CHAPTER TEN

The Philosophy of Nature

One of the most fascinating moments in the development of Schelling's thought—and in the development of German idealism in general—is the move from a philosophy of self to a philosophy of nature, or *Naturphilosophie*. Rather than deriving nature from the self, the philosophy of nature conceives of nature as an independent, self-regulating reality, from which the self can be derived. Thus, while the philosophy of self takes the activity of self-intuition to be primary, both ontologically and epistemologically, the philosophy of nature accords such primacy to nature.[1]

Schelling's move toward the philosophy of nature is nothing less than a fundamental restructuring of the meaning and methodology of idealism. While Fichte repeatedly emphasizes that philosophy can only be transcendental (i.e., its goal is to examine the conditions that make experience possible), Schelling comes to argue that a transcendental procedure fails to account for its own possibility. Thus, while Fichte claims that philosophy must begin with the self-reflective I, Schelling maintains that this I presupposes an original positing or causality and thus cannot serve as the foundation of philosophy. Although this difference becomes clearer around 1800, I have already shown that it was implicitly present in Schelling's conception of the I as an "absolute causality" and in his distinction between the inner-form and the outer-form of the proposition of identity.

The "origin" of Schelling's philosophy of nature, or more accurately, the seed of what later came to be his philosophy of nature, remains a disputed topic. Many scholars trace his work in *Naturphilosophie* back to his "Timaeus Fragment" from his time in Tübingen in 1794, prior to his encounter with Fichte's work.[2] It was not until 1796–1797, however, that Schelling began his study of nature and incorporated nature into his philosophical

writings. Nonetheless, in these writings, Schelling's conception of nature is squarely within the framework of transcendental philosophy—his primary concern is epistemological and nature is understood as a product of the self or spirit (*Geist*). It was not until the 1799 *Erster Entwurf eines Systems der Naturphilosophie*, and its *Einleitung* (which was published one month later), that Schelling granted to nature the status of the absolute and thus paved a new path in the history of German idealism.

The question therefore is: What inspired this shift in Schelling's thought? By investigating the transformation of Schelling's understanding of nature, from 1796 to 1799, an answer to this question becomes apparent.

10.1 MATTER AS THE PRODUCT OF SPIRIT (*GEIST*)

In both *Vom Ich* and the *Briefe*, Schelling maintains that it is the nonobjectifying character of intellectual intuition that enables it to grasp the absolute. After all, as he repeatedly emphasizes, the absolute is not an object or a thing and thus cannot be known through either concepts (discursive understanding) or sensible intuition. Rather, as an ideal reality, the absolute can only be grasped through this "secret, wonderful capacity" that "can breathe life [*Leben*] into the otherwise dead and inanimate system" (HKA 1/3, 88).

The difference between criticism and dogmatism which he outlines in the *Briefe* rests on precisely this point. While dogmatism takes the absolute to be an already realized object of knowledge, criticism conceives of the absolute as an activity, "an *infinite* task," that realizes the infinite in the finite (HKA 1/3, 102). Because this task is infinite, the absolute is never made into an *object* of knowledge, a static entity that can be grasped through concepts. Rather, it remains an active, developing reality.

By working out a conception of the absolute as nonobjective, and by developing a theory of knowledge that can grasp the absolute, Schelling takes his first steps toward a philosophy of nature. That Schelling considers these two points to be fundamentally interdependent is made evident in the "Abhandlung zur Erläuterung des Idealismus der Wissenschaftslehre" (1796–1797). It is in this work that Schelling engages with the question of nature for the first time. It is also in this work that he emphasizes the active, productive character of intellectual intuition that Fichte had outlined. Though at first sight the combination of a philosophical account of nature with a Fichtean take on intuition seems surprising, upon closer consideration it is in perfect harmony with the progress of Schelling's thought. Having realized that the problem with Spinoza's conception of intellectual intuition rests on its objectification of the absolute, Schelling integrates the Fichtean

conception of intellectual intuition as activity into his own understanding of intellectual intuition. He maintains that only a nonobjectifying, and thus active, intuitive capacity can grasp the nonobjective absolute.

Schelling begins the "Abhandlung" by explaining that his concern is not with nature as such, or with how things outside of us are possible, but with the possibility of *our representations* (*Vorstellungen*) of nature. In other words, the primary question is an epistemological one, concerning the "correspondence [*Uebereinstimmung*] of the object and our representation, of being and knowledge" (SW 1/1, 365). Or, to put it in the terminology of his previous works, the question concerns the relation between form and content. In concert with these earlier works, Schelling's answer is the principle of identity. However, in contrast to *Vom Ich*, in the "Abhandlung" he adds that self-intuition is the ground of the principle of identity: it is only in *self*-intuition that representation and object correspond to one another (SW 1/1, 366). On this basis, Schelling concludes, reality must be determined through our spirit, in other words, knowledge of reality is predicated upon the original unity between subject and object found in self-intuition.

However, self-intuition does not only guarantee the certainty of our knowledge and its correspondence to reality. It plays another, more complex role, and here we see Schelling's second reason. In addition to his desire to secure knowledge through the correspondence between representation and object, Schelling is concerned with comprehending the difference between matter and spirit or mind (*Geist*) and, in turn, understanding their relation.

Schelling begins his argument by outlining two different ways by which to conceive the relationship between form and matter: either matter and form are given from something outside of me, or they are given to nature by me. The first case implies that matter is something "in itself." For us, however, it is impossible to know how matter is in itself. In order to gain such knowledge, we would have to be matter. Insofar as we are not matter, but knowing subjects, knowledge of matter in itself is impossible. Therefore, he concludes,

> so long as we presuppose, i.e., assume, that matter is something that precedes our knowledge, then we do not know what we are talking about. Instead of going further with such incomprehensible concepts, it is better to ask what it is that we originally understand and can understand. Originally, however, we understand only ourselves. Since there are only two possible systems, one which makes matter the principle of spirit, the other which makes spirit the principle of matter, there remains for us only one system which we can understand, namely, not that

> spirit is born out of matter, *but rather that matter is born out of spirit*. (SW 1/1, 373–74)

This leaves us with the second option, namely, that matter and form are given *by us* to nature, that matter is the *product* of our spirit (*Geist*). In other words, our productive intuition determines the structure of matter and thereby grants it organization and unity.

