1804 lectures focus on Spinoza’s *Ethics* almost as obsessively as the 1801 exposition.<sup>31</sup>

*My System* originated in the challenges Schelling faced from Fichte and Eschenmayer: from the former, whether *Naturphilosophie* was consistent with transcendental idealism or in some sense still part of the movement that traced its roots back to Kant’s *Critiques*, from the latter, whether *Naturphilosophie* could be an independent philosophical science or whether it needed to be grounded in a broader metaphysics such as the *Wissenschaftslehre*. That Schelling adopts Spinoza’s metaphysics as his model, both in form and content, shows him digging in his heels on the naturalism his 1799 and 1800 essays had displayed. That a “metaphysics of identity” is deployed to ground philosophy of nature and unite it with an explanation of the potencies and the individuals of appearance shows that he understood the force of Eschenmayer’s objection that *Naturphilosophie* was a premature science.<sup>32</sup>

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<sup>29</sup> Ibid., 364-66.

<sup>30</sup> See PRFS, 205. See also SW, I/6, 495-576.

<sup>31</sup> For an overview of the 1801 *Presentation*, see Michael Vater, “Schelling’s Philosophy of Identity and Spinoza’s *Ethica more geometrico*,” in *Spinoza and German Idealism*, ed. Eckart Förster and Yitzhak Melamed (Cambridge: Cambridge University Press, 2012), 156-174.

<sup>32</sup> See Vater and Wood, “Introduction to the Texts of F. W. J. Schelling,” PRFS, 135-140.

In the course of the serious disputes that characterize their letters from late in the autumn of 1800 onwards, Schelling sent Fichte issues of his *Zeitschrift für spekulative Physik* that contained the second part of the *Dynamic Process* treatise and the *Presentation of My System*. We have no idea whether Fichte read the former, but he took detailed notes on the later—until he stopped at the boundary between metaphysics and philosophy of nature, § 51: “The first relative totality is matter.”<sup>33</sup> He showed good sense as a reader, in some respects, though he might have gone on a page or two more to the Corollary: “Matter is the *prime existent*.” The existent had already been metaphysically deduced in the theorems on individuation, §§ 32-41, and though the ground/existence paradigm is employed in the *Naturphilosophie*, Schelling gave no indication that the paradigm structures the discussion as a whole. If the reader is not already familiar with the *Naturphilosophie*, that section of the *My System* can seem to be an add-on, or worse, something wholly redundant. Unless one reads quite far into the discussion of nature, the work’s overall structure cannot readily come into view, viz., where absolute identity infected with duplicity and restored to relative identity or totality—the metaphysics of identity, in short—is *ground*, matter the *first existent*, organism the *second existent*, and embodied intelligence (human being) the *third*. Schelling remarks in the 1804 *Entire System* that he had used the Spinozistic mode of exposition to briefly state what he wished to say and *not to say what he did not wish to say*.

On second view, however, there is a fairly tight connection between the four key thematic elements in the system: (1) the metaphysical consideration of the individual; (2) the structural identity of all the potencies; (3) the constructed line that symbolizes  $A = B$  or potentiated identity-in-difference, and (4) the construction of matter as the concurrence of opposite forces in three-dimensional space. Because absolute identity exists in the universe in the same way it exists in the individual,<sup>34</sup> the individual is infinite in itself,<sup>35</sup> or, relative to itself, it is totality or the universe.<sup>36</sup> In the way it *is* or stands in being, as opposed to the way it is connected to and exhibits the universe, the individual entity is a connection of opposed factors, subjective and objective, and symbolized by  $A = B$  in contrast to the pure  $A = A$  of absolute identity. Its form of being is distorted identity, but it is expressed in all possible variations of potencies, so that it can be expressed as a line between A and B, or between the subjective and the objective.<sup>37</sup> As it is posited or steps forth in being, the apparent individual is at one and the same time the relative identity of the factors, their relative duplicity, and their reunion as relative totality,<sup>38</sup> or the line of identity, the angle of duplicity, and their union in the third dimension, existent as matter or filled

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<sup>33</sup> J. G. Fichte, “On the Presentation of Schelling’s System of Identity,” PRFS, 122-133.

<sup>34</sup> *Presentation of My System*, § 39, 156.

