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The Creativity of Nature: The Genesis of Schelling's Naturphilosophie, 1775-1799

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ABSTRACT

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The Naturphilosophie of Friedrich Wilhelm Joseph Schelling (1775-1854) has been neglected in the Anglophone world for over 200 years, but his detractors are wrong in insisting that his system represented a disguised mysticism and a rejection of empirical science. Although Schelling studied theology at the famous Tübingen seminary, he dedicated his life to philosophy by 1794, eventually turning to an intensive study of the natural sciences. By 1799, he had developed a systematic Naturphilosophie which harvested the discoveries of eighteenth century science in order to solve the philosophical problems left behind by Immanuel Kant and Johann Gottlieb Fichte. Schelling relentlessly fought against the notion that nature is inert. Instead, he stressed its vibrancy, its activity, and ultimately its creativity. By reconstructing Schelling’s intellectual development, we not only gain a new appreciation for his thought, but we also see aspects of his Naturphilosophie which are deeply sympathetic, and perhaps even useful in the twenty-first century.
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committee for awarding me a fellowship for research abroad, and the Humanities Research Center at Rice, which provided me with a fellowship during the 2007-2008 Academic year.
Introduction: The Revival of the Young Schelling

Any contemporary study of the philosophy of Friedrich Wilhelm Joseph Schelling (1775-1854) must answer an obvious question: why should anyone in the twenty-first century care about the often impenetrable and seemingly wildly metaphysical texts of the German Idealists?\(^1\) This question is especially difficult to answer in the English-speaking world, where metaphysical thinking itself has been thoroughly discredited.\(^2\) There is a general sense that the Idealists have very little to offer us today.\(^3\) For that reason, defenders of Fichte, Schelling, and Hegel often present them in sanitized forms, attempting either to isolate a helpful “non-metaphysical” kernel in their thought or to present their philosophies as sober advancements on Kant’s transcendental philosophy. This is especially true in the cases of Hegel and Fichte, both of whom have received increasingly favorable treatment in English.\(^4\) Schelling’s situation is somewhat more difficult than

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\(^1\) Kant’s reputation, on the other hand, has not suffered nearly as much. Analytic philosophers are happy to see the sage from Königsberg as a safe, healthy alternative to the descent into philosophical madness of the Idealists, who nevertheless, often with good reason, claimed to be following the “spirit” if not the “letter” of the Critical Philosophy. Fichte’s invocation of the letter/spirit distinction was the most forceful. See Daniel Brazeale’s “The Spirit of the Wissenschaftslehre” in The Reception of Kant’s Critical Philosophy: Fichte, Schelling, and Hegel, ed. Sally Sedgwick (New York: Cambridge University Press, 2000), 171-198.


\(^4\) Klaus Hartmann is the father of today’s “non-metaphysical” interpretations of Hegel. See his “Taking the Transcendental Turn,” The Review of Metaphysics (20) 1966: 223-249. Both Terry Pinkard and Tom Rockmore have contributed to this reading. See Rockmore’s Hegel, Idealism, and Analytic Philosophy (New Haven: Yale University Press, 2005), Pinkard, Hegel’s Phenomenology: The Sociality of Reason (New York: Cambridge University Press, 1996), Pinkard, German Philosophy 1760-1860: The Legacy of
that of his two contemporaries; his metaphysical commitments, especially after 1809, seem impossible to downplay, and his Naturphilosophie continues to be an object of ridicule for modern science. Nonetheless, there has been something of a "Schelling Revival" in the English-speaking world. This dissertation is intended as a contribution to that revival, particularly with respect to his early Naturphilosophie between 1797 and 1799. Although several authors have already attempted to revive him in English, most

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*Idealism* (New York: Cambridge University Press, 2002). A comprehensive collection of essays on the non-metaphysical Hegel, which also includes a bibliography of Klaus Hartmann’s works, is Terry Pinkard, H. Tristram Engelhardt, eds., *Hegel Reconsidered: Beyond Metaphysics and the Authoritarian State* (Dordrecht: Kluwer Academic Publishers, 1994). For recent attempts to portray Fichte as merely an epistemologist, see Frederick Neuhouser, *Fichte’s Theory of Subjectivity* (New York: Cambridge University Press, 1990), Wayne Martin, *Idealism and Objectivity: Understanding Fichte’s Jena Project*, Robert Pippin, “Fichte’s Alleged Subjective, Psychological, One-Sided Idealism,” in *The Reception of Kant’s Critical Philosophy: Fichte, Schelling, Hegel*, Sally Sedgwick, ed. (New York: Cambridge University Press, 2000), 147-170. Fichte scholars have a tendency to attack Schelling (and Hegel) in an attempt to distance them from their hero. Reinhard Lauth claims that “Schelling and Hegel, unlike Kant and Fichte, annihilated rational philosophy through itself, in a rigorously idealistic fashion, in the service of a fundamental irrationalism.” Lauth, “Die Unterschied-zwischen der Naturphilosophie der Wissenschaftslehre und Schelling von zwei charakteristischen Ansatzpunkten des letzteren aus erläutert,” in *Natur und Subjektivität: Zur Auseinandersetzung mit der Naturphilosophie des jungen Schelling. Referate, Voten, und Protokolle der II. Internationalen Schelling-Tagung Zürich*, ed. Reinhard Heckmann, Hermann Krings, Rudolf W. Meyer (Stuttgart: Frommann Holzboog, 1985), 224. Daniel Brazeale also levels false charges against Schelling’s Naturphilosophie: “It is important to note, even if only in passing, the radical dissimilarity between Fichte’s conception of a philosophy of nature and certain other projects that have gone by the same name. What is most striking about Fichte’s concept of nature is how little he believed one can learn about nature from the a priori standpoint of philosophical reflection—which may explain why he himself showed so little interest in developing this branch of his system...Fichte would appear to have far more in common with what we today call the philosophy of science than with the a priori Naturphilosophie of Schelling and Hegel.” (Brazeale, “The Spirit of the Wissenschaftslehre” in *The Reception of Kant’s Critical Philosophy: Fichte, Schelling and Hegel*, ed. Sally Sedgwick (New York: Cambridge University Press, 2000), 179. The idea that Schelling’s knowledge of nature was “a priori” will be discredited in this dissertation.

5 Ernst Mayr, perhaps the most important interpreter of the discipline of biology in the 20th Century, portrays Schelling’s scientific theories as at best an overreaction to naïve Newtonian mechanism, and at worst “ludicrous.” Because Schelling and the Romantics were “essentialists” and embraced a speculative and “sterile” philosophy, they were “quite unable to develop a theory of common descent.” Mayr, *The Growth of Biological Thought: Diversity, Evolution, and Inheritance* (Cambridge, MA: Belknap Press of Harvard University Press, 1982), 387-389. The biggest problem with Mayr’s approach to the history of biology is that, for Mayr, anything short of full-blown species change is dismissed as delusional “essentialism.” This ignores the ways in which eighteenth century thinkers like Buffon, Diderot, and even Naturphilosophen like Schelling paved the way for a dynamic, temporalized view of nature.

6 Schelling was already being revived in Germany in the 1980s, at least with respect to his importance to modern biology and ecology. Unfortunately, the English-speaking world has lagged behind. Keith R. Peterson notes the recent “revival” in the introduction to Schelling’s *First Outline of a System of the Philosophy of Nature*, trans. Keith R. Peterson (Albany: State University of New York Press, 2004), xxxiii.
either avoid the subject of *Naturphilosophie* or are unwilling to give it the attention it deserves.

The recent attempts to rehabilitate Schelling correspond to a general, though by no means precise, division of his philosophy. American scholars especially have turned to his later metaphysics and discovered a powerful critique of western philosophy, one that bears similarity to that advanced by Heidegger.\(^7\) Others have looked to his early *Naturphilosophie* and seen a building block in the development of Darwinian evolution or modern systems theory.\(^8\) German Schelling scholars have also returned to his *Naturphilosophie*, which they see as a forerunner of modern self-organization theory.\(^9\) All of these perspectives have their merits, yet they are plagued by a common problem. In each case, Schelling is more or less portrayed as a forerunner (*Vorläufer*), who contributed to a process of development culminating in Heidegger, Darwin, Prigogine, or

\(^7\) The most important book in this vein is Andrew Bowie, *Schelling and Modern European Philosophy: an Introduction*, (London: Routledge, 1983). Both Dale Snow and Alan White have written broad treatments of Schelling's entire philosophical development which end up stressing the later works. See Snow's *Schelling and the End of Idealism*, (Albany: State University of New York Press, 1996) and White's *Schelling: An Introduction to the System of Freedom*, (New Haven: Yale University Press, 1983). Incidentally, all three of these works gloss very quickly over the *Naturphilosophie*, demonstrating either an unwillingness or inability to deal with the complex scientific context of the time. Reinhard Zimmermann's *Die Rekonstruktion von Raum, Zeit, und Materie: Moderne Implikationen Schellinger Naturphilosophie*, (Frankfurt a.M.: Peter Lang, 1998) does not suffer from this problem, but Zimmerman also stresses the similarities between Schelling on the one hand and Sartre and Bloch on the other.


whichever endpoint the author has selected. Ironically, these treatments condemn Schelling to the same role he was accorded in Hegel's system: a mere stepping stone.

The failure of this approach leaves historians of Schelling in a difficult position. They must justify modern-day interest in Schelling as more than antiquarianism, without resorting to "sanitizing" his philosophy or presenting him merely as a precursor of some later intellectual movement. Fortunately, an accurate historical reconstruction of Schelling's development allows us simultaneously to understand him historically and to recognize the fruitful aspects of his thought in the present day. This dissertation will present Schelling on his own terms by using the methods of contextual intellectual history. These methods are indispensable if we are to apply his ideas to our own problems. After all, how can he be of assistance to us if we do not understand his world and the problems he faced in the late 1790s? While some of Schelling's solutions may strike the reader as ridiculous or utterly useless today, they are far outweighed by their insightful counterparts. Schelling's *Naturphilosophie*—which sees nature not as an object to be exploited, but as an intrinsically valuable counterpart to the human mind—is certainly relevant to a culture struggling with the ecological and bioethical dilemmas brought on by the ruthless exploitation of the earth's resources and our rapidly increasing capabilities for genetic manipulation. In the conclusion to this dissertation, I will discuss these issues further, but the bulk of the work will be historical.

This dissertation has two main aims, the first of which is directed towards Anglophone readers. I intend to discredit the myth—still prevalent in the United States and Great Britain—that Schelling's *Naturphilosophie* was a rejection of empirical science and an attempt to investigate the natural world from a philosopher's desk. On the
contrary, not only was it empirically and philosophically informed, but it was part of what Schelling and his radical contemporaries saw as a thoroughgoing philosophical revolution aimed at changing every aspect of human knowledge. Schelling, Hegel, and Hölderlin sketched out this ambitious project in the famous Oldest System Program of German Idealism, which united politics, epistemology, ethics, physics, and aesthetics. For them, Idealism and Naturphilosophie were the mental equivalent of the French Revolution, and this explains why an entire generation of college students could passionately read books which modern readers find almost indecipherable. For the young Schelling and his cadre of intellectual allies, philosophy was about action, and his Naturphilosophie was, in its own way, an attempt to carve out a space for human freedom, without which real, tangible revolution was impossible. Those new to Schelling’s philosophy might see the juxtaposition of nature and human freedom as a puzzling one: but I will show how, in the wake of the Kantian philosophical revolution, the need to reconcile the two was absolutely critical.