Schelling's reasoning rests on what he sees as a deficiency in matter. First, matter does not intuit itself; it is turned merely outward, in contrast to the self, which is turned both inward and outward (SW 1/1, 380). Thus, while the self turns inward and, in so doing, produces itself—brings itself forth—matter is directed purely to the external world. While it is transformed by the world, it does not effect any change on itself. Matter, then, cannot be said to produce itself: its *cause* is not *inherent to* itself. Nonetheless, matter appears to be self-organizing. The question thus is: How is this possible?

matter as self-organizing but not self-productive

That the self intuits itself implies a duality—an interiority and an exteriority—which, Schelling contends, is the ground of self-productivity and self-organization. An organized being is one that causes or produces itself; it is not caused or determined by something external to itself. Furthermore, an organized being acts in accordance with an *inner* purpose, such that everything within it strives toward a particular goal and in this way instantiates a system. The self exhibits precisely these characteristics: as self-determining, the self contains within itself the origin and goal of its being. For this reason Schelling concludes that "since there is the infinite striving for self-organization in our spirit, then a universal tendency toward organization must also reveal itself in the external world." In other words, organization in the world can only be explained by way of the organization of our selves. Our spirit, as Schelling puts it, provides the "archetype [*Urbild*]" for nature (SW 1/1, 386).

the kantian inheritance

These ideas and overarching questions underlie much of Schelling's first work that explicitly addresses nature, the *Ideen zu einer Philosophie der Natur* (1797). The primary concern of the *Ideen*, much like that of the "Abhandlung," is "not whether and how that assemblage of phenomena and the series of causes and effects, which we call the course of nature, has become actual *outside* us, but how they have become actual *for us*, how that system and that assemblage of phenomena have found their way to our minds, and how they have attained the necessity in our conception, with which we are absolutely compelled to think of them" (SW 1/2, 29–30). Similarly, in the *Ideen* Schelling turns to the self-organization of the mind as the only way

by which to explain our experience of nature as self-organizing, leading him to conclude that "the system of nature is at the same time the system of our mind" (SW 1/2, 39).

In spite of these fundamental similarities between the *Ideen* and the "Abhandlung," in the *Ideen* we see a significant step toward an understanding of nature as self-productive. This is clear in Schelling's distinction between natural organization and the work of art and in his claim that the unconditioned in nature is a divine (universal) intelligence and not a subjective (self-reflective) mind.

Natural organization and the work of art share one fundamental characteristic: their parts are not arbitrarily chosen but are organized in accordance with an intention. A "*concept* lies at the base of every organization," Schelling explains, "for where there is a necessary relation of the whole to the part and of the part to the whole, there is a *concept*" (SW 1/2, 41). However, while in the work of art the concept is external to the work (in the intention of the artist), in nature the concept is internal, and as such, nature must be understood as *self*-organizing. Schelling writes, "This concept dwells in the *organization itself*, and can by no means be separated from it; it *organizes itself*, and is not simply, say, a work of art whose concept is to be found *outside* it in the understanding of the artist" (SW 1/2, 41).

Furthermore, Schelling explains that this "concept" or "intention" that grounds self-organization cannot be understood as an intention of a subjective mind. There must be a "third thing" which connects the subjective mind, on the one hand, and matter, on the other, because "no relation is possible except through a third thing, to whose ideas both, matter and concept, belong" (SW 1/2, 42). Only "a higher divine intelligence," he continues, can comprehend the union of mind and matter (SW 1/2, 44). This, in turn, leads Schelling to further differentiate between the work of art and the natural organism. While it is perfectly adequate to speak of a concept determining the artwork, such a characterization falls short in depicting the processes of nature. This is because it would make the higher intelligence into a "slave" of the concept. As Schelling explains: "a being in whom the concept *precedes* the act, the design the execution, cannot *produce*, but can only form or model matter already there. . . . What he produces is purposive, not *in itself*, but only in relation to the understanding of the artificer, not *originally* and *necessarily*, but only contingently" (SW 1/2, 44). In other words, the higher intelligence creating nature must be *internal* to nature; otherwise, it would be simply following a previously outlined blue print—and would therefore lack internal necessity and originality.

By differentiating nature from the artwork in this way, and explicating

the productivity of nature in terms of a higher intelligence, Schelling grants to nature an independence from the subjective, self-reflective mind. Unlike the work of art, nature is not determined by a concept from without but by a higher intelligence that acts from within. This higher intelligence, furthermore, is not identified with singular subjectivities, but with a universal ideality, which is "inseparable" from nature (SW 1/2, 44). This leads Schelling to conclude that the purposiveness in nature "could not be imparted from without. . . . [The things of nature] are purposive originally *through themselves*" (SW 1/2, 45).

However, Schelling does not follow through on his claims in the *Ideen*. He continues to maintain that the higher intelligence must be "an intuiting and reflecting mind [*Geist*]," thus identifying the activity of nature with a self-intuiting, self-reflective being. He then goes on to conceive of the organization of the self-reflective mind as the source of natural organization, for it is only "in relation to a *mind* [*Geist*]," he writes, that "organization as such is conceivable" (SW 1/2, 42; see also 47).

In the *Ideen*, Schelling thus appears to oscillate between a conception of nature as self-organizing and his earlier understanding of nature as the product of a self-intuiting mind. This oscillation becomes most evident in his distinction between the work of art and nature, where he opposes natural organization to the intentionality and organization exhibited in the production of artefacts. Yet, although he acknowledges a real difference between the two, he continues to maintain that natural organization can be understood only in relation to a self-intuiting mind and not on its own terms. Thus, the distinction between these two kinds of organization is not coherently thought out and leaves many questions unanswered. If there is a real difference between the two kinds of productivity, then this difference must be located not only in relation to the self-intuiting mind, but also in the work of art itself and in nature itself. What, then, are the determining characteristics in nature and in the artwork that lead the mind to recognize a difference in their organization?

Schelling's difficulty arises from an unjustified assumption regarding the character of nature. As a result of identifying nature with matter and divesting matter of interiority and thereby purposive activity, Schelling concluded that nature cannot be the source of its organization. Only a self (as a self-intuiting being) could produce itself. Yet he saw that natural relations could not be reduced to mechanical, external relations. Thus, nature appeared to necessitate a notion of self-productivity. However, given his basic assumption that only a self can produce itself, Schelling was unwilling to

grant self-productivity to nature, concluding that it is only by understanding nature as the product of our spirit that we can understand how nature functions in a nonmechanistic manner.

10.2 GOETHE'S INFLUENCE

Schelling's perspective on the character of nature alters dramatically in the following year. In the *Erster Entwurf eines Systems der Philosophie der Natur* and in its *Einleitung*, he makes the remarkable claim that nature must be understood as autonomous and independent of the mind. Nature, he maintains, is not a "product" of our spirit, but is a self-producing reality. This claim, in opposition to his earlier conception of nature, leads Schelling to abandon the perspective of transcendental philosophy and to distance himself, once and for all, from Fichte's *Wissenschaftslehre*. The question then is: How does Schelling's thought shift, such that he is able to grant to nature self-productivity and thus independence from the intuiting mind? The answer to this question is the key to understanding the transformation in Schelling's conception of nature and his break with Fichtean idealism. An examination of Schelling's relationships at the time reveals that this fundamental shift had less to do with conversations with Hölderlin or with a return to Spinoza and more to do with Schelling's appropriation of Goethe's understanding of nature as metamorphosis.