<sup>35</sup> *Ibid.*, § 40, 156.

<sup>36</sup> *Ibid.*, 156-57.

<sup>37</sup> See § 46 and associated explanations and corollaries, PRFS, 159-160.

<sup>38</sup> *Ibid.*, § 50, Erl.1, 160-61.

space.<sup>39</sup> Schelling remarks, without apparent trace of irony, that though he could have done it other ways, he presented this proof because it was the shortest.

There is a great deal of ambiguity about this text in *Naturphilosophie*. We shall shortly return to the topic of the ambiguity of the three potencies and the questions of what they precisely designate.

(i) Eckart Förster notes a confusion in earlier versions of the *Naturphilosophie*'s construction of matter as to whether nature unfolds sequentially, as the schema of the three potencies suggests, or whether they exist all at once, nature popping into existence fully grown and manifesting all qualities and operations.<sup>40</sup> We have seen the *Dynamic Process* treatise suggest that genetic method or construction involves taking the all-at-once character and translating it into stepwise *explanation*. In this text, the very murkiness of the potency structure—or to put it less kindly, the meandering though geometrical exposition—suggests that nature exists as a plenum of operations which operate simultaneously to do the same thing: *demonstrate the non-being of difference*. Even though there seems to be some *telos* or hierarchy in the first two potencies, or the domain of the first existent (matter), operationally nature always does the same: collapse difference into indifference.

(ii) A related problem infects this and other versions of *Naturphilosophie*. Since matter and space are coincident, there is no space without matter, and matter-space is singular, not plural. The operational or dynamic homogeneity of nature suggests the same thing: there is only one entity and in it there occurs only one operation: *ontological deflation*. Other texts suggest that nature might be inhabited by multiple centers of activity, but each of them perfectly monadic so that there is no genuine interaction, no inside/outside distinction, no effective plurality.<sup>41</sup> It is obviously not the intention of *Naturphilosophie* to do armchair summation of the march of empirical science, nor to mimic the methods of the Newtonian experimentalists.

(iii) What do the potencies designate? Evidently anything that has the triadic structure of relative identity, duplicity and relative totality, and that is functionally recursive or repetitious. We have just seen that in the transition from metaphysics to nature, Schelling equates metaphysical and proto-geometrical properties:

Relative Totality	Depth		
Duplicity	Breadth	=>	Matter (the First Existent)
Relative Identity	Length	<sub>42</sub>	

<sup>39</sup> Ibid., § 51, Beweis and Zus., 162-63.

<sup>40</sup> Eckart Förster, *Twenty-Five Years*, 246.

<sup>41</sup> See the Axioms of Nature that begin the specialized *Naturphilosophie* of the 1804 *System*, SW, I/6, 279-280.

<sup>42</sup> This and all subsequent diagrams depict potentiation (or in Schelling's symbols, the progression from A<sup>1</sup> to A<sup>2</sup> and from A<sup>2</sup> to A<sup>3</sup>) in a bottom to top manner, as Schelling presented them.

At a higher level of generality, the abstract proto-logical features are equated with:

Organism  
Light  
Gravity

In this text, it is not clear how these general features of nature as a whole match up with lower-level operational features or with domains of being. The 1804 *Complete System of Philosophy, and Nature-Philosophy in Particular* marks these features off, along with space/matter, as primordial principles of natural being and devotes a special section, General Philosophy of Nature, to them, prior to any consideration of detailed natural operations. Gravity and light are there said to operate, respectively, as the ground of being and the cause of being.<sup>43</sup> The most problematic feature of this presentation is the place of the three levels of dynamic process:

Chemical Metamorphosis (Oxidation/De-oxidation)  
Electricity  
Magnetism (Cohesion)

These factors are introduced into the discussion time and time again; they seem to be the drivers or ‘workhorse’ features of inorganic nature. There are also moves to reduce dynamic levels of phenomena downward to cohesion or upward to chemical metamorphosis; it is difficult to discern which feature is more fundamental, especially since potencies are in some sense all repetitions of one and the same operation. Chemical interactions are seen to involve reciprocal changes in cohesion in the “chemical matters” or elements involved.<sup>44</sup> In this text, Schelling makes no distinction between a non-apparent or constitutive level of dynamic process that is a universal feature of matter and makes matter fill space and a higher-level perceptible but regional version of the same that manifests as perceptible magnetism, electricity and chemical alteration, as do both the 1800 and 1804 versions of *Naturphilosophie*. If all of this were not complicated enough, Schelling seems to have two ontological paradigms operative in this text, in addition to the substance/attribute and attribute/mode distinctions inherited from Spinoza:

Form of Being ≈ Existence  
Being [Essence] ≈ Ground

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<sup>43</sup> See SW, I/ 6, 266: Gravity is the ground of the being of particular things, light their cause. The former is the “in-breath of nature,” the latter “the outbreath.” Schelling compares them to the paternal and maternal principles of Eros in Plato’s *Symposium*.

<sup>44</sup> See *Presentation of My System*, PRFS, 170-73 and 187.

The former schema was introduced in the opening paragraphs of the 1799 *First Outline* and is operative in all the metaphysical expositions of the so-called Identity Philosophy.<sup>45</sup> The second appears in the *Naturphilosophie* of 1801 and 1804, but only comes into prominence in the 1809 *Essay on Freedom*.

Finally, there is a commanding presence of Johann Wolfgang Goethe in this text. Schelling explicitly attempts to defend Goethe's color-theory, where light is said to be unitary, not composite, and the colored appearances of things are analyzed as epiphenomena that arise from the contrast of light and dark surfaces being viewed in close contiguity.<sup>46</sup> Schelling uses the term *metamorphosis* that Goethe coined for the process of repeated expansion and contraction in the development of the archetypal plant to characterize chemical interactions, the highest level of dynamic process.<sup>47</sup>

### III.

The 1804 Würzburg lecture manuscript for the *Entire System of Philosophy and of the Philosophy of Nature in Particular* remained unpublished in Schelling's lifetime. It is something of a patchwork, since its construction of the ideal world incorporates materials that Hegel would have heard in Jena. Schelling's editor-son remarks of the *Naturphilosophie* that it is more specific than other published texts, and that its contents have been amplified; it now includes topics in chemistry, astronomy and physiology.<sup>48</sup> The sixty-one sections on philosophy in general or the metaphysics of identity are more carefully stated and explained than the corresponding sections of *My System*. The opening pages present at least five distinct *arguments* about the nature of God or the absolute, viz., that:

- knower and what is known are the same in the highest instance of knowing
- self-knowledge of that identity occurs only in reason
- identity or immanent self-sameness is independent of anything subjective or objective
- God is his own self-affirmation, or has being in virtue of his very idea
- the form of God's absolute self-affirmation is repeated in reason.<sup>49</sup>

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<sup>45</sup> *First Outline of a System of the Philosophy of Nature* (1799), trans. Keith Peterson (Albany: State University of New York Press, 2004), 13-14.

<sup>46</sup> *Presentation*, PRFS, 174-75, 183-84.

<sup>47</sup> See Eckart Förster's exposition of Goethe's theories of light and color and his schema of biological development in *The Twenty-Five Years*, 265-276. Though Schelling is quite conscious of the difference between Goethe's *results* and those of the atomists and experimenters that followed Newton, Förster maintains that Schelling was interested in imposing a priori categories and theoretical patterns upon phenomena in *Naturphilosophie*, while Goethe developed an empirical procedure of close and repeated inspection of phenomena—think of Hume's example of the missing shade of blue—that Förster deems *intuitive understanding*.

<sup>48</sup> SW, I/6, vii-viii.

<sup>49</sup> §§ 1-8, Zus., SW, I/6, 137-151.