If the first aim of my dissertation is to "vitalize" Schelling’s Naturphilosophie for the Anglophone reader, the second aim—oriented more towards specialists—is to reconstruct the path Schelling took to his first fully systematic work on Naturphilosophie, the First Outline of a System of Naturphilosophie (1799). How and why did an ambitious young philosopher, originally destined to be a Protestant pastor, create a system characterized by a deep interplay between empirical natural science and idealist philosophy? Why did he suddenly abandon transcendental philosophy in 1796 and devote himself to natural science? Why did he write two largely empirical works—The Ideas (1797) and On the World Soul (1798)—before finally giving his Naturphilosophie a
systematic form? And why did his *Naturphilosophie*, which at times seems ludicrous today, resonate so strongly with his contemporaries, including serious natural scientists?

Neither of these are easy tasks. Both aims require an examination of three distinct but interrelated contexts, and very few Schelling scholars have the inclination to investigate all three. The least neglected of these contexts is the philosophical one. Very few treatments of Schelling neglect the influence of thinkers like Spinoza, Kant, Jacobi, Fichte, and Hegel, although some overemphasize one to the detriment of the others.\(^{10}\) Thanks to Frederick Beiser’s *German Idealism*, we now have an excellent account of this story in English. The second, somewhat more neglected context is biographical, and in this category I would also include the influence of several lesser known intellectuals, including Schelling’s professors and friends at the Tübingen *Stift*. Robert Richards has brilliantly described Schelling’s interactions with Goethe and the Jena circle, although the scope of his narrative prevented him from fully exploring Schelling’s earlier influences. Still, the biographical context examined in this dissertation is often ignored even in outstanding German-language scholarship, and some of it is extremely helpful in understanding the choices Schelling made, both personally and philosophically. This brings us to the almost universally ignored context: eighteenth century natural science. Even Schelling scholars concerned explicitly with his *Naturphilosophie* gloss over this material, arguing that the empirical content of his works is almost irrelevant to his larger philosophical vision. I will argue that this is simply not true. While many of Schelling’s chapters on light, heat, electricity, etc. are at best dated and at worst spectacularly wrong, his treatment of living nature is often insightful, reasonable, and prescient. But we *must* proverbially "stick to the point*.

\(^{10}\) Snow, for example, presents Jacobi as the most important influence on Schelling’s early Idealism, a contention with which I strongly disagree.
understand the scientific context to see this. Schelling, like many of his generation, boldly called for an understanding of life based on physical yet non-mechanical principles. In that sense, his early *Naturphilosophie* is far more materialist than spiritualist.

The chapters of this dissertation will sometimes jump back and forth between these several contexts, although they often intersect. In chapter 1, I discuss Schelling's childhood and early education, paying special attention to the unique situation of Württemberg, Schelling's homeland, in the eighteenth century. Although I describe the ways in which Württemberg's traditions of political resistance and Pietist theosophy may have influenced the young Schelling, I do not believe, as some authors do, that Swabian traditions determined Schelling's entire career. Rather, I show that Schelling was both shaped by and revolted against his native culture. By the time he completed his education in Tübingen, he was desperate to leave Württemberg altogether, and saw himself not as a theologian but as a philosopher.

The second chapter examines the aforementioned philosophical context of Schelling's development, from Kant up to Fichte, and also gives an interpretation of Schelling's first two philosophical works, *On Possibility of a Form of All Philosophy* (1794) and *On the I as Principle of Philosophy* (1795). In both of these works, Schelling attempted—like Reinhold and Fichte before him—to unify the fractured Kantian system under a common principle. In one important sense, he went beyond Fichte by drawing on the philosophy of Spinoza. While writing these two books, Schelling also learned to use Fichte's concepts and methods, which he would later transfer over onto Nature. Just as
Fichte saw self-consciousness as the product of original, conflicted forces, Schelling saw nature not as a static object, but as the product the basic forces of attraction and repulsion.

Chapter 3 examines a shift in Schelling’s philosophy which occurred after he graduated from the Tübingen Stift. In his earlier works, he carefully maintained the guise of Fichtean orthodoxy, even when he deviated from his mentor’s ideas. But the main point of the *Philosophical Letters on Dogmatism and Criticism* (1796) was at odds with Fichte’s system, and indicated that Schelling was searching for a philosophy which escaped the narrow confines of Fichte’s subjective, ethical Idealism. Indeed, the final letter hints at a forthcoming investigation of nature. That Schelling intended to study natural science is also proven by the aforementioned *Oldest System Program*. Finally, I argue that his intellectual feud with Friedrich Nicolai may have impelled him to abandon his youthful Idealism and investigate the “real” world instead.

Chapter 4 takes a step backwards in order to orient the reader into Schelling’s own scientific world. At the outset of the eighteenth century, Newton’s natural philosophy dominated the agenda of even the life sciences. Herman Boerhaave, who trained an entire generation of European physicians, tried to interpret the human body as a series of springs and hydraulic pumps. But eighteenth century life scientists gradually abandoned the idea that living things could be explained in the same manner as celestial bodies. In France, *philosophes* like Maupertuis and Buffon adopted a “vital materialism” which asserted that even inorganic matter is essentially dynamic, and that life is not an aberration, but the very purpose of nature. This vital materialism was transferred to Schelling by Herder, and deeply influenced his *Naturphilosophie*. Therefore it is fair to say that *Naturphilosophie* was not a revolt against science, but rather the final and boldest
statement that the world—even so-called "dead matter"—is organically linked and teeming with life.

In chapter 5, I finally examine Schelling’s Naturphilosophie, but I do not jump straight to a reading of the Ideas for a Philosophy of Nature (1797). Rather, I argue that his real turn to nature is announced in a serial publication, The General Overview of the latest Philosophical Literature (1797-98). By systematically reconstructing the composition of this text, which Schelling used as an avenue for exploring his diverse interests at the time, we can gain some insight into Schelling’s Leipzig period, about which source material is extremely lacking. After showing how the General Overview was the true turning point in Schelling’s thought, I examine the Ideas, arguing that, even in the empirical sections, we can see Schelling’s eventual system shining through. At that point, I look back at his scientific training in Leipzig and give a hypothetical account of the previous year’s studies. Of crucial importance to this chapter is the philosophy of Leibniz, whose influence on Schelling I believe has been gravely underestimated. Schelling calls for the revival of Leibniz in both the General Overview and the Ideas, and it is a mistake not to take this aspect of these works seriously.

In Chapter 6, I examine Schelling’s next two monographs: On the World Soul (1798) and the First Outline of a System of Naturphilosophie (1799), along with the concise and important Introduction to that latter work. After failing to get a professorship at Jena after the publication of the Ideas, Schelling begins again from scratch and writes On the World Soul, which, unlike the Ideas gives a detailed account of organic nature. Schelling’s vital materialism is in full bloom in this work, for he argues—like Diderot—that the forces of life are latent even in so-called “dead matter.”
Goethe liked it so much that he called him to Jena as full professor. In preparation for his lectures, Schelling wrote the *First Outline*, the most systematic presentation of his *Naturphilosophie*. I argue that the *First Outline* is really a physical monadology which incorporates his earlier empirical insights. Leibniz's name barely appears in the *First Outline*, but his ideas are everywhere in Schelling's "dynamic atomism." The world of the *First Outline* is one constructed not by atoms of matter, but by "atoms of force," which lie at the bottom of upward development. Like Herder, Schelling believed that basic physical forces drive Nature upwards to humanity. And in this sense, Schelling comes full circle: he had begun his career trying to explain self-consciousness solely in its own terms. In the end, he explains self-consciousness by finding the seeds of human subjectivity in the objective, natural world.

Finally, to conclude the dissertation, I offer my thoughts on the value of Schelling in contemporary debates about science and nature. I believe we must exercise some caution in this regard. The attempts to find similarities between Schelling's viewpoints and certain aspects of modern science is often misguided, because it rips Schelling from his context and misses the forest from the trees. In the end, the most valuable aspects of Schelling today are his larger insights about the relationship between philosophy and science, nature and man. On the first front Schelling offers hope to a world where philosophy and science occupy almost completely separate spheres. For 200 years, *Naturphilosophie* has been held up as proof that philosophers should not interfere with science. I argue the opposite. *Naturphilosophie*, for all its obvious flaws, offers a fruitful model of scientific-philosophical cooperation. And had previous generations taken Schelling seriously, and recognized that man is *impossible* without nature, perhaps the
ecological quandaries with which we now struggle could have been avoided. Ultimately, Schelling speaks to our situation, and we do not need to divorce him from his historical and philosophical context to realize this.
Chapter 1: Schelling’s Swabian Education

Among Germans one will understand immediately when I say that philosophy has been corrupted by theologian blood. The Protestant Pastor is the grandfather of German philosophy, Protestantism itself is its original sin... One has only to say the words “Tübingen Stift” to grasp what German philosophy is at bottom—a cunning theology... The Swabians are the best liars in Germany, they lie innocently.

--Friedrich Nietzsche, *The Antichrist*

CONTEXTUALIZING GERMAN IDEALISM

Nietzsche contended that German philosophy was essentially a disguised theology, and his argument is persuasive on its surface: one cannot deny that the development of post-Kantian, “Absolute” Idealism was largely the undertaking of several graduates of the famous Tübingen seminary. Schelling and Hegel played an enormous role in that process, but several of their schoolmates—such as the theologian and philosopher Immanuel Niethammer and the poet Friedrich Hölderlin—were crucial for it as well.

Many historians and philosophers have thus adopted a version of Nietzsche’s aphorism as a master narrative for the interpretation of Schelling and Hegel, pointing out the supposed

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12 Niethammer and Hölderlin will be extensively examined later in this dissertation, but they play a large role in Dieter Henrich’s seminal *Konstellationen: Probleme und Debatten am Ursprung der idealistischen Philosophie 1789-1795* (Stuttgart: Klett-Cotta, 1991).
theological—and uniquely Swabian theosophical—undercurrents in their writings. Not only do these scholars claim that Idealist thought was a secularized version of Swabian Pietism, but they argue that it belongs to a mystical tradition stretching back to Jakob Böhme and Paracelsus. If anything, this narrative has become even more popular in an age skeptical of grand philosophical systems. Reading Schelling and Hegel as heirs of a mystical religious tradition makes them seem more authentic and more appealing to those hostile to eighteenth century rationalism. If the Idealists can be “exposed” as mere theologians, their admittedly excessive pretensions to systematicity can be casually dismissed as quaint artifacts of a bygone philosophical age. In some ways, the narrative is an excuse not to take Idealism seriously.