Beginning in 1798, Goethe came to play a significant role in the development of Schelling's thought. Not only was Schelling deeply impressed by Goethe's optics, undertaking experiments with Goethe during his first visit to Weimar in May 1798, but he also found in Goethe's conception of plant metamorphosis the key to understanding nature as a self-producing, organic whole. Thus, in a letter to Goethe from January 26, 1801, Schelling writes, "Your presentation of the metamorphosis of plants has proven indispensable to me for understanding the emergence of all organic beings, and the inner identity of all organic forms amongst themselves and with the earth. . . . The organic was never *created* but has always *existed* [war immer *schon da*]" (HKA 3/2, 305). Thus, we need to consider in what sense Goethe's idea of metamorphosis became central to Schelling's own conception of nature and how it proved to Schelling that the organic was never "created" but always "existed."

In his 1798 *Von der Weltseele* (*On the World Soul*), Schelling is clearly familiar with Goethe's conception of metamorphosis and quotes the *Versuch über die Metamorphose der Pflanzen*, invoking Goethe's understanding

of plant growth to show the underlying law of natural development. Growth, Schelling explains, takes place through the two opposing forces of expansion (*Ausdehnung*) and contraction (*Zusammenziehung*) (HKA 1/6, 221).[3] The goal of growth is individuation, which, once attained, leads to reproduction (HKA 1/6, 222).[4] What at first appear as two different laws of productivity in nature—growth and reproduction—are in fact two aspects of the same law.[5] Schelling agreed with Goethe that the essential characteristic of nature is transformation, or *Bildung*.

However, in spite of the clear similarities between Goethe's conception of metamorphosis and Schelling's understanding of nature in the *Weltseele*, Schelling remains within the paradigm of transcendental philosophy. For one, he opposes the empirical and the transcendental. Then, he argues that those who rely on experimentation cannot, on the basis of physical evidence, explain the original antithesis in nature—the antithesis that makes movement and change possible (HKA 1/6, 86). "The origin of this antithesis," he writes, "is to be sought in the original duplicity of our spirit [*Geist*]" (HKA 1/6, 91). Therefore, although Schelling appropriates some of Goethe's ideas concerning metamorphosis, he either does not completely understand or he does not agree with Goethe's fundamental premise—namely, that metamorphosis is an ontological principle that underlies both the empirical and the transcendental, the real and the ideal. In other words, at this point Schelling does not agree with Goethe's claim that the metamorphosis of plants refers to a real formative principle that inheres in the natural organism and is not imposed upon it by the mind.

In fact, this is precisely the criticism which Goethe levels against Schelling's writings on nature. In a letter to Schiller from January 6, 1798, he criticizes Schelling's conception of nature and his method in the *Ideen*. "I happily admit," Goethe begins, "that he is not speaking of the nature which we recognize, rather of a nature which we take in by way of certain forms and capabilities of our spirit. . . . The idealist can try as much as he likes to defend himself against things-in-themselves, but he will nevertheless stumble up against them before he knows it" (MA 8/1, 489). In a letter written just a week later, on January 13, Goethe once again complains to Schiller about the newest philosophy. He writes, "In reading Schelling's book I have realized that there is little hope for help from the most recent philosophy" (MA 8/1, 494).

This critical attitude soon changed, however, following Schelling's visit to Jena and Weimar in May 1798. In a letter to Christian Voigt, Goethe expresses his interest in the prospect of Schelling being appointed as a profes-

sor in Jena, describing Schelling as "a very clear, energetic and . . . organized mind" and concluding that Schelling "would do us a great honor if he were to become useful in the academy" (MA 6/2, 922). Less than a month later (June 21, 1798), Goethe writes to Voigt to reiterate his plea, emphasizing that "Schelling's brief visit was a great pleasure for me; it would be beneficial for both him and us [if he came here] . . . [for him] so that he would be introduced to experience and experimentation and an assiduous study of nature" (MA 6/2, 922–23). Just a couple of weeks later, Schelling received an invitation from Goethe to join the university in Jena.[6]

In the winter semester of 1798–1799, Schelling offered a course on the philosophy of nature.[7] In October of 1799 he published the *Erster Entwurf eines Systems der Naturphilosophie* and in November published the *Einleitung* to that work. Goethe read the *Entwurf* toward the end of 1798, prior to its publication, and, following his reading of the *Einleitung* (September 1799), went through the work with Schelling in October 1799 (TAG 2, 264–65, 277, 314; TAG 2, 318–20). In a letter from November 9 of that year, Schelling remarks that "just a while ago [Goethe] and I spent a lot of time together. I was at his place daily and had to read and work through my text on the philosophy of nature with him. What a growth of ideas these conversations were for me, you can only imagine" (HKA 3/1, 244).

10.3 GOETHE AND THE METAMORPHOSIS OF NATURE

It was on his first Italian journey (1786–1787) that Goethe began to clearly formulate his idea of an archetypal plant or *Urpflanze*. In the garden in Palermo, Goethe writes, "I was confronted with so many kinds of fresh, new forms, I was taken again by my old fanciful idea: might I not discover the *Urpflanze* amid this multitude? Such a thing must exist after all! How else would I recognize this or that form as being a plant, if they were not all constructed according to one model?" (MA 15, 327). What Goethe seeks in the garden is the principle or idea that enables him to recognize all these varieties of plants as plant—the unifying principle of plants. Importantly, he does not seek it outside of the multiplicity, but "amid this multitude."

In a letter to Herder, dated May 17, 1787 (exactly one month following his visit to the garden), Goethe writes that he has come to comprehend "the secret of plant generation and structure" (MA 15, 393). He has realized that the unity he is after is integrally connected to plant growth and development. Given this insight, Goethe claims that he can now imagine an infinite variety of plants, which, although nonexistent, could exist.

It is not until July of that year, however, that Goethe arrives at a deeper understanding of the plant. In a report in which he includes the two passages quoted above, he adds this important conclusion: "It has become apparent to me that in the plant organ we ordinarily call the leaf a true Proteus is concealed, who can hide and reveal himself in all formations. From top to bottom, a plant is all leaf, united so inseparably with the future bud that one cannot be imagined without the other" (MA 15, 456). By this Goethe does not mean that the plant is reducible to the leaf, but that the parts of the plant are various manifestations of what he saw as the archetypal principle that underlies and determines the growth and development of all plant life.