While Schelling begins to use the term “God” in at least a quasi-theistic sense in *Philosophy and Religion*, the word indicates only the Spinozistic *deus sive natura* here and is conceived in a fundamentally Spinozistic way as the identity of self-affirmation and what is affirmed, *natura naturans* and *natura naturata*. And while Schelling has obviously gone back to the *Ethics* again and pursued its Germanic translation in more detail, he has also carried forward the generic Platonism or Neo-Platonism of the *Bruno* in insisting that appearances have the ontological standing only of *privation*, of being infected by *Nicht-Wesen*, non-being. The finite or the realm of appearance is precisely the relative being and non-being of the particular within the universe.<sup>50</sup> “Considered in and of itself, nothing is finite.”<sup>51</sup>

When we turn to the philosophy of nature, there is a bit of a surprise. The framework features of nature and the preeminent items of the first two potencies (gravity and light) are set apart in a general *Naturphilosophie*. Each finite item is monadic, apparently in itself but constituted by external relations. Being nothing in itself, it is but a mirror of the cosmos, hence a quantum of affirmation or activity allied to one of being-affirmed or passivity.<sup>52</sup> As part of the affirmed, it is body and appears in space, the form of mere externality; as ensouled or part of the affirming, it is in time. The very forms of appearance express the non-being of things.<sup>53</sup> Pure space combined with the point yields the line of time. The dimensions of space contracted to a point yield impermeability, and we have at least the simulacrum of Kant’s idea of matter: occupied or impenetrable space.<sup>54</sup> The apparent materiality of the finite item of appearance is therefore a product of a process of expansion and contraction—the process that in the development of the plant Goethe termed *metamorphosis*. Schelling contrasts the purely active or productive character of this construction of matter with Kant’s which depends on a mere concept of reflection: force or *conatus*, mere striving. He remarks how the item of appearance is like a rainbow, the infinite substance, as it were, refracted through the prism of non-being or particularity—a comment that unconsciously presupposes the Newtonian color theory, not Goethe’s.<sup>55</sup>

Schelling articulates a non-mechanistic theory of matter and motion in order to argue that gravity is one of the primitive items of nature—not magnitude, nor mass, nor motion. Neither the substance of matter nor space itself is composite or even intrinsically divisible.<sup>56</sup> Matter or material substance is the identity of unity and totality, and motion, the active or affirming side of matter; motion is the reciprocal projection (*Ineinsbildung*) of space and time into one another. After Spinoza, Schelling conceives motion-and-rest as one of the infinite

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<sup>50</sup> § 31, Zus., SW, I/6, 180-81.

<sup>51</sup> § 17, Fol., SW, I/6, 161.

<sup>52</sup> §§ 66-67, Erl., SW, I/6, 217-218.

<sup>53</sup> §§ 69-71, SW, I/6, 219-221.

<sup>54</sup> § 74, Proof-§ 76, Erl., Proof, SW, I/6, 222-225.

<sup>55</sup> § 76, Zus., Anm.1-§ 77, SW, I/6, 226-230. Goethe’s theory assumes one views a colored surface through a prism, Newton’s that one views the surface illuminated by passing light through the prism.

<sup>56</sup> § 83, SW I/6, 229.

attributes of God/nature. The passive “mass” that is the object of mechanism’s calculations is abstracted from matter, which even as it appears in the inorganic, is as much self-moving as is the organism.<sup>57</sup> The inertial mass that is the focus of mechanism is but passivity, inborn defect, “the original sin of matter.”<sup>58</sup> Gravity is, therefore, the intrinsic relation of matter to its ground, infinite substance, not an externally communicated impulse which is the measure of one’s finite body’s influence on another, nor Newton’s attractive force.<sup>59</sup> Baader is credited for positing gravity as an independent force and refuting Kant’s hypothesis of attractive force being “action at a distance.”<sup>60</sup> The so-call law of gravity reveals that every point of the universe is the mid-point. Schelling remarks:

Hence the ground of gravity is the undiscoverable depth of nature itself, which can itself never step forth into *daylight*, that *whereby* everything else is birthed and sees the light of day—the mysterious night, the fate of all things, or the maternal principle, since all things are conceived in it and born from it as their ground.<sup>61</sup>

The ideal counterpart of gravity is light, or the *Lichtwesen*; the two are the infinite attributes of nature, expressing the affirming and affirmed aspects of the one substance. While gravity, acting on passive mass or the mere *res extensa*, is the real filling of space, light is its ideal description.<sup>62</sup> Unable to categorize its ideality accurately, Newton was driven to empirical nonsense in talking of the “immateriality of light”; it is reflection, not reason, which has recourse to empirical concepts and divides nature into “mater” and “spirit,” quixotically placing light with “dead matter.” Viewed in itself, light is the boundary of nature or the threshold of intelligence. Viewed together, the two principles of nature, light and gravity, are centrifugal and centripetal energies, light defining things in their particularity, gravity in their identity. Gravity is the *ground* of things, light their *cause*; the former defines the *nicht-für-sich-Seyn* of things, the latter their *in-sich-selbst-Seyn*.<sup>63</sup> The varying relations of these two principles to another (the process of *metamorphosis*) establish the different levels or potencies in nature, and within the potencies, establish the *Evolutionsreihe* of natural phenomena.<sup>64</sup>