Fortunately for those who see Schelling’s Naturphilosophie—which is inseparable from German Idealism as a whole—as relevant to present-day concerns, this

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narrative crumbles upon closer inspection.\(^\text{14}\) Although Württemberg was important for Schelling’s development, and although Schelling did turn to mystical-theological traditions after 1809, his early works by no means follow any theological agenda.\(^\text{15}\) In fact, the young Schelling was a radical—perhaps even an atheist—and a republican, and he became so precisely by revolting against the theological traditions he was supposed to follow. By the time Schelling left Württemberg in 1796, he harbored an outright disdain both for his homeland and for the professors who had trained him. And while writing his Naturphilosophie, Schelling saw himself not as a “cunning” pastor but as a philosopher, not as an alchemist but as an interpreter of cutting edge natural science. To say otherwise is to fundamentally misunderstand his entire project, which originally arose out of a unique constellation of sociopolitical, religious, and philosophical contexts in his native Württemberg. The present chapter will sketch out those contexts, and show how a young man destined for a career as a Protestant pastor became a radical philosopher and a revolutionary instead.


\(^\text{15}\) The works cited above do have the merit of taking context into account, unlike the purely philosophical narratives epitomized by Richard Kroner’s famous Von Kant bis Hegel. Kroner argues that “German Idealism from Kant to Hegel should be comprehended as a whole: as a line that soars upwards in a great curve according to laws which are immanent, yet only manifested in this development...[This presentation] will show how these ideas advanced forward step by step, how they hastened towards a goal, and how the goal quickened every step. Therefore, the beginning should be treated with an eye on the end, and the goal of this developmental-historical essay is therein expressed: it will be shown, how the Hegelian Philosophy of Spirit grew from Kant’s critique of reason....” (Kroner, Von Kant bis Hegel, 2nd edition. (Tübingen: J.C.B. Mohr (Paul Siebeck), 1961), I, 21. Dieter Henrich points out that Kroner’s “great curve” ignores “the conceptual connections, problem areas, and lines of argument that were most crucial for and characteristic of the structure of [German Idealist] works.” Also see Henrich, “The Path of Speculative Idealism,” in The Course of Remembrance and other Essays on Hölderlin, ed. Eckhart Förster (Stanford: Stanford University Press, 1997), 15.
WÜRTTEMBERG IN THE EIGHTEENTH CENTURY: TRADITION AND CONFLICT

Schelling’s early life was powerfully shaped—but not predetermined—by his homeland’s history. Of all the territories in the old Holy Roman Empire, at least in the eighteenth century, Württemberg was probably the most peculiar. Its geographical and demographic characteristics formed the basis of this uniqueness. Württemberg was, and still is today, an area filled with small towns and villages, many lying along the banks of the Neckar River and its tributaries. Its western areas feature the mountains of the Black Forest, while the Swabian Alb runs through the middle of the country, from southwest to northeast. The Danube River, originating in the Black Forest, runs through the south of the country. Even today, it is one of the most beautiful locales in Germany.\(^{16}\) In this setting, there was a remarkable absence of large cities; instead, smaller communities predominated. Indeed, Württemberg had the greatest concentration of what Mack Walker calls “home towns” in all of the Reich, with approximately 1 town per square German mile around 1800.\(^{17}\) In 1787, there were only three towns in the duchy with a population of 5,000 or more: Stuttgart (the ducal capital), Tübingen (home of the Stift), and Ludwigsburg (the ducal residence).\(^{18}\) Given the multitude of “home town” communities, it should come as no surprise that there was no established nobility in Württemberg. Its nobility played almost no political role after the early sixteenth century, and as a result, the town/country conflicts so characteristic of other states was

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\(^{18}\) Carsten, *Princes and Parliaments*, 3.
completely absent in Württemberg.\(^{19}\) The entire country imbibed a middle class consciousness, and the young Schelling, a steadfast opponent of aristocratic pretensions and vice, was no exception.

The absence of conflict between bourgeoisie and nobility did not, however, betoken a complete lack of internal strife. Since the early sixteenth century, the Estates, a quasi-parliament composed of church prelates and town representatives, possessed an enormous degree of political power and repeatedly came into conflict with the ruling Dukes. Not only did they control the expenditures of the government, but in 1498, they even succeeded in overthrowing a Duke (with the approval of Holy Roman Emperor Maximilian) on account of his “manifold bad and disorderly practices.”\(^{20}\) Over the years, the powers of the Estates waxed and waned, and its influence was often successfully blunted by strong-headed rulers willing to operate without its explicit approval. Nonetheless, the Estates preserved a spirit of resistance in Württemberg unmatched by any other territory in Germany. This strong parliamentary and liberal tradition even impelled a British author to declare that the only two constitutions in Europe were those of Britain and Württemberg.\(^{21}\) This parliamentary tradition would play a crucial role in the eighteenth century, for in 1733, Duke Karl Alexander ascended to the throne. The successive reigns of Karl Alexander (1733-1737) and his son, Karl Eugen (1737-1793), would last for a combined sixty years and precipitate a long conflict between the Estates and ducal rule.


\(^{20}\) The Duke was Eberhard the Younger. See Carsten, *Princes and Parliaments*, 8-9.

Karl Alexander’s reign lasted only four years, but it set the tone for much of the eighteenth century, since his son would continue to pursue his policies. Karl Alexander alarmed the estates for two reasons. First, Württemberg was a Lutheran state surrounded by Catholic territories, and Karl Alexander was a convert to Catholicism. Although he paid lip service to the Estates on religious issues—through the so-called Religions-Reversalien of 1733, in which he promised that his Catholicism would remain only a private affair—it was clear to everyone that his ultimate goal was the advancement of the Catholic Church in his duchy. This conjured up memories of past religious conflicts: a century earlier, the Thirty Years War had devastated Württemberg. After the Catholic victory at Nördlingen in 1634, Imperial forces ran roughshod over the country. Thereafter, Württemberg suffered at the hands of both French and Imperial armies, and by 1648 it had incurred severe losses in population and property. Any alliance between Karl Alexander and Austria would again make Württemberg vulnerable in a renewed Franco-Austrian conflict.

Karl Alexander’s absolutist ambitions were equally disconcerting to the Estates. He sought to imitate the absolutist model of Prussia by demanding the creation of a large standing army, which the Estates opposed not least because of its incredible cost. But Karl Alexander was able to successfully exploit the war of the Polish Succession (1733-1738) and the concomitant threat of invasion by France to further these military

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23 Württemberg was largely unaffected during the Bohemian, Danish, and Swedish phases of the Thirty Years War. Nevertheless, it became an ally of Sweden shortly before Nördlingen, and thus opened itself to the wrath of the Imperial forces. On Württemberg’s role, and its losses, in the Thirty Years War, see Vann Allen, The Making of a State, 93-96.
ambitions, and the Estates were able to offer only minimal resistance to his plans.\textsuperscript{24} Were it not for his sudden death in 1737, his plans would most likely have succeeded. The Estates struck back the day after Karl Alexander's death, when a number of his closest advisers were arrested. His financial adviser, a Jew named Süss Oppenheimer, met a worse fate: he was eventually executed for his willing violations of the constitution.\textsuperscript{25} Thus, the specter of Catholic absolutist rule was temporarily banished, as Karl Eugen, the heir to the throne, was still only nine.\textsuperscript{26}

In 1744, however, Karl Eugen reached his majority, and he picked up where his father had left off. History has not been kind to Karl Eugen, for as Peter Wilson notes, “Whenever an example is required to reinforce the stereotype of the petty absolutist in eighteenth-century Germany, [K]arl Eugen is called upon to provide it.”\textsuperscript{27} Wilson makes the case that Karl Eugen’s ambitions were not very different from either his predecessors’ or his successors’, thus somewhat deflating his reputation as a larger than life despot.\textsuperscript{28} Still, since we are examining the setting in which Schelling’s ideas blossomed, Karl Eugen is extremely important. Not only did he arouse the hatred of the Protestant populace in general, but he helped provoke the revolutionary mindset which Schelling and many of his classmates in Tübingen embraced. Like his father, he was dedicated to

\textsuperscript{24} Peter H. Wilson, \textit{War, State, and Society in Württemberg, 1677-1793} (New York: Cambridge University Press, 1995), 163.

\textsuperscript{25} Oppenheimer was resented both because he was a Jew and a foreigner, and his execution speaks to the animosity of Württembergers to the financial schemes of Karl Alexander. Thousands of people watched as Oppenheimer was hanged in Stuttgart within a specially constructed cage. See Vann Allen, \textit{The Making of a State}, 232-235.

\textsuperscript{26} Carsten, \textit{Princes and Parliaments}, 128.

\textsuperscript{27} Wilson, \textit{War, State and Society}, 199.

\textsuperscript{28} \textit{Ibid.}
the buildup of a large standing army, and his officers went to great lengths to achieve this goal. What particularly incensed his subjects were stories of forced recruitment into the army. Although Karl Eugen denied that such practices occurred, Carsten notes that it was easy “to list numerous examples of forcible enrollment,” some of which included the use of torture.29 The Duke was so desperate to increase the size of his army that he eventually sold it out to France, receiving money from Louis XV to recruit 6,000 infantry which would be at the latter’s disposal. This turned out badly during the Seven Years War: Württemberg’s forced alliance with France meant that these infantry were slaughtered by Frederick the Great during his brilliant victory at Leuthen in 1757. Two-thirds of the 6,000 man force was destroyed.30 These events were not only embarrassing, but ironic: Karl Eugen idolized Frederick’s “enlightened despotism”, yet his army was crushed by him.

Karl Eugen’s military misadventures had disastrous financial consequences, which were compounded by his willingness to spend vast amounts of money on his court.31 In fact, his military failures may have provoked these cultural expenditures. As Wilson hypothesizes,

29 Carsten provides the example of “twelve young men...who were taken to the barracks at Ludwigsburg, where they were threatened with starvation unless they enlisted, and their parents were forbidden to bring them any food. Then they were put on a wooden donkey and heavy stones were laid on their feet which they had to raise, and if any stone dropped, they were so severely beaten on their shins that some fainted. Timber was put into their hands which they had to hold with outstretched arms, and if they let one arm sink they were so beaten on the elbow that their wounds were still unhealed. This torture continued until they promised to enlist; but five escaped, whereupon their fathers were arrested and only released on payment of 100 guilders.” (Princes and Parliaments, 135-136).

30 Carsten, Princes and Parliaments, 136-137. Wilson, War, State, and Society provides a more detailed account of Karl Eugen’s cooperation with the French. See 207-246 passim.

The continuation of lavish court expenditure in the mid-1760s has much akin to an act of defiance. If [K]arl Eugen could not outdo his rivals by realizing his political ambitions, he would at least overshadow them with a dazzling court.... The court and art patronage were to compensate for his failure....