In the first four paragraphs of his *Versuch*, Goethe elaborates how the plant parts are manifestations of the plant whole. An observation of the plant, he writes, reveals "that certain of their external parts sometimes undergo a change and assume, either entirely or in greater or lesser degree, the form of the parts adjacent to them" (MA 12, 29, no. 1). This is most evident, he explains, in what might be called intermediate parts, that is, parts which take on characteristics of preceding and succeeding parts. For instance, a stem leaf can begin to look more like the calyx, or stamens take on the attributes of petals. In other words, if the plant's parts are observed in relation to one another, one begins to recognize continuity between the parts, and it becomes clear that each part assumes a form that is a modification or progression of the other parts.

The various parts of the plant thus appear as moments in a continuum of formation—particular manifestations of the transformation which the plant undergoes from seed to fruit. This transformation, Goethe continues, is the bringing forth of "one part through the other," which presents "the most diverse forms through modification of a single organ" (MA 12, 29, no. 3). Goethe's claim is that what makes a plant a plant, what grants it an integral unity and coherence, is the manner in which each of its parts is a transformation of the plant's other parts and as such a manifestation of the whole of the plant. Each part, one can say, reflects the *history* of the plant—manifesting what preceded it and anticipating what is to come after it—and thus contains within it the whole plant.

Further observation of the plant reveals that plant metamorphosis occurs in two complementary ways. First, it is apparent that every part of the plant is a moment of either expansion or contraction. While the seed is the first contraction, the stem leaves are the first expansion. The calyx is a contraction, and the petals are an expansion. The sexual organs are once again a contraction, while the fruit is the "maximum expansion," and the seed

within it is the "maximum concentration." Alongside this development is a second principle—that of progression or intensification (*Steigerung*). Each of the parts comes progressively closer toward reaching the goal of growth attained in the final parts of the plant, the reproductive organs (MA 12, 44, no. 50; MA 12, 65, no. 113).

With this in mind, we can return to the question of different kinds of beings and their differing laws. Through the observation of plants, Goethe came to realize that what grants the plant unity is something that is specific to living beings and that cannot hold for nonliving beings. For it is not a static substance or an externally imposed principle, as in mechanical unities. Rather the unity of the plant lies in the fact that it is in a process of metamorphosis, wherein each part is a physical manifestation of the different stages of metamorphosis. Put differently, it is a unity that emerges in and through the different parts and their distinctive forms and functions over time; it is thus an internally differentiated unity.

As the developing interrelation between inherently connected parts, the archetypal plant is not a static substance or a quasi-platonic form that simply precedes its parts.[8] Rather, the archetypal plant is the lawful process of metamorphosis. This means that the archetypal plant is only in its parts, but is nevertheless not reducible to any of its parts. Therefore, although the archetypal plant is an ideal reality, it is not separable from the real. It is what constitutes the real, informing its growth and transformation. This implies two things. First, while the archetypal plant informs the parts, it does not in any substantial way precede the parts. Second, the archetypal plant is not a thing or a product, but productivity. Thus, it cannot be made equivalent to any one of its products.

What Goethe attempts to show in the *Metamorphose der Pflanzen* is how the whole of the plant kingdom is in a process of metamorphosis and how each species is a particular expression of the possibilities inherent in metamorphosis. By not only seeing the separate parts of the plant or the plant kingdom but seeing the *connections* between each of these parts, Goethe was able to recognize the successive and simultaneous *production* underlying the plant's form and development.

10.4 THE *EINLEITUNG* TO THE *ENTWURF*: SCHELLING'S CONCEPTION OF NATURE AS METAMORPHOSIS

In the first paragraph of the *Einleitung*, Schelling plunges into a critique of the primacy of the *Wissenschaftslehre*. He criticizes the idea that nature's ground is something other than nature itself. Rather, the goal is to think

nature "as independent and real" (HKA 1/8, 30). Thus, instead of attempting to derive nature from mind, or the real from the ideal, as he had done in his previous works, Schelling proclaims that "*the ideal must arise out of the real and admit of explanation from it*." For this reason, he continues, "there is no place in this science for idealistic methods of explanation, such as transcendental philosophy is fitted to supply." *Naturphilosophie* will proceed by following "the first maxim of all true natural science, to explain everything by the forces of nature" (HKA 1/8, 31).

Schelling's methods and goals in the *Einleitung* reveal a radical shift in his thinking about both the ontological reality of nature and the way in which to know nature. Nature is no longer imagined as inert matter, void of interiority and self-movement. Rather, nature has its own forces, out of which natural products arise. This means that nature no longer needs to be known by means of transcendental philosophy as the product of the duality of spirit. We are no longer seeking the cause of nature in something outside of nature—in a self that can grant nature activity and interiority—but in nature itself, in nature as *self*-production. Thus, Schelling introduces the distinction between nature as productivity, *natura naturans*, and nature's products, *natura naturata*.[9]

The implication of Schelling's statements is not only that there must be methods *other than* the idealistic ones, but also that self-consciousness is itself a product or an outcome of nature's activity. Thus, Schelling writes, "There is nothing impossible in the thought that the same activity by which nature reproduces itself anew in each successive phase, is reproductive in thought through the medium of the organism . . . in which case it is natural that what forms the limit [*Gränze*] of our intuitive faculty [*Anschauungsvermögen*] no longer falls within the sphere of our intuition [*Anschauung*] itself" (HKA 1/8, 31). In other words, what was understood to be absolutely self-producing—the intuition of the self—is no longer absolute. In fact, it falls within the domain of nature's activities and is therefore one manifestation of the forces of nature. The productivity of self-intuition is thus an instance of nature's self-productivity, or, as Schelling puts it a letter to Fichte, the I is nothing other than the "highest potency" of nature's activity (Traub, 178).

The most distinctive aspect of Schelling's conception of nature in the *Einleitung* is his claim that nature is a self-productive organic whole. This means that nature possesses a capacity that he had previously exclusively granted to the self. Self-productivity is not limited to a self-conscious being—it is no longer identified with the act of reflection in which the self brings itself forth and in so doing becomes aware of itself as a self. Thus,

Schelling rethinks the meaning of self-productivity such that a nonconscious being, nature, can be understood as self-productive.

The key to thinking of nature as self-productive is to recognize that what nature *is* cannot be reduced to the products of nature. Nature is thus not a composite of its parts but that which underlies and constitutes the parts and their relations. The first step toward an adequate conception of nature requires understanding nature not merely as product, but as *productivity*, as that which produces the products. However, to speak of nature as both productivity and products implies that nature contains *within itself* an original duality or opposition. Nature as productivity is opposed to nature as product. Yet it is not clear how the transition from productivity to product (and vice versa) can take place. In other words, how can productivity be limited in such a way that it can produce a particular product without transforming completely into this product. Or how can the product—as a finite thing—be maintained within infinite productivity? Essentially, how does nature maintain the necessary equilibrium, the necessary duality, between productivity and product?