Space will not permit a detailed look at the “Specific *Naturphilosophie*.” Absent that, the best I can do is to reproduce Schelling’s own diagram of the first two potencies, and complete it with the third. In contrast to the disorganization of the 1801 *Naturphilosophie*, which (charitably construed) can suggest that all natural process occur at once and are (metaphysically viewed) the same

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<sup>57</sup> § 85, Zus. 1-3, SW, I/6, 242.

<sup>58</sup> § 88, Zus., SW, I/6, 246.

<sup>59</sup> §§ 92-94, SW, I/6, 250-52.

<sup>60</sup> § 95, Erl., SW, I/6, 254-55.

<sup>61</sup> § 97, Zus., SW, I/6, 256-257. This remark, and subsequent ones about light, seems to anticipate the Ground/Existent categorial scheme of the 1809 *Essay on Freedom*.

<sup>62</sup> § 103, SW, I/6, 263.

<sup>63</sup> § 105, Anm., SW, I/6, 266-67.

<sup>64</sup> § 108, Zus. and § 133, Zus., 3-§ 138, SW, I/6, 269, 299-305.

operation, the 1804 system, with its tight organization, detail, and ideal-real symmetry suggest that the processes are ordered teleologically toward the intelligence-nested-in-organism that is humankind and therefore unfold in a graduated sequence.

The Potencies in the 1804 Specific *Naturphilosophie*<sup>65</sup>

Third Potency

	<u>regarded in form</u>	<u>regarded in substance</u>
<u>Third Dimension</u>	sensitivity	animals
<u>Second Dimension</u>	excitability	protozoa
<u>First Dimension</u>	reproduction	plants

Second Potency

	<u>regarded in form</u>	<u>regarded in substance</u>
<u>Third Dimension</u>	chemical action	heat
<u>Second Dimension</u>	electricity	light
<u>First Dimension</u>	magnetism	sound

First Potency

	<u>regarded in form</u>	<u>regarded in substance</u>
<u>Third Dimension</u>	spherical cohesion	hydrogen,oxygen: water
<u>Second Dimension</u>	relative cohesion (breadth)	phlogiston: air
<u>First Dimension</u>	active cohesion	sulfur: metals, fire

*Figure 1*

Considerably more detail could be unpacked in the third potency, where a mirroring of the ideal and real breaks forth in phenomena such as sexual dimorphism or the symmetrical organization of animal physiology, and where the matters of sensitivity or perception (their real basis) are correlated with perceptual capacities (ideal bases):

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<sup>65</sup> Based on SW, I/6, 369 and 392-404.

System of Sensation (*Sinn*)<sup>66</sup>

<u>Dynamic Process</u>	<u>Sensory Basis/Perception</u>		<u>Biological Function</u>
Magnetism	Hearing	Sound	Reproduction
Electricity	Sight/Smell	Light	Excitability
Chemism	Taste/Touch	Heat	Sensitivity

*Figure 2*

Sound is accounted the highest perception, since it is the perceptual vehicle of language, the body of thought. Both sight and smell communicate sensory information over a distance, while taste and touch are more local. Sensation and perception unite apparently internal and extra-somatic information in such a way that crude binary ideas of realism and idealism are refuted.

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<sup>66</sup> §§ 225-226, SW, I/6, 443-45. The order of the potencies is reversed here. Hearing/sound is said to be magnetism returned into itself, the first *Ineinsbildung* of the infinite into the finite. It is the basis of speech (*Sprache*), which is the instrument of reason (§ 232, SW, I/6, 454-55). “Speech is the highest item of nature: it is the [W/w]ord made flesh” (§ 259 Zus., SW, I/6, 491-492).