Thus, there was a deep connection between his military and cultural excesses. Karl Eugen's profligacy led both his subjects and subsequent historians to view his reign as a "heady rush of hunting expeditions, ballets, mistresses and military adventures...." He repeatedly spent more money than the Estates authorized, and subsequently sought to replenish his coffers with a variety of tax schemes, ranging from a salt tax which obliged all Württembergers to buy 15 pounds of salt, to an annual tax to be levied by soldiers. In both cases, refusal to pay meant either incarceration or a fine, on top of one's existing tax debt. The Estates naturally opposed these measures, for if Karl Eugen could successfully carry them off, they would lose the power of the purse and be as weak as the impotent Estates in other German lands. Opposition to these ducal schemes could be dangerous. Johann Jakob Moser, the most famous leader of the opposition and one of the leading theorists of hometown communities, was even sent to prison for speaking out against the Duke's plans.

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33 Wilson, 109.

34 Carsten, 141.

In detailing the conflicts between the Estates and the Duke, Carsten and Wilson focus largely on the issue of military expansion and the related disputes over funding and conscription. Wilson explicitly downplays the importance of religion in these conflicts, especially in his discussion of the Seven Years War. Wilson portrays Karl Eugen’s alliance with Catholic France and Austria completely in terms of Württemberg’s geopolitical situation. The duchy was surrounded by anti-Prussian, Catholic territories, and an alliance with Frederick would have meant certain disaster. But other scholars have emphasized the religious aspect of the political squabbles in eighteenth century Württemberg. Laurence Dickey, in his contextualization of Hegel, gives much more weight to the religious feud between the Catholic Duke and the Protestant Estates. Dickey argues that the “overriding concern of Württemberg Protestants” during the eighteenth century was the limitation of Catholic ducal authority, and that the religious and constitutional traditions of Württemberg were intimately woven together:

In this context, the interest of Protestant prelates and those of other members of the Estates converged—negatively in their antipathies to Catholicism and absolutism and positively in their commitment to legitimizing the Estates as the guardian of the religious and civil liberties of all Württembers.

While Dickey argues for a powerful intersection between Protestantism and the interest of the Estates in the eighteenth century, he makes it clear that this univocal front.

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36 Wilson, War, State, and Society, 210-212.

37 Dickey, Hegel, 113.
only arose with the accession of Karl Alexander in 1733. Before that, the church prelates often sided with the Dukes, because the ruler traditionally controlled the funding of the church. The Reversalien of 1733-1734 changed this arrangement, giving the Estates control over church revenues. Whereas prelates and city-dwelling representatives had heretofore often disagreed, they now stood united in opposition to the Catholic Dukes. Furthermore, the friendship between the Pietest theologian Johann Albrecht Bengel (1687-1752) and the legal theorist Johann Jakob Moser (1701-1785) forged an ideological union between pietism and the oppositional tradition of Württemberg. Political opposition to the Duke, under the guise of the veneration of the 1514 Treaty of Tübingen, became thoroughly intertwined with the call for the creation of a civically-engaged, pious Protestant culture. Thus, the separate traditions of religious revival and constitutionalism easily coalesced. It was this union of Protestant and Constitutionalist ideology that allowed the estates to frustrate Karl Eugen’s absolutist ambitions.

If Protestantism and political resistance made common cause in 1733, their alliance began to fade after 1770. In 1764, after becoming overwhelmed with Karl

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39 The reaction to Karl Alexander’s death shows the extent of the alliance between political and religious resistance (Van Allen, *The Making of a State, 222*).


42 Indeed, Fulbrook characterizes even mid-century Pietism in Württemberg as tending towards “pluralism and passivity” rather than resistance, noting that the Pietists made no great effort to get Moser released (*Piety and Politics*, 148-149).
Eugen's tax schemes, the Estates lodged a formal complaint against the Duke with the Aulic Council, one of the two highest courts of the Holy Roman Empire. The result was remarkable: Moser, who had been imprisoned for five years, was ordered released, and the Council ordered Karl Eugen to summon a diet to discuss the problems. Karl Eugen, still reeling from the disaster of the Seven Years War, was deprived of funds and desperately needed the support of the Estates, but the diet dragged on for years without much progress. Further cases were brought to the Aulic Council until 1770, when that body finally proposed a compromise, the so-called Erbvergleich, which was a monumental victory for the Estates. Faced with financial problems and the pressure of Austria, Karl Eugen had little choice but to accept the agreement, which gave the Estates what they had wanted all along—guaranteed status as equal partners in the government of the country. It was precisely this victory, however, that broke up the seemingly monolithic alliance between Protestants and Constitutionalists. Karl Eugen was no longer a threat, and contented himself with court projects and the founding of his new Karlsschule in Stuttgart. But despite its final resolution, the legacy of the conflict would influence future generations: the long period of political strife had given birth to a new form of Pietism, one explicitly eschatological in focus, which would live on in the popular consciousness long after the threat of Karl Eugen had receded. The aforementioned theologians Bengel and Oetinger were the torch bearers of this movement, and their ideas were embraced by Schelling's own family.

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43 Walker, Moser, 245-247.
44 Wilson, War, State, and Society, 233.
PIETISM, ESCHATOLOGY, AND NATURMYSTIK IN EIGHTEENTH CENTURY WÜRTTEMBERG

The cultural and political impact of Pietism in Germany cannot be understated. During the eighteenth century, Pietist ideas gave birth to innovations in fields as disparate as aesthetics and medicine.\(^\text{45}\) Pietism began in the late sixteenth century as a revolt against the perceived spiritual stagnation of the Lutheran church. Reformers wanted to renew the faith by going back to its simpler, more spiritual roots. After all, Lutheranism had begun with the assertion of the priesthood of all believers and emphasized each individual’s direct relationship with God. Nevertheless, the official Lutheran church had become a rigid organization very similar to the Catholic Church against which it had originally rebelled. In this corrupted Lutheran church, dogma and doctrine trumped inner spiritual rebirth. Pietism thus deemed Lutheran orthodoxy “to be essentially an uninspiring, woodenheaded preoccupation with largely irrelevant theologumena, and which it, therefore, held responsible for the deplorable state of the Lutheran churches in both Germany and Scandinavia.”\(^\text{46}\) All Pietists agreed that the essence of Christianity lay not in any particular Church structure but in a direct relationship with Christ.\(^\text{47}\) Additionally, Pietists stressed the need for each individual to experience a spiritual rebirth. This rebirth must be total, and one must, in terms of Pauline theology, be “in but not of the world.”\(^\text{48}\)

\(^{45}\) The invention of the word “aesthetics,” and the development of this discipline, was largely the contribution of the Pietist Alexander Baumgarten (1714-1762). Georg Ernst Stahl (1660-1734), a devout Pietist who applied his religious ideas to medicine, founded one of the most important medical traditions in Europe, parts of which would be revived in Schelling’s Naturphilosophie. The relationship between Pietism and Stahl’s theory of the organism is the focus of Johanna Geyer-Kordesch's *Pietismus, Medizin, und Aufklärung in Preußen im 18. Jahrhundert: Das Leben und Werk Georg Ernst Stahls*, (Tübingen: Max Niemeyer, 2000).


\(^{48}\) 2 Corinthians 10: 1-3.
Orthodox Lutheranism, which happily accommodated itself to a supposedly corrupt world and surrendered its autonomy to the state, violated this tenet of Pietist belief. A final characteristic of Pietism was its emphasis on the Bible, which focused on the application of the Bible’s teachings to daily life. The drive to understand the Bible properly led to new methods of exegesis and innovative Biblical scholarship, but it often degenerated into an outright mistrust of reason. The expulsion of Christian Wolff from the University of Halle in 1723 demonstrated that this distrust of reason could make Pietists as intolerant as the orthodox Lutherans they so vehemently criticized.

Philipp Jakob Spener (1635-1705), usually identified as the father of the movement, hinted at all of these aspects of Pietism in his writings, but it was his followers in Halle, such as August Hermann Francke (1663-1727), who first built Pietism into an organized system, encompassing education and politics as well. The University of Halle, the most prestigious University in Prussia during the eighteenth century, became a bastion of Pietist thought. However, a uniquely Swabian variant of Pietism arose alongside it in Württemberg, and this variant interacted with the political developments outlined in the preceding section. This arose partly from a visit Spener made to


\[52\] Pietism in Württemberg was so strong that Martin Brecht remarks, “No other German state church was so powerfully influenced by Pietism as that of Württemberg.” (“Der Württembergische Pietismus,” in *Geschichte des Pietismus*, vol. 2 *Der Pietismus im achzehnten Jahrhundert* (Göttingen: Vandenhoec & Ruprecht, 1995), 225.
Tübingen and partly because of a desire for spiritual rebirth in a land that was still recovering from the devastation of the Thirty Years War (1618-1648). Bengel emerged as the first and most important leader of Württemberg Pietism. He accepted the tenets of the Halle school, but made two unique contributions to the movement: the first was a new method for biblical exegesis, and the second was his eschatology. The latter bears some resemblance to Hegel's philosophy of spirit, a fact that many scholars misinterpret as a sign that Hegel was a "theologian in disguise."

Bengel spent a great deal of time interpreting the Book of Revelation. He believed that it was fundamentally dissimilar from the rest of the books in the New Testament; it was delivered in the style of an Old Testament prophetic book, and Bengel interpreted it as the direct revelation of Jesus Christ, not the apostle John. Like many Christians throughout history, Bengel believed that Jesus would soon return, and that he himself was a "divinely chosen instrument" whose role it was to identify the date of the second coming. 1836 was the year of Christ's return, according to Bengel. Bengel's apocalyptic thought was probably fueled in part by the political situation in his homeland. As mentioned above, Bengel played an important role in the alliance between Protestant and Constitutionalist ideologies in their battles against Karl Alexander and Karl Eugen. Many Württembergers believed that their fight against the evil (even Satanic) Catholic Dukes was a sign of the end times, and thus Bengel was by no means unusual in his

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53 See the brief treatment of the Thirty Years War earlier in this chapter.

54 Heinze, Bengel und Oetinger als Vorläufer, 22-23.

55 Stoeffler, German Pietism, 102.

56 For a concise description of Bengel's biblical eschatology, see Brecht, "Der Württembergische Pietismus," 255-256.
conviction that his was one of the last generations before the second coming. He lived in
an age in which traditional structures were breaking down, and these moments in history
are always conducive to the development of eschatology.⁵⁷

Although expectations of the last days have pervaded Christian history, Bengel’s
particular version was extremely innovative: he introduced “history” into God’s very
being, and many commentators have drawn a parallel between this aspect of Bengel’s
thought and Hegel’s historical vision. Robert Schneider argues that Bengel was the first
Swabian “Philosopher of History” and that his theology made the entire religious culture
“through and through historical.”⁵⁸ Bengel not only believed that God knew the outcome
of history in advance,⁵⁹ but he believed that God Himself will change in the future.
When Christ eventually returns, he will render the scriptures superfluous since humans
will have a direct knowledge of God. This in turn will inaugurate a new relationship
between man and God, one in which God’s very essence will change.⁶⁰ Of course,
comparing this with Hegel’s vision of a self-actualizing world spirit is problematic,
especially because Bengel’s “chiliasm” is, by Heinze’s own admission, “purely
passive.”⁶¹ In Bengel’s account, it is not man’s job to move along the process of history,
but God’s alone. Oetinger, the second of the great “Swabian fathers,” likewise embraced
the idea of a changing God, although in a much less eschatological context.