The question concerning the possibility of a finite product within infinite nature is, according to Schelling, the chief problem of *Naturphilosophie*.[10] A product is a point of limitation (*Hemmung*) to nature's infinite productivity. Thus, it can only emerge out of the encounter between infinite productivity and its opposition, namely, infinite limitation.[11] However, insofar as this encounter is between two *infinite* oppositions, it would seem that the result of the encounter would always necessarily be null or zero. The only way that this meeting does not result in nothing, Schelling explains, is through the infinite re-production of the product—the infinite reproduction of the encounter between infinite productivity and infinite limitation. He writes, "absolutely no subsistence of a product is thinkable without a continual process of reproduction. The product must be thought as annihilated at every step, and at every step reproduced anew" (HKA 1/8, 45). In other words, the product of nature is the infinitely reproduced point of contact between productivity and limitation and, as such, contains within itself *both* infinite productivity and infinite limitation.

It is for this reason, Schelling continues, that the product of nature is only "apparently finite." After all, the "infinite productivity of nature concentrates itself in it," such that the product is not simply an empirical *presentation* of nature's infinite productivity but contains productivity *within itself*. In turn, the productivity within the product is precisely what enables the product to grow, sustain itself, and ultimately regenerate. As Schelling puts it, "This product is a finite one, but as the infinite productivity of

nature concentrates itself in it, it must have a drive toward infinite development" (HKA 1/8, 46).

This capacity for self-production and reproduction, the drive toward infinite development, is, according to Schelling, nothing other than metamorphosis (HKA 1/8, 56). However, unlike his earlier conception of metamorphosis in the *Weltseele*, the metamorphosis Schelling describes in the *Entwurf* is an "interior relation of the forms [*eine innere Verwandtschaft der Gestalten*] that is unthinkable without an *archetype* [Grundtypus], which underlies everything" (HKA 1/8, 55). Metamorphosis, in other words, is an essential characteristic of nature, an "archetype" that underlies and constitutes the relations of nature's parts or forms. Metamorphosis is the "inner construction" of nature (HKA 1/8, 33 and 71).

Metamorphosis

Thus, infinite development does not simply imply the infinite reproduction of the same product, but also its transformation. This is because infinite development expresses itself in two ways. First, it is progressive potentiation or intensification (*Steigerung*). Through internal necessity, nature undergoes transformation that leads to increasing complexity.[12] The second stage is polarity. The original duplicity in nature between infinite productivity and infinite limitation becomes a polar opposition, through which the activity of nature emerges as either a moment of contraction or a moment of expansion.[13] The two aspects of metamorphosis reveal a unity in nature: on the one hand, the organism is an integral unified being, whose parts are manifestations of the underlying whole; on the other hand, the organism relates to other organisms through reproduction and evolution and thus represents a different stage of development or further expression of the archetype which underlies all of nature's products.[14]

An important question to address at this point is: How does Schelling's conception of metamorphosis in the *Entwurf* not only differ from his previous understanding of metamorphosis in the *Weltseele*, but also—more significantly—how does it enable him to establish the view that nature is independent from the mind? In the *Weltseele*, Schelling describes the development of nature; however, he does not locate the origin of this development—its ground or source—within nature itself. Rather, as noted above, the duality necessary for the productivity of nature is said to originate in the duality of our spirit (*Geist*). In the *Entwurf*, by contrast, Schelling understands metamorphosis in the same way that Goethe understands it—as the formative principle that underlies growth and development. This enables Schelling to make the claim that duality is original to nature. For it is only through the "infinite development" of the "apparently finite" product that

the opposition between productivity and limitation—the original duality in nature—can be adequately explained and justified. In other words, the duality of nature is possible *if and only if* the products of nature are also productive. Nature can uphold and balance its opposing tendencies only because the products of nature are themselves in a state of infinite development, or metamorphosis.

As noted above, Schelling was always aware of the inadequacy of a mechanistic conception of nature; however, insofar as he denied nature the capacity to self-produce, he could not explain how nature was a self-causing (as opposed to mechanical) cause. By introducing the idea of metamorphosis, he makes it possible to conceive of nature as a self-producing unity, in which all of the parts "mutually bear and support each other" (HKA 1/8, 36).

When speaking of nature as a *whole*, Schelling is not speaking of an empirical reality, any one part or all the parts of nature brought together to make up "the whole of nature." Rather, the whole of nature is an idea or archetype that constitutes the parts. As idea, however, nature is neither a concept of the understanding imposed upon nature nor an ethical ideal that is ultimately unrealizable.[15] It is the constitutive ground of nature, through which the parts of nature "mutually bear and support" one another. In other words, it is only insofar as nature is an original idea that is not the outcome of its parts, that the parts of nature can relate to one another organically.[16] Although the idea of nature must be distinguished from the parts, it is neither outside of nor unrealizable in its products. There are no products without productivity, and there is no productivity without products. In light of this, Schelling returns to his earlier distinction between the work of art and nature, explaining that in art "the concept [*Begriff*] precedes the act or execution, [while] in nature idea and act are simultaneous and one, the concept passes immediately into the product and cannot be separated from it" (HKA 1/8, 41). Nature as a whole, as idea, is thus in each of its parts and in their relation to one another.

As an idea, nature is not a creation of the mind—a regulative ideal—developed for the sake of ordering and understanding nature. Rather, nature is a constitutive idea that underlies and determines natural products. It is thus inseparable from them. Nonetheless, it is not empirical and cannot be reduced to any one empirical phenomenon (HKA 1/8, 51). Therefore, when Schelling calls the principles of nature a priori, he distinguishes his use of the term from Kant's. By a priori, he does not mean what is prior to experience, since everything, according to Schelling, must be given in experience.

In contrast, the claim that nature is a priori indicates the necessary determinations or forms (archetypes) of nature: the a priori in nature is the regularity and necessity of its constitutive principles (HKA 1/8, 35).

10.5 EXPERIMENTATION AND CONSTRUCTION IN THE PHILOSOPHY OF NATURE

In his previous writings on nature, Schelling had resisted the notion that an intellectual intuition of nature is possible. After all, he had identified nature with inert matter, with objects. Intellectual intuition, however, is concerned with the "principle of inner activity" that underlies and brings forth objects (SW 1/1, 390). Hence, in his early work, Schelling had limited intellectual intuition to self-intuition, intuition of the productivity of the I. However, having established in the *Entwurf* that nature is productivity and not merely product, Schelling's stance on the possibility of an intellectual intuition of nature necessarily alters.