⁵⁷ Stoeffler, German Pietism, 103.
⁵⁸ Schneider, Schellings und Hegels Schwäbische Geistesahnen, 39.
⁵⁹ Stoeffler, German Pietism, 102.
⁶⁰ Heinze, Bengel und Oetinger als Vorläufer, 40.
⁶¹ Ibid, 43.
If Bengel is usually compared with Hegel, Oetinger (1702-1782) is most often compared with Schelling, especially in the context of Schelling's early Idealism and Naturphilosophie. Indeed, Oetinger was deeply interested in natural science and constructed a sort of theosophical philosophy of nature. Oetinger refused to compartmentalize human knowledge, instead thoroughly blending theology with philosophy and natural science. Furthermore, there are affinities between Schelling's so-called "real-idealism" and Oetinger's belief in inseparability of body and spirit. Still, in his own time, Oetinger was looked upon as a potentially dangerous rebel and as a disciple of Jakob Böhme, whose works he helped reintroduce to the German public. He first came to public attention in 1765 by translating some of the writings of the Swedish mystic Swedenborg into German, appending his own—often sympathetic—commentary to the translation. The commentary brought Oetinger's orthodoxy into question, and he was questioned by the Stuttgart Konsistorium, the arbiters of Swabian Pietist dogma, in 1766, and he was forced to recant some of his positions. Oetinger's difficulties with the Konsistorium aptly demonstrated that official Swabian Pietism had degenerated into the same doctrinally-obsessed mindset that the original Pietists had criticized.

In addition to his work on Swedenborg, Oetinger devoted himself to the philosophy of another mystic: Jakob Böhme. Oetinger appropriated Böhme's theories regarding the conflicting forces of nature, and combined these ideas with his own kabalistic inquiries to create an elaborate Naturmystik, which comprehensively explained the development of all the powers of nature at creation. Oetinger explained life itself as a

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62 For a recent summary of Oetinger's thought see the collection Mathesis, Naturphilosophie und Arkanwissenschaft im Umkreis Friedrich Christoph Oetingers (1702-1782), ed. Sabine Holtz, Gerhard Betsch, Eberhard Zwink, (Stuttgart: Franz Steiner Verlag), 2005.

63 See Brecht, "Der Württembergische Pietismus," 277.
conflict of forces, thus foreshadowing the ideas of Herder, Goethe, and Schelling. He also seized upon the centrality of light in Böhme’s system and maintained, as Schelling would later in *On the World Soul*, that light is “the first principle of all nature” and the “ultimate principle of all bodies.” Finally, Oetinger was a renowned anti-dualist: although many giants of eighteenth century philosophy (Newton, Leibniz, Wolff) separated matter and spirit, world and God, Oetinger saw them as manifestations of a deeper unity. Oetinger famously declared that “Embodiment is the goal of the works of God (*Leiblichkeit ist das Ende der Werke Gottes*).” Like his spiritual ancestor Bengel, Oetinger believed that the essence of God could change, and that in 1836, a “Golden Age” would begin, one in which spirit and body would be reconciled. God had even foreshadowed this unification of the spiritual and the corporeal by coming to earth in the bodily form of Christ. These four aspects of Oetinger’s thought—his polarity thinking, his explanation of life, his emphasis on light as first principle, and his anti-dualism—have been seized upon by those who argue for connection between Oetinger’s theosophy and Schelling’s *Naturphilosophie*. But we must approach this argument cautiously. Although there is no evidence that Schelling even read Oetinger prior to the construction of his *Naturphilosophie*, Oetinger’s ideas may have permeated Swabian religious culture.

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64 Schneider, *Schellings und Hegels Schwäbische Geistesahnen*, 102-105.


66 On the various intellectual sources for Oetinger’s unification of matter and spirit, see Brecht, “Der Württembergische Pietismus,” 274-275.


68 Heinze, *Bengel und Oetinger als Vorläufer*, 89.

and predisposed Schelling to see Nature as active and spiritual. However, even if Oetinger influenced Schelling in this way, it does not prove that Schelling was simply a “cunning theologian” in the late 1790s. He may have kept Swabian Naturmystik in his philosophical toolbox, but he saw himself first and foremost as a philosopher.

We now have sufficient background to delve into Schelling’s biography. The eighteenth century in Württemberg had produced a unique concoction of political and theological viewpoints. Before mid-century, the Bengel-Moser alliance combined innovative theology with the spirit of political resistance. Yet as the century came to a close, those factors had faded from view, replaced by a stagnant official Pietism and a tendency towards political passivity. Schelling’s family had some connections to the Bengel-Oetinger circle, but it was primarily the stodgy Pietism of the Konsistorium that Schelling encountered during his formative years, a Pietism wholly in line with what he saw as political oppression. Still, although Schelling’s life up to the age of twenty is a story of his gradual rejection of his family’s clerical traditions, he could also draw on an older, more radical tradition. Thus Schelling was both thoroughly Swabian and thoroughly opposed to the present climate of his homeland.

**SCHELLING’S EARLY LIFE: FROM LEONBERG TO TÜBINGEN**

Friedrich Wilhelm Joseph Schelling was born on January 27, 1775, in the small town of Leonberg (also the hometown of Johannes Kepler), where his father had served as “second pastor” or Diakon since 1771.⁷⁰ His father, Joseph Friedrich Schelling, and his

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mother, Gottliebin Marie Schelling, née Cletz, both came from clerical families, and as such, "their mindset was that of Old-Württemberg piety."\(^71\) Both belonged to a group of families deeply influenced by the teachings of Bengel.\(^72\) This family consciousness played an enormous role in the church structure of eighteenth century Württemberg, as it opened up opportunities for young men hoping to become pastors or theologians. In wealthy church families, it was a tradition that every other son studied theology,\(^73\) and nearly half of new clergy each year were sons of either theologians or pastors.\(^74\) Given such traditions, it was assumed that young Friedrich would study theology, and his early education reflected this expectation.\(^75\)

Schelling’s philosophical origins lay not in the culturally dominant northern part of Germany, but in the south (8-10).

\(^71\) Plitt, I: 2-3.

\(^72\) Plitt, I: 3. Plitt notes that Schelling’s father was more a disciple of Bengel’s methods of biblical exegesis than of his apocalyptic eschatology. This undercuts those who argue that Schelling’s early work is directly related to the Swabian theosophical tradition.

\(^73\) Martin Hasselhorn, Der altwürttembergische Pfarrstand im 18. Jahrhundert (Stuttgart: Kohlhammer, 1958), 33

\(^74\) Ibid., 30. 8% of new clergy were sons of theologians, while 36% were sons of pastors or deacons.

\(^75\) It is striking how much English-language Schelling scholarship neglects Schelling’s biography. A newcomer to German Idealism could read Dale Snow’s Schelling and the End of Idealism (Albany: SUNY Press, 1996) and still have no idea what area of Germany Schelling came from. For her, and for Alan White in his Schelling: An Introduction to the System of Freedom, (New Haven: Yale University Press, 1983), the only contexts that matter are philosophical contexts, and this means beginning with Spinoza and the Pantheism controversy. Even Beiser’s excellent German Idealism, as John Zammito points out in “Reconstructing German Idealism and Romanticism: Historicism and Presentism,” Modern Intellectual History 1 (2004): 427-438, adopts an intensely “internalist” strategy in the belief that context can be of little help in guiding us through the labyrinth of Idealist thought. Robert Richards’ intensely biographical approach in The Romantic Conception of Life: Science and Philosophy in the Age of Goethe (Chicago: University of Chicago Press, 2004) does better in this regard, but given the scope of his project, he cannot and does not devote a large section to Schelling’s early life. For more information on Schelling’s early biography, see Manfred Frank and Gerhard Kurz, eds., Materialien zu Schellings philosophischen Anfängen (Frankfurt a.M.: Suhrkamp, 1975), especially 53-88. Much of the biographical material contained therein can also be found in volume one of Horst Fuhrmans, Schelling: Briefe und Dokumente (Bonn: Bouvier, 1962 -), henceforth cited as BuD.
At the time of Schelling’s birth, Joseph Schelling was a moderately successful theologian. Although his most important works dealt primarily with oriental languages, especially Arabic, he had also studied philosophy in his youth. He worked with the famous Leibnizian logician Gottfried Ploucquet, under whose supervision he wrote a *Magisterarbeit* in 1758. In 1777, two years after Schelling was born, his father’s career took a positive turn, as he was called to a position at the Bebenhausen Klosterschule. The Klosterschulen in Old Württemberg were the preparation grounds for young theology students who would eventually attend the famous Tübingen Stift. Thus, Schelling spent his early years in Bebenhausen, a picturesque town about an hour away from Tübingen, located squarely within the forests of what is today the Schonbuch Naturpark. Schelling probably gained an early appreciation from his surroundings, enjoying the beautiful view of the valley heading towards Tübingen and wandering around in the forests whose “wild beauty” he praised in a childhood essay on the history of the Kloster. At the age of eight, he began his study of ancient languages, and at age ten, Joseph Schelling sent his son to Latin school in Nürtingen, where he met Friedrich Hölderlin for the first time. In Nürtingen, Schelling lived with his uncle Köstlin, a Diakon in that town. Those who argue for an Oetinger-Schelling connection often point to Köstlin as a possible missing

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77 Heinrich Knittermeyer, *Schelling und die Romantische Schule* (München: Ernst Reinhardt, 1929), 36. For a more detailed description of Schelling’s youthful “Geschichte des Klosters” see Plitt, I, 6-11.

link, but this is pure conjecture.\textsuperscript{79} Regardless, Schelling did not remain in Nürtingen for long. In late 1786, his teachers reported to the Schellings that young Friedrich was so far ahead of his classmates that he could no longer learn anything at the Latin school.\textsuperscript{80} This put his father in a difficult position: his son, who would shortly turn twelve, was too young to enter the Klosterschule, which normally accepted students at the age of fourteen.\textsuperscript{81} He had no choice but to allow Friedrich to enroll informally with his own students, who were between sixteen and eighteen years old.\textsuperscript{82} Still, this was no problem for young Friedrich: he excelled in his studies here, and rather than enroll him in a Klosterschule when he was old enough, his father attempted—and succeeded—to enroll him at the Tübingen Stift, where he would make friends with Hölderlin and Hegel, both five years his senior. Ironically, by sending him to Tübingen, his father propelled him along an unexpected path: it was in Tübingen that Schelling would become religiously, politically, and philosophically radicalized, embracing philosophy instead of theology and breaking with his family’s clerical past.

\textbf{LIFE AT THE STIFT, 1790-1794}

Schelling’s time in Tübingen was productive but ultimately unhappy. The Pietists in the church of Württemberg—partly out of nostalgia for the sixteenth century, and partly because of an inherent resistance to reform—mandated strict discipline in all theological

\textsuperscript{79} Reiner Heinze, \textit{Bengel und Oetinger als Vorläufer}, 107. Heinze admits that Schelling only mentions Oetinger in his letters after 1802, leading us to wonder what impact Köstlin really had on him.

\textsuperscript{80} Plitt, I: 12.

\textsuperscript{81} Plitt, I: 13.

\textsuperscript{82} \textit{BuD}, I: 5.
schools. This applied not only to the Stift, but to the Klosterschulen as well. The church used the latter to instill discipline at an early age. There, a student could expect punishment for such sins as talking to girls, taking trips home, visiting shops, or even speaking German. Life at the Stift was hardly different. Since their education was paid for by the state, Karl Eugen took a personal interest in his future clergy. They were to be educated in the "spirit of obedience and traditional discipline," thus preparing themselves to fight against those who questioned their divinely appointed rulers. The rules of the Klosterschulen still applied: every aspect of the students' lives was regimented, from their dress to the fixed times of morning prayers and weekend church services. And of course, smoking and dancing were out of the question. Friedrich Nicolai, whose account of his visit to Tübingen would later spawn an intellectual feud with Schelling, described the atmosphere of the Stift as conformist and Spartan.

Unfortunately, we have very few letters from Schelling during his first four years at the Stift, and none at all to or from Hegel and Hölderlin. There is good reason for this: until Hölderlin and Hegel graduated in 1793, there was simply no need for correspondence. Fortunately, Hölderlin was extremely close to his mother and wrote to her religiously, often complaining about his life at the Stift and subtly asking her for permission to leave. Shortly after his arrival in 1788 he wrote to her of his "annoyance,

83 Martin Hasselhorn, Der altwürttembergische Pfarrstand
84 Ibid., 41.
85 BuD, I: 14.
86 BuD, I: 14.
87 Nicolai reasoned that the "external discipline and order partially robbed [the students'] character of liveliness and originality, which were replaced by a noticeable conformism." (Nicolai, Gesammelte Werke, 22 vols., eds. Bernard Fabian and Marie Luise Spieckermann (New York: Georg Olms, 1985 - ), vol. 20, XI: 92.
the confinement, the unhealthy air, the poor lodgings,” all of which “perhaps weaken my body more than a freer place would.” “O dear Mamma! My blessed father used to say that his university years were his happiest. One day I’ll have to say that my university years embittered my life forever.” In any epoch, such an oppressive atmosphere would engender resentment on the part of students. But in the winter of 1790, when Schelling matriculated, the situation was greatly exasperated. The fresh air of freedom was blowing in from the west.

Because of Württemberg’s proximity to France, and because the administration of the Stift could easily be construed as akin to despotic monarchs, the French Revolution was both geographically and intellectually close to the students in Tübingen. The Revolution tantalized Schelling and his classmates—across the Rhine, a new age was dawning, yet they were unable to participate in those world-changing events. Instead, they coped with them intellectually. They read Rousseau, recited the hymns of the great German poet Klopstock, and discovered in Spinoza an alternative to orthodox Christianity. They celebrated Bastille day, admired Schiller’s rebellious Sturm und Drang play The Robbers, and explicitly likened their own Duke to the justly overthrown French King. And although the famous story of Hölderlin, Schelling, and Hegel planting a liberty tree is probably apocryphal, Schelling was reputed to have translated

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88 Hölderlin to his mother, GSA, VI, 1: 45-46.
89 BuD, I: 15-16.
90 BuD, I: 18.
the *Marseillaise* into German, prompting the suspicions of Karl Eugen himself, and leading to a personal inquisitorial meeting.\(^91\)

The Duke traveled to Tübingen and had all the *Stipendiaten* assembled in the mess hall, and then made Schelling and a few other suspected radicals step forward. He had a copy of the translated *Marseilleise* in his hands, and then alluded to Schelling: “In France, a neat little song has been composed, and it is sung by the Marseilles bandits; *he* knows it.” Karl Eugen, according to Plitt, then

- Fixed his eyes on Schelling sharply and for a long time.
- Schelling, however, looked at the Duke with his bright blue, brilliant eyes, equally unmoved. This dauntlessness pleased the Duke so much that he desisted from any further reprimands.\(^92\)

Whether or not this is true, little of direct political import arose from the students’ actions. Even Hölderlin, who may have favored violent revolution and the establishment of a Swabian republic, was still just a harmless student.\(^93\) Nonetheless, as Marx quipped, the Germans always *think* what the French actually *do*.\(^94\) Schelling and his friends would

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91 On Schelling translating the *Marseillaise*, see Plitt, I, 31. Plitt argues that Schelling was not really the translator, but that is what Karl Eugen believed.

92 Plitt, I: 31-32.


94 “While the French and English at least stick to the political illusion, which is after all closer to reality, the Germans move in the realm of the “pure spirit,” and make religions illusion the driving force of history. The Hegelian philosophy of history is the last consequence, reduced to its “clearest expression,” of all this
carry out a revolution in thought, one which had a twofold origin: first, in the monism of Baruch Spinoza, and second, in the Critical philosophy of Immanuel Kant. Ironically, his teachers at the Stift would unwittingly provide him with some of the tools to carry out this revolution.

When Schelling arrived in Tübingen, the once proud Stift was experiencing a crisis. During the 1780s, Karl Eugen had established his own academy, the so-called Karlsschule in Stuttgart, dedicated to the training of military officers and government bureaucrats, but encompassing the natural sciences and medicine as well. Unlike the Tübingen Stift, whose student body was comprised primarily of the sons of existing clergy and theologians, the Karlsschule was ostensibly open to children of all backgrounds. This was where Friedrich Schiller, the son of a military doctor, was educated in medicine in the late 1770s. The creation of the Karlsschule was not intended to weaken the Stift—if anything, it was intended to provide a better education for non-clergy—but this was precisely the effect it had, diverting funding and faculty from Tübingen to Stuttgart. The “Ephorus,” essentially the head of the Stift from 1777 to 1806, was Christian Friedrich Schnurrer, originally a professor of oriental languages whom the Duke chose to lead the Stift because of his youth and vitality. The imposing yet somewhat liberal Schnurrer was the “dominant personality” at the Stift during his reign as Ephorus, a man who in addition to his administrative duties lectured on the Old and New Testament and who commanded his students’ respect and admiration.

German historiography for which it is not a question of real, nor even of political, interests, but of pure thoughts...." (Karl Marx and Friedrich Engels, Collected Works (New York: International, 1976), 5: 55.

95 Martin Leube, Das Tübinger Stift 1770-1950: Geschichte des Tübingen Stifts (Stuttgart: JM Stemkopf Verlag, 1954), 4-5.

96 Leube, Das Stift, 9-10.
Schnurrer had to deal with the perceived decay of the *Stift*, and could not have foreseen the upheavals his school would undergo in the aftermath of the French Revolution. Many of the faculty were neither willing nor able to cope with new ideas, which fed the dissatisfaction of students like Schelling.

While Schnurrer was the dominant administrative figure during Schelling’s education at the *Stift*, the most powerful theologian was undoubtedly Gottlob Christian Storr. Although he was famous—Kant even mentioned the “famous Doctor Storr in Tübingen”—Storr was an old-fashioned theologian. He constructed his own theological system and dismissed the theological innovations of the eighteenth century. He had little use for radical biblical criticism in the style of Semler and Reimarus, and emphasized the absolute and divine authority of the scriptures. Not surprisingly, he showed little interest in the Kantian philosophy or its implications for theology. More balanced in this respect was Storr’s student Johann Friedrich Flatt, “Tübingen’s only philosopher of importance.” Flatt was well read in the critical philosophy, and attempted to make Kant agree with his teacher’s dogmatics. Thus, Flatt was a prime example of the retrograde Kantianism Schelling later pilloried in his *Philosophical Letters*. Schelling attended the lectures of Schnurrer, Storr, and Flatt, but he also learned much from the philosophical faculty.

Schelling’s classes in Tübingen—especially during the first two years, which were intended to prepare the students for more rigorous theological training—were surprisingly diverse. Between 1790 and 1792, he received instruction not only in the Old

97 Henrich, *The Course of Remembrance*, 34.
98 Ibid., 40.
and New Testament, but in philosophy, natural law (*Naturrecht*), and aesthetics as well. His courses on philosophy familiarized him with, to name a few, Plato, Epictetus, Cicero, Malebranche, Locke, Leibniz, and even Kant. In spite of this broad curriculum, Schelling was dissatisfied with his philosophical training, especially as it related to the sage of Königsberg. His professors, especially Flatt, invoked a safe version of the critical philosophy; one stripped of its radical tendencies and suited to upholding traditional theology. Schelling would later complain that his teachers justified every irrational dogma by invoking practical reason, thus perverting Kant’s teachings. In response, Schelling and his friends conducted their own readings of Kant in private. We will see Schelling’s full backlash against his teachers in Chapter three.

As theology students, Hölderlin, Schelling, and Hegel were most interested in the application of Kantian principles to theological questions. Carl Immanuel Diez, a friend of Schelling’s, took Kant’s teaching to its most radical conclusions and eventually abandoned theology altogether. Kant had argued in the *Critique of Pure Reason* that human knowledge is limited; all our knowledge must lie within the boundaries of possible experience, and when reason attempts to overstep those boundaries, it becomes hopelessly entangled in contradictions. And who oversteps those boundaries more than theologians? According to Diez’s reading of Kant, theology as a whole is meaningless. Divine revelation is impossible, the Bible is simply a contradictory product of misused human reason, Jesus and his apostles were merely superstitious fools, and Christian

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99 *BuD*, I: 19.

100 Wilhelm Jacobs stresses the conflict between the “official” Kant and the one to which the students were drawn. It was certainly no crime at the Stift to study Kant, but Schelling and his friends wanted to use him to in the service of a wholly rationalized theology. See-Zwischen Revolution und Orthodxie? Schelling und seine Freunde im Stift und an der Universität Tübingen: Texte und Untersuchungen (Stuttgart-Bad Cannstatt: Frommann-Holzboog, 1989), 52-53.
ethical teaching is invalid because it is based on revelation rather than reason.\textsuperscript{101}

Theology is a "science" which seeks to prove the unprovable. Diez's critique flowed directly into German idealist philosophy, for Henrich notes that "only a few years later, the same model, from a completely different perspective and with far greater philosophical skill, was elaborated by Schelling."\textsuperscript{102}

We can gain an understanding of Diez's influence on Schelling by examining his much more well-documented impact on Hölderlin. Hölderlin had already come under Diez's influence as early as 1789 and no doubt infused the sixteen year old Schelling with this radical critique of Christianity. That Hölderlin accepted Diez's critique is evidenced by a letter to his mother in 1791. Hölderlin's mother was deeply religious and he was always afraid to disappoint her by falling away from Christian doctrine; nevertheless he was usually remarkably candid about his theological doubts, often gently trying to convince her that strict adherence to orthodoxy was unimportant.\textsuperscript{103} Hölderlin tells her of the hollowness of all proofs for God's existence, and he also relates his discovery of Spinoza, who would have an enormous impact on the thought of the young Schelling:

\begin{flushright}
101 In Diez's extant theological writings, he rigorously applies Kantian principles in order to show that revelation involves an overstepping of the proper boundaries of reason. Any proof of divine revelation involves dealing with "supersensible objects" which reason cannot know. Reason continuously tries to find a "bridge" to the supersensible but it inevitably fails. Any so-called "proof" of divine revelation is merely the "aping of chimeras." See Diez, "Möglichkeit einer Offenbarung (frühere Fassung)" in Diez, Briefwechsel und Kantische Schriften: Wissensbegründung in der Glaubenskrise Tübingen-Jena (1790-1792), ed. Dieter Henrich (Stuttgart: Klett-Cotta, 1997), 133. Henrich's edition of Diez's letters also provides a portrait of the intellectual debates at the Stift during Schelling's years there.