In significant ways, Schelling's views in the *Entwurf* evidence a return to Spinoza's third kind of knowledge and the understanding of intellectual intuition that Schelling developed in *Vom Ich*—with some decisive differences. Schelling distinguishes intellectual intuition from both sensible intuition and discursive understanding. Intellectual intuition does not grasp objects as atomistic individuals but grasps the whole of nature in and through the parts and regards the parts as active manifestations of this whole. Intellectual intuition, furthermore, does not construct the whole from the parts but gains insight into the whole through grasping the relations between parts—as in the mathematical example given by Spinoza. The parts, then, gain their articulation in terms of the whole, and the whole becomes manifest only in and through the parts. While the discursive intellect can only grasp the whole by abstracting from the parts and arriving at a general concept whose unity is granted by the mind, the intuitive intellect grasps the whole that underlies and constitutes the parts *in and through* the parts.

In addition to these characteristics which Schelling had explicitly developed in *Vom Ich*, he adds that the relation between the intuiter and her object of intuition is a relation of production. "We *know*," he writes, "only the self-produced" (HKA 1/8, 34). This last detail is in concert with Schelling's explication of intellectual intuition in his more Fichtean writings—the "Abhandlung" and *Ideen*—in which he conceives of self-intuition as self-production. In bringing together the Spinozist ideas present in *Vom Ich* with the Fichtean understanding of intellectual intuition, Schelling is

making a first attempt at explicating how intellectual intuition can grant insight into the whole (nature) without objectifying it.

Schelling's new understanding of the relationship between intellectual intuition and nature, however, leads to many questions. After all, in his previous writings, Schelling maintained that nature was the *product* of intellectual intuition, and it is in this sense that intellectual intuition is *productive*. In the *Entwurf*, by contrast, nature is conceived as self-producing, and this necessitates a revision of his conception of intellectual intuition. It cannot, after all, continue to produce nature in the sense previously elaborated. Thus, Schelling must answer the question: In what sense is intellectual intuition productive?

Knowledge "in the strictest sense," Schelling writes, is insight into the "principles of possibility" of that which is known. This knowledge is contrasted to a superficial "mere seeing," which does not understand how something comes about but simply knows that it exists. Schelling provides the example of the inventor to explicate his point. "The inventor of the machine has the most perfect knowledge of it," he writes, "because he is, as it were, the soul of the work, and because it preexisted in his head before he exhibited it as reality" (HKA 1/8, 33; see also 71). The implication is clear: in order to know something, one must understand the "inner construction," its conditions of possibility, its function and how it relates to its structure, and the formative or underlying principle of its activity.

However, the example of the inventor is for obvious reasons problematic. The relationship between the inventor and the machine is different from the relationship between the student of nature and nature. The idea of the machine arises in the inventor's *own mind*—such that the inventor's mind is the original *producer* of the machine. By contrast, there is no such relationship between the natural scientist and nature, if nature's productivity is independent. What then is involved in "knowledge in the strictest sense"?

It is here that we once again see Goethe's influence.[17] Schelling writes: "We *know* only the self-produced; knowing, therefore, in the *strictest* sense of the term, is a *pure* knowing *a priori*. Construction by means of experimentation." Experimentation, he continues, is "a bringing forth of the appearance [*ein Hervorbringen der Erscheinung*]." "The first step toward science," he writes, "is taken when we ourselves begin to produce the objects of that science" (HKA 1/8, 34).

By bringing forth an appearance, however, an experiment is not constructing the *idea* of nature as such, nature as *natura naturans*. "Construction by means of experiment," Schelling explains, "is . . . not an absolute

self-production of the phenomena" (HKA 1/8, 34). Thus, although in experimentation the experimenter participates in the production of nature, the *source* of natural productivity is not the experiment but nature itself. The experiment, or, more accurately, the outcome of the experiment, is a particular manifestation, a specific instance, of nature's productivity.

Although this is Schelling's first mention of experimentation as a means of achieving philosophical knowledge, it is certainly not his first mention of construction. In the "Abhandlung," for instance, he describes the productive activity of spirit—the activity which brings forth nature as a product—as "a real construction of the soul itself [*reale Construction der Seele selbst*]" (SW 1/1, 380). Later on in the essay, Schelling outlines the mathematical heritage of his understanding of construction and elaborates on its philosophical significance.

Schelling's conception of philosophical construction as elaborated in the "Abhandlung" mirrors Fichte's, as espoused throughout the latter's Jena writings. Fichte borrows the geometrical notion of construction (and thus challenges Kant's distinction between mathematics and philosophy) in order to explain the conditions of the possibility of self-consciousness. For Fichte (as for Schelling), the very possibility of self-consciousness depends on an original *postulation* or summons (*Aufforderung*) to abstraction and reflection.

Like mathematical construction, philosophical construction begins with a postulate—an indemonstrable intuition—on the basis of which the mathematician proceeds to construct or derive further results. These results are necessary—and therefore evident—because they are the immediate outcome of the original postulation. The mathematician, Schelling explains, recognizes that there is no choice in the construction—he or she has to proceed in this way.

The difference between mathematical construction and philosophical construction lies in the fact that the latter is concerned with "inner sense" and thus "cannot provide each construction with a corresponding, external intuition" (SW 1/1, 445). In the case of geometry, a line drawn on a piece of paper corresponds to the mentally constructed line. No such external object, Fichte and Schelling note, is possible for philosophical construction. However, Schelling emphasizes that although there is a corresponding external object in geometrical intuition, this object does not serve as the *cause* of the intuition, as would be the case with sensible intuition. Rather, it serves as the *occasion* for the intuition (SW 1/1, 445). The difference is significant, and I will return to it shortly.

For now, it is important to point out that for both Fichte and Schelling in the "Abhandlung," philosophical construction is the activity of self-production, in which the self abstracts from everything empirical, turns its attention to the pure self (intellectual intuition), and deduces (through synthetic thinking and creative imagination) the conditions of its possibility, that is to say, the concept that enables the opposition between subject and object that is the essence of the self. In so doing, the self progressively *produces* newly discovered conditions and orders these conditions. This is what Fichte calls the "pragmatic history of the spirit" and what he considers to be the task of transcendental philosophy (GA 1/2, 364). It is also what Schelling means when he writes in the *Ideen* that philosophy is "the natural history [*Naturlehre*] of our mind" (SW 1/2, 39).

Schelling's conception of construction in the "Abhandlung" remains within the limits of transcendental philosophy—the domain of the self, and the self's production of its reality. In the *Entwurf*, however, the goal is to move beyond the boundaries of transcendental philosophy and the domain of the self's constructions. What, then, does Schelling mean by construction in the philosophy of nature?