102 Henrich, The Course of Remembrance, 41.

103 On Hölderlin's relationship with his mother, see Constantine, Hölderlin, 3-4. The letter cited below is one example of his tendency to try to break free of her dogmatic convictions.
I studied that part of philosophy (*Weltweisheit*) which treats of the rational proofs for the existence of God... although it led me for a time to thoughts that would perhaps have made you uneasy had you known of them. For I quickly sensed that these rational proofs for the existence of God and also for immortality were so imperfect that they could be overthrown altogether by clever opponents, at least in their principle parts. In this period, writings by and about Spinoza fell into my hands. [Spinoza was] a great noble man from the previous century, who was nevertheless, strictly speaking, an atheist (*doch Gottesläugner nach strengen Begriffen*). 104

It was this attitude that Schelling imbibed from his friends in Tübingen, and that would propel him first towards an unorthodox understanding of scripture, and then finally to an outright rejection of theology altogether.

Before we conclude this chapter, we must also look at one aspect of his Tübingen education which may have laid the groundwork for his *Naturphilosophie*. In addition to his education in theology and philosophy, between 1790 and 1792, Schelling attended the lectures of Christian Pfleiderer, who taught mathematics as well as theoretical and experimental physics. 105 This is important, for it demonstrates that Schelling encountered the natural sciences long before his stay in Leipzig in 1797-1798, and thus the impulse to

104 Hölderlin, *GSA*, 6, 1: 63.

105 *BuD*, 1: 19.
construct a Naturphilosophie may have already been present in his Tübingen years. He certainly ignores that topic in most of his early writings, which begin to appear in 1792. However, in later chapters I will show that a number of his early philosophical works in 1795-1796—the Philosophical Letters, the General Overview, and even the Oldest System Program of German Idealism, if one concedes the authorship to Schelling—betray a latent interest in natural science.

Nonetheless, Schelling wouldn't turn to natural science until he first turned towards philosophy, and nothing was more important to this latter turn than his discovery of Fichte in 1793-1794. The spell which Fichte cast over the young Schelling was the most important aspect of his intellectual development in Tübingen. On New Year's Day of 1795, while still preparing to receive his theological degree, he wrote to Hegel:

I cannot give you much of a report on my theological works. For about a year they have become minor matters to me. The only thing that interested me up until now were historical investigations of the Old and New Testaments and the spirit of the first Christian century—here, there is still much work to be done;—for some time, however, I have abandoned this. Who wants to bury himself in the dust of antiquity, when in the course of his own time every moment rides on with him? At present, I live and breathe philosophy.106

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106 Schelling to Hegel (6 January 1795), in BuD II: 57.
Thus, in the span of a year, Schelling abandoned biblical criticism and became Fichte's most promising philosophical disciple. However, to understand Fichte's impact on Schelling, we must also understand Fichte's two most important philosophical predecessors, Immanuel Kant and Karl Leonhard Reinhold. Therefore, the next chapter will begin with an excursus in Kant, Reinhold, and Fichte's philosophy, and then turn to an examination of Schelling's first two philosophical works: *On the Form of Philosophy in General* (1794) and *On the I as Principle of Philosophy* (1794).
Chapter 2: Schelling’s Philosophical Beginnings

SCHELLING AND CLASSICAL GERMAN PHILOSOPHY

The seeds of Schelling’s *Naturphilosophie* were sown during his early life and education. Not only did he develop an appreciation for nature at an early age, wandering the woods in Bebenhausen, but he also received basic training in the natural sciences at the *Stift*, where he most likely imbibed—albeit unconsciously—the dynamic view of nature found in Oetinger’s writings. But this does not come close to explaining the origins of his *Naturphilosophie*, especially since Schelling saw himself neither as a theologian nor as a disciple of Oetinger. Something crucial happened between his arrival in Tübingen and his turn to the natural sciences: by 1794, Schelling had abandoned theology altogether and instead aimed to solve—like so many others before and after him—the fundamental problems left behind by Immanuel Kant’s critical philosophy. For the purpose of explaining the genesis of Schelling’s *Naturphilosophie*, his confrontation with this philosophical context was decisive in two ways: first, his dynamic philosophy of the human mind, which closely followed the arguments of Johann Gottlieb Fichte (1762-1814), foreshadows the dynamism with which he would later infuse nature. Just as Schelling refused to treat the mind as a “thing” in his early writings, so too would he refuse to see nature as a lifeless and powerless object. Second, and more importantly, Schelling’s attempts to solve the problems of critical Idealism pushed him headlong into
Naturphilosophie, which emerged as the only way to unify philosophy.\textsuperscript{107} In the eyes of the Idealists, Kant's system, although a great step forward for philosophy, utterly failed to explain something absolutely central for a philosophy of human life: how can a mechanical, physical world, in which every phenomena supposedly has a direct cause, be reconciled mankind's freedom, its ability to actually act in that world? Kant failed to provide a satisfactory answer to this question, as it was still possible to declare that humans are still cogs in a giant world-machine. What Kant needed was a vision of nature in which mankind was at home, a nature which left open room for freedom. This is what drove Schelling towards Naturphilosophie. Fichte, although he was also obsessed with freedom, showed almost no interest in nature at all, and his system cried out for someone to restore nature to her proper place.\textsuperscript{108} Thus, Württemberg may have provided the seeds

\textsuperscript{107} Philippe Gros, in his \textit{Système et Subjectivité: L'enjeu de la question du système Fichte, Hegel, Schelling} (Paris: Vrin, 1996), refers to Schelling and Hegel's gradual realization of the "inadequacy of the I as principle of philosophy" (85-87). This parallels my narrative in this chapter and the next. The never-ending attempts to find a first principle of philosophy could not possibly remain limited to the sphere of the I or Ego. Eventually, a greater synthesis was needed which encompassed both subject and object, spirit and nature. Schelling's Naturphilosophie points the way towards that synthesis, which would be explicitly stated in the \textit{Presentation of my System of Philosophy} in 1801.

\textsuperscript{108} I largely agree with Kurt Schilling's appraisal of the Kant-Fichte-Schelling relationship. Schilling actually attempts to contextualize Schelling only with reference to Kant, and not to Fichte. This approach is somewhat extreme, but given the importance of the \textit{Third Critique}, it is at least somewhat plausible. Despite their personal acquaintance, Fichte and Schelling had drastically different approaches to philosophy, and Schelling actually has more in common with Kant. The only things that Schelling took from Fichte were his concepts and his terminology, which he would employ in his description of nature. (\textit{Natur und Wahrheit: Untersuchung über Entstehung und Entwicklung des Schellingschen Systems bis 1800} (Munich: Reinhardt, 1934), 15. "Schelling, [although] at first an enthusiastic disciple of Fichte, increasingly realized during the course of his development that, from the beginning, his goals and intentions were completely different from Fichte's." (41). Intraud Görland agrees that Schelling largely appropriates Fichtean concepts for a different purpose (\textit{Die Entwicklung der Frühp hilosophie Schellings in der Auseinandersetzung mit Fichte} (Frankfurt a.M.: Klostermann, 1973), 9. Michael Blamauer explores the disjunct between Fichte and Schelling in another way, stressing that Schelling's Naturphilosophie was yet another attempt to "ground" transcendental philosophy, which prior to Schelling saw nature only as a "necessarily conditioned object which is constituted by the knowledge-conditions (Erkenntnisbedingungen) of the subject." Schelling discussed the "unconditioned" in his early philosophy but would later transfer this discussion over "onto the sphere of nature" in order to avoid an "infinite regress in the search for a first cause" (\textit{Subjektivität und ihr Platz in der Natur: Untersuchung zu Schellings Versuch einer naturphilosophischen Grundlegung des Bewusstseins} (Stuttgart: Kohlhammer, 2006), 103-104. Of course, those who believe in the caricatures of Schelling's Naturphilosophie celebrate Fichte's neglect of natural
of Schelling’s *Naturphilosophie*, but it was the confrontation with Kant and Fichte which began the growth process.

In order to properly deal with these two aspects of Schelling’s thought, it is necessary to examine not only Kant and Fichte, but the wider philosophical climate to which *they* were responding. Therefore, this chapter will proceed as follows: first, I will summarize Kant’s attempts—beginning with the *Critique of Pure Reason* (1781)—to put metaphysics on a new, more solid foundation. I will also discuss the *Pantheismusstreit* or pantheism controversy of the mid 1780s. The *Pantheismusstreit* was an intellectual maelstrom which drew in Germany’s most important intellectuals, including Kant himself, and it raised the possibility that a revived, vitalized version of the system of Baruch Spinoza (1632-1677) could serve as an alternative to Kant’s cautious philosophy. Second, I will discuss the systems of Karl Leonhard Reinhold (1757-1823) and Fichte, both of which attempted to give Kant’s philosophy a unity it previously lacked. Finally, I will discuss Schelling’s first two philosophical works, *On the Possibility of a Form of All Philosophy* (1794) and *On the I as Principle of Philosophy* (1795), which represent Schelling’s own attempts to unify the diverse aspects of Kant’s system. By the end of the chapter it will be clear that, from the beginning, Schelling sought a much grander synthesis than any of his predecessors, one which drove him towards a study of natural science and an effort to bring together mind and nature in a way neither Kant nor Fichte

science. Daniel Brazeale, for example, says that “What is striking about Fichte’s concept of nature is how little he believed one can learn about nature from the a priori standpoint of philosophical reflection—which may explain why he himself showed so little interest in developing this branch of his system....Fichte would appear to have far more in common with what we today call the philosophy of science than with the a priori *Naturphilosophie* of Schelling and Hegel.” (“The Spirit of the *Wissenschaftslehre*, in Sally Sedgwick, ed., *The Reception of Kant’s Critical Philosophy* (New York: Cambridge University Press, 2000), 179). By the end of this dissertation it should become abundantly clear that Schelling did not believe we could investigate nature from an armchair.
would have countenanced. His first two philosophical works, though they pay almost no
attention to nature, are thus vital for an understanding of why Schelling turned to
*Naturphilosophie* in the first place.