Schelling's conception of construction in the philosophy of nature must differ from his earlier understanding. Most distinctive is the fact that the construction of nature is not concerned with "inner sense" but with "outer sense," that is, with the construction of ideas that correspond to externally given natural phenomena. This brings the construction of nature closer to geometrical construction. Both have external objects which correspond to the constructions. This fact, as Schelling explains in the "Abhandlung," implies that there is an element of "coercion"—"I may be coerced to construct the *straight line* by the line drawn on paper or on a board." In contrast, the internal construction of the self is "determined entirely by freedom" (SW 1/1, 445).

Nonetheless, Schelling emphasizes that the act of geometrical construction is not simply a *reproduction* of the sensibly given line. This view has to do with Schelling's conception of knowledge and construction. The empirical line, he claims, "affords us no knowledge of the line, but conversely, we compare the straight line on the blackboard to the original line (in the imagination)" (SW 1/1, 445). In other words, it is only through my mental construction of the line that I *grasp* what I perceive *as* a line. My perception becomes meaningful only through my construction. Thus, while the empirical line may occasion the construction, it does not occasion my actual understanding of it as a line. Rather, understanding can only be achieved

in my mental construction of the line: from the idea of the line, I seek to grasp its properties and thus discern how the line, as line, is possible (its principles of possibility).

This view of construction carries over to Schelling's philosophy of nature, but to understand how it does so, it is important to begin by noting differences between geometrical construction and the construction of nature. Geometry is an entirely a priori science, in which the concept and its object correspond completely *in* the mental construction. Thus, although the mental construct may correspond to a sensibly given object (such as the line on the blackboard), the real object of geometry (the line) is an ideal reality. In nature, by contrast, the idea of nature does not correspond to purely mental objects. Rather, it is realized in the sensibly given phenomena. This means that the relation between the idea and its object in nature is different from—more complex than—the relation between the idea and its object in geometry. While in both cases the relationship implies identity and difference (the object is a particular manifestation of the idea), in the case of nature, the idea realizes itself in a material spatio-temporal horizon.

Thus, the relation between the idea of nature and natural phenomena is not immediate in the same way that it is in geometry. One cannot simply construct *forward* from the idea to the object, because the idea of nature is realized not in an ideal object, but in a multiplicity of material phenomena that evidence greater or less degrees of complexity, varying spatio-temporal locations, and distinctive functions within a context.

Schelling thus maintains that in addition to constructing forward, the philosophy of nature must also "construct back," that is, construct *from the phenomena* back to the idea (SW 1/5, 127). This means that the construction of nature must occur through experimentation, because it is only through *experiencing* particular phenomena that we can grasp how the idea of nature realizes itself. The aim of the experiment, however, is not simply to *reproduce* the phenomenon but to reveal its genetic structure: how it came about or, more specifically, how it realizes the idea in its particular form (HKA 1/8, 34).

This does not mean that Schelling was an empiricist. His claim is that an experiment on its own does not result in science. Experimentation "never gets beyond the forces of nature" to uncover the underlying idea of nature—the idea that is present in the phenomena but is not reducible to any one phenomenon. For this reason, every experiment must be guided by a hypothesis, which is in turn confirmed or rejected through experimentation. The hypothesis acts as the regulative ideal of the experiment; it determines the question that one poses to nature and the form and kind of experiment

that is undertaken. However, its goal is not merely heuristic. Together with the experiment, its goal is to arrive at the idea of nature itself. Thus, while the hypothesis regulates the experiment, the experiment constructs natural phenomena in order to determine their principles of possibility.

The experiment, therefore, functions as the middle ground or mediator between the hypothetical regulative ideal, on the one hand, and the absolute productivity of nature, or nature as a constitutive idea, on the other. By producing nature in controlled circumstances in accordance with a hypothesis, the experiment does nothing less than empirically illustrate (construct) the idea of nature.

In order for this method to work, in order for experimentation to result in science and not in disconnected fragments of knowledge which have no evident relationship to one another, an experiment must be based on an "absolute hypothesis" (HKA 1/8, 34). Unlike other hypotheses, the absolute hypothesis functions as the ground of the system as a whole and as such is the basic premise upon which the knowledge of nature is based. This means, Schelling explains, that it "must bear its necessity within itself" (HKA 1/8, 35). In other words, the absolute hypothesis is not an arbitrarily chosen proposition; rather, as the ground of the system of science, it must be absolutely necessary. Furthermore, the goal of the absolute hypothesis is to explicate the entirety of nature—nature as absolute—and not just a particular phenomenon in nature.

The absolute hypothesis, Schelling maintains, is the original duplicity of nature—the encounter between infinite productivity and infinite limitation. As noted earlier, it is only on the basis of this hypothesis that nature can be conceived as self-producing and self-organizing. Thus the absolute hypothesis replaces Schelling's conception of a *Grundsatz*. Like the *Grundsatz*, it must be absolutely necessary. Unlike it, however, it must be put to the test of experimentation: "*for, inasmuch as all the phenomena of nature cannot be deduced from this hypothesis so long as there is in the whole system of nature a single phenomenon which is not necessary according to that principle, or which contradicts it, the hypothesis is thereby at once shown to be false,* and from that moment ceases to have validity" (HKA 1/8, 35). In other words, the absolute hypothesis must be tested to conform to the phenomena of nature; otherwise, it is invalid.

Experimentation therefore plays the distinctive and significant role of mediating between the regulative idea (hypothesis) and the constitutive idea (nature's productivity). The goal of experimentation is to uncover the laws of nature—the inner construction of nature—by testing the absolute hypothesis. This test takes place not in relation to just one product of

nature but in relation to nature as a whole. Through undertaking experiments, then, the student of nature seeks to reveal the productivity of nature as it manifests itself in its products and in their relations. By making apparent the relations among nature's products and seeing them in terms of the whole of nature, experimentation aims to bring the idea of nature to consciousness and order the phenomena of nature in accordance with this idea. In this way, Schelling explains, judgments achieve necessity. "When we become conscious of them as necessary," he writes, judgments *become a priori* (HKA 1/8, 35).

This brings us back to the question of geometrical construction and its proximity to the construction of nature. Through experimentation, it is not only particular natural phenomena that are constructed. Rather, the whole of nature—nature as a system—is constructed. Furthermore, the system of nature must be absolutely necessary. The a priori construction of nature thus means a systematic construction that reveals the necessity (lawfulness, regularity) of nature. A phenomenon of nature is a priori (necessary) only when it is part of the system of nature, that is, when it forms part of a "necessary connection" that binds all the phenomena of nature to the underlying principle of nature, a connection that embraces "the *whole* of nature," such that "everything that happens or comes to pass" is absolutely necessary (HKA 1/8, 36).

The phenomena of nature, therefore, gain meaning only through the construction of the system of nature. In understanding the relations among natural phenomena and recognizing the place and function of each phenomenon within the whole of nature, one grasps both the meaning and necessity of particular phenomena. Furthermore, through the construction of nature as a system, it becomes evident that every phenomenon is one manifestation of the original productivity of nature. In other words, the phenomena of nature are, just like the line drawn on a piece of paper, realizations of an ideal construction.

While in geometry, necessity and evidence are achieved in the pure act of mental construction, in the study of nature, more is necessary. This is because the necessity between universal and particular, idea and object, is not immediately given in nature. For this reason, constructing forward—from the idea of nature (the absolute hypothesis)—must be supplemented by constructing backward—from the phenomena back to the idea.

It is here that experimentation becomes essential. It is only through the mediation of the experiment—the mediation between the regulative idea in the form of hypothesis and the constitutive idea of nature—that evidence can be achieved. By constructing a system of nature through experimenta-

tion, the student of nature brings to consciousness the unconscious idea of nature. Because this idea is not immediately evident, the evidence that is produced through experimentation must be tested and retested, and the hypothesis underlying the experiment confirmed or challenged.

Although experimentation plays a central role in the *Entwurf*, particularly in the *Einleitung*, it is not a central theme in all of Schelling's writings on nature. Nonetheless, in later works, he emphasizes that construction is often carried out incorrectly and argues that the only way by which to verify construction is through experience.[18] Thus, while in his 1801 essay "Ueber den wahren Begriff der Naturphilosophie," Schelling does not emphasize experimentation to the same degree, he does explain that the coincidence of one's construction to experience establishes that one is in fact undertaking *Naturphilosophie* (HKA 1/10, 95). In other words, it is only when I recognize that my construction holds in the empirical world that I can rightly call myself a philosopher of nature.

By bringing experimentation into the picture and rethinking the meaning of construction in terms of experimentation, Schelling finds a way to mediate between the knowledge of nature and nature as such. The goal remains the construction of a priori knowledge; however, this a priori knowledge must be constructed through the mediation of the experiment and hypothesis. At first sight, it may appear that by incorporating the notion of a regulative idea in the form of a hypothesis and maintaining that evidence can only be gained through experimentation, Schelling introduces a chasm between *idea* and *reality* that is not present in geometrical construction. However, upon closer consideration, it becomes clear that Schelling introduces these procedural elements in order to *overcome* that chasm. This is because the relationship between the idea and its object in geometry is different from the relationship between the idea and its object in nature. The idea of nature is not immediately present in its products or objects. This is because the objects of the idea of nature (the natural products) are not purely mental phenomena. Rather, the products of nature are material manifestations, realized in varying degrees, within varying material contexts. Thus, the immediacy of geometry is absent in the study of nature. In order to achieve this immediacy, to perceive the relationship between the idea of nature (nature as productivity) and its objects (the phenomena of nature), one must begin by positing a hypothesis. Then, through experimentation and observation of the products of nature, one constructs back to nature as productivity. Thus, experimentation and hypothesis aim to achieve the unity between idea and reality, between productivity and product, that is at the heart of geometrical knowledge.

10.6 CONCLUDING REMARKS

In the last paragraph of the *Entwurf*, Schelling summarizes the key idea and basic methodology of the philosophy of nature: "It was assumed that nature is a development from one original involution. This involution cannot be anything real, however, according to the above; thus it can only be thought as *act*, as *absolute synthesis*, which is only ideal, and signifies the turning point, as it were, of transcendental philosophy and the philosophy of nature" (HKA 1/7, 271). By conceiving of nature as an ideal reality, as an act, Schelling was able to grant nature independence and develop a philosophy of nature distinct from transcendental philosophy. Such a conception of nature, however, requires that nature not be thought of as a thing among things, but as that which brings things forth—as the act of construction itself. For this reason it is necessary to rid the philosophy of nature of any conception of substance or being. He writes, "Transcendental philosophy knows of no original being. For if *being itself* is only *activity*, then the individual being can only be viewed as a determinate form or limitation of the original activity. Now, *being* ought to be something just as little primary in *Naturphilosophie*, '*the concept of being as an original substance should be absolutely eliminated from Naturphilosophie, just as it has been from transcendental philosophy*.' The above proposition says this and nothing else: 'Nature should be viewed as unconditioned'" (HKA 1/7, 78). In other words, philosophy—whether transcendental philosophy or the philosophy of nature—must not begin with substance, or being. Otherwise, it would necessarily conclude with an undesirable and untenable opposition between being and knowing (as we saw in Spinoza). It must always begin with activity. In transcendental philosophy, this activity is presented as the activity of the self as it produces itself and thus brings forth objects in the world. In the philosophy of nature, it is nature's activity, or nature as metamorphosis.

For this reason, construction is the essential methodology in both transcendental philosophy and the philosophy of nature. However, the a priori construction of nature does not simply involve observation and reflection on the phenomena of nature. Rather, construction involves determining the necessity of the phenomena, understanding their relations, and thereby developing a system of nature. This system, ultimately, aims to make explicit or conscious the unconscious activity of nature and thus bring it to its own highest manifestation. After all, nature as productivity is an ideal reality, which means that its expression remains incomplete so long as it is presented in unconscious, *real* products. It is only in coming to presenta-

tion in the mind, *ideally*, that the idea of nature attains its final and most complete realization.

Schelling's ontology of identity between mind and nature, between ideal and real, has one significant (but often overlooked) consequence: insofar as the activity of the mind is the highest activity of nature—its most conscious manifestation—it follows that the work of construction *could not* simply be a reflection of nature's activity. Rather, as its highest manifestation, the work of the mind necessarily *participates* in the work of nature and, in doing so, *transforms* it. Schelling makes this point most explicitly in the *System des transcendentalen Idealismus* (1800), in which he identifies productive intuition with the power of genius and identifies both with the productivity of nature. He writes, "What we speak of as the poetic gift is merely productive intuition, reiterated to its highest power. It is one and the same capacity that is active in both [nature and genius] . . . and its name is imagination. . . . Hence, that which appears to us outside the sphere of consciousness, as real, and that which appears within it, as ideal, or as the world of art, are also products of one and the same activity. . . . To be sure, then, the real world evolves entirely from the same original opposition as must also give rise to the world of art" (HKA 1/9.1, 326–27; SW 1/3, 626). From 1800 onward, Schelling turns his attention to this aspect of construction, that is, to the identity between knower and known and to the transformative character of knowledge. In the *System*, his goal is to provide a "conclusive proof" of this original identity, through a progressive method of deduction. As I discuss in the next chapter, however, Schelling soon realizes that identity cannot be grasped deductively and thus turns away from the method of progress or successive construction to a theory of knowledge that recalls his earliest conception of intellectual intuition.