**KANT'S NEW METAPHYSICS AND ITS CONTEXT**

Before 1781, when Kant published his *Critique of Pure Reason*, German philosophers
had largely divided themselves into two camps. One side could trace its roots back to the
great German rationalist, Gottfried Wilhelm Leibniz (1646-1715). Unfortunately,
Leibniz’s philosophy largely remained in private correspondence and short essays, and
his largest book, the *New Essays concerning Human Understanding*, was not discovered
by the German public until the 1760s. Because of that, most eighteenth century
Leibnizians were really followers of Christian Wolff (1679-1754), who, in addition to
carrying on a lengthy correspondence with Leibniz himself, shared many of his rationalist
commitments, and published his systematic *German Metaphysics* while teaching at Halle
in 1719. Both men believed that philosophy could be carried out *a priori*, or in other
words, deductively from first principles. For instance, even the nature of God could be
deduced by the human mind. By defining God as a perfect being, the rest of his
properties could then be discovered. By mid-century, the “top-down” metaphysical
systems of the German Wolffians were also characterized by poor writing and an
incredibly difficult vocabulary. While there were some Wolffians who wrote well, such
as the great Jewish *Aufklärer* Moses Mendelssohn (1729-1786), their stylistic faults made
most of them unattractive to the lay reader.

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109 It seems strange, but we know far more about Leibniz today than Germans did in Kant’s time.
Separate from, and sometimes opposed to the Wolffians were the *Popularphilosophen*, whose founding father was Christian Thomasius (1655 – 1728), the first professor in Germany to lecture in the vernacular. Many of them were still loyal to Leibniz and Wolff, but they were repulsed by Wolff’s inscrutable writing style. They helped bring the ideas of John Locke (1632-1704) and David Hume (1711-1776) to Germany, and they were also impressed by Hume’s elegant style, which conveyed deep philosophical ideas without boring his readers to tears. The *Popularphilosophen* were committed to the project of the *Aufklärung* or Enlightenment, and wanted to spread their beliefs to the average reader. British empiricism and French sensationalist philosophy crept into their systems, and some even became interested in Hume’s skepticism, which rejected the notion that humans can ever reach certainty or ultimate truth. Hume argued, like John Locke, that all knowledge comes from the senses. But if our senses are inherently unreliable, then all knowledge is, as well.

Admittedly, the division between Wolffians and *Popularphilosophen* was not as hard and fast as implied by the preceding paragraphs. No Wolffian completely disregarded empirical research, and neither did most *Popularphilosophen* completely abandon deductive reasoning. Yet they are useful categories for understanding Kant’s project, because at different points in his early, pre-critical career, he belonged to both factions. Kant, who was born in a Prussian Pietist family, was trained by a Wolffian at

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111 Frederick Beiser, *The Fate of Reason*, 165-166.

112 Kant’s personality in old age is well-known. The stories of the citizens of Königsberg setting their watches based on his daily walks have reached mythological status. Nonetheless, we must remember that
the University of Königsberg, but by 1764, his sensationalist tendencies clearly manifested themselves.\footnote{This is especially apparent in Kant’s prize essay for the Prussian Academy of Sciences in 1763. At issue was whether the mathematics and metaphysics could attain the same level of certainty. Moses Mendelssohn, as a good Wolffian, answered yes, and he was awarded the prize. However, Kant’s response, which essentially was awarded second place, was also published by the academy. Kant answered that philosophy—specifically regarding ethics—could not use the same methodology as mathematics, thus siding more with empiricism. Kant’s “Untersuchung über die Deutlichkeit der Grundsätze der natürlichen Theologie und der Moral” (\textit{AA}, II: 275-301) can be found in English in Kant, \textit{Theoretical Philosophy 1755-1770}, trans. David Walfrod, Ralf Meerbote (New York: Cambridge University Press, 1992), 247-75.} By the time he wrote his \textit{Inaugural Dissertation} in 1770, a work which foreshadowed many of the basic aspects of the \textit{Critique of Pure Reason}, it was clear that Kant’s main aim was to synthesize the rationalist and empiricist traditions and create an altogether new kind of metaphysics. He wanted to retain the beneficial aspects of empiricism without falling into the sort of skepticism that Hume and his German followers had embraced.

The foundation of Kant’s project is the \textit{Critique of Pure Reason}, which limits the scope of reason by performing an exhaustive inventory of the mind’s powers. According to Kant, before we can actually start philosophizing about the world, we need to understand our own minds; the new metaphysics must therefore arrive at “transcendental knowledge,” which Kant defines as “all knowledge which is occupied not so much with objects as with the mode of our knowledge of objects in so far as this mode of knowledge is to be possible \textit{a priori}.”\footnote{All translations of the First Critique are from Immanuel Kant, \textit{Critique of Pure Reason}, trans. Norman Kemp Smith (New York: Macmillan, 1929). A11/B25. For easier reference, all citations will be made to the original A/B pagination.} In other words, philosophers cannot take reason for granted, and apply it to whichever things they please. Rather, Kant argues that we must first
figure out exactly what we can and cannot know. Then, and only then, after philosophy has been put on a firm foundation, can a stable philosophical edifice be constructed.

In order to lay this firm foundation, Kant proposes a radical change in the way we think about knowledge. Even today, most people assume that there are objects “out there” in the world, situated in space and time, which somehow impress themselves upon our minds and create our experiences. From this common sense standpoint, the mind is a passive receiver of information. Kant turns this standpoint on its head, explaining that space and time are not features of the external world, but are instead structures of our own minds which we impose upon the raw data presented to our senses. But even after we put objects into space and time, we must organize the data even further: Kant argues that we only have coherent experience when the mind imposes order on this data, and it does so through what Kant called categories, or “pure concepts of the understanding.” For Kant, without space, time, and the categories, the human mind would be as useless as the human eye in a pitch black room. Space, time, and the categories act like night vision goggles, allowing us to see things clearly and have meaningful sensations and empirical knowledge.

Nonetheless, like the empiricists, Kant recognizes the limits of this type of knowledge. For him, it is the “understanding,” not reason, which processes everyday sense experience, and is also responsible for the natural sciences. This is a major shift, for it introduces a distinction into reason which most rationalists would never allow. Kant claims that the understanding is perfectly capable of performing its tasks—and the achievements of Isaac Newton prove this—but it is only equipped to process this type of data, which must lie “within the bounds of possible experience.” As a result, the human
mind is hopelessly cut off from ultimate truths. We have knowledge only of phenomena, not ultimate reality, or what Kant calls the “noumenal world.” We know objects as they appear to us, but we cannot know them directly. In a rare poetic passage, Kant describes the phenomenal world as an island, “the land of truth—enchanting name!—surrounded by a wide and stormy ocean, the native home of illusion, where many a fog bank and many a swiftly melting iceberg give deceptive appearance of farther shores....” Kant will warn us that, as soon as we leave this small, safe, “land of truth” and attempt to know objects beyond appearances, we are destined for philosophical danger.

The “wide and stormy ocean” is the land of what Kant calls the “thing-in-itself.” For Kant, the thing-in-itself could be anything at all. We know that the thing-in-itself is the source of our experience, but we literally cannot say anything about it beyond that. Thus, we know it only as some unidentified X which causes our experience. For both Kant’s critics and his Idealist followers, the doctrine of the thing-in-itself was deeply unsatisfying, for it seemed to violate Kant’s own rules about the application of the categories. One of Kant’s categories is causality, and it seems to be invoked when he intimates that the thing-in-itself causes our experiences. But Kant also says quite clearly that the categories cannot be applied beyond the realm of possible experience, and the thing-in-itself certainly lies beyond this boundary. How then, can Kant claim that the thing-in-itself, that unidentified X, causes our experiences by acting upon our sensory organs? Friedrich Heinrich Jacobi famously quipped that “I need the assumption of thing-in-themselves to enter the Kantian system; but with this assumption it is not


116 Kant scholars disagree over whether “Noumenon” and “Thing-in-itself” can be used interchangeably, but for the purposes of this brief exposition, I will use them interchangeably.
possible for me to remain inside it." It was equally repulsive to Fichte, who would later completely banish it from his system starting with the *Aenesidemus* review. Schelling will do the same in both his theoretical philosophy and in his *Naturphilosophie*.118

Nonetheless, the thing-in-itself was a cornerstone of Kant's own philosophy. Because he believed that reason, if misused, could undermine belief in God and morality, Kant avoided any attempt to know things-in-themselves. Indeed, he identified the attempt to do so as the source of all faulty metaphysics. Reason, when used properly, establishes the rules of logic and can be used *practically* to decide questions of action and morality.119 But when reason oversteps this boundary and applies the categories of the understanding to things *beyond* possible experience, it becomes *dialectical*. For Kant, "Dialectic" means the process by which reason oversteps its boundaries and falls into contradiction with itself. His use of the term is wholly at odds with Hegel's; for the latter, the dialectic is something positive, the real method of discovering philosophical truth. Hegel's dialectic is a series of stages whereby apparent contradictions are negated and superseded, ultimately yielding philosophical progress. For Kant, the "dialectic" of reason results in dogmatism, contradiction, and error. Kant's "Transcendental Dialectic" is thus a sweeping demonstration of the many ways reason goes astray. In the "Paralogisms of Pure Reason," he shows that how it falsely establishes the individual self


118 Schelling's rejection of the thing-in-itself will not be a major theme of this dissertation. Nonetheless, there is a way in which his *Naturphilosophie*—by making nature and mind identical—washes away the entire problem. If mind and nature are identical, then there should be no inability for us to cognize it! See my discussion of the *Ideas* for more on this.

as a substance, even though, as Hume pointed out, it is difficult to establish the mind as anything more than a bundle of disparate sensations. Later, Kant shows how all proofs of God's existence are impossible. And finally, in his famous "Antinomies," he demonstrates that reason can simultaneously "prove" contradictory things about space, time, God, and freedom. Reason, allowed to outstrip its proper limits, gives rise to the nonsense of self-contradiction.

Nevertheless, Kant offers us a way out. After telling his readers that humans can never arrive at ultimate truths, he attempts to show that, despite our inability to prove things theoretically, we are justified in assuming them practically. For example, although we cannot know that we are free beings, we are justified in assuming freedom practically. In our everyday life, we consistently believe that some actions are blameworthy, precisely because we assume that a criminal could have and ought to have done something differently. If we really believed that every criminal's actions were predetermined by physical causes, we could never find him or her guilty. Therefore, Kant argues that, so long as we cannot disprove freedom, we are justified in assuming it. He offers a similar argument for assuming the existence of God and immortality: if there is no God to mete out punishment in the afterlife, then there can be no ultimate grounding for morality here on earth. After all, the just often suffer, and the wicked often live wonderful lives. God and immortality are needed to make us believe that virtue will eventually be rewarded with happiness. We cannot prove them, but we must assume them.

120 As we will see, Schelling substantializes the "Absolute I" in his On the I as Principle of Philosophy. But he does so in an attempt to solidify Kant's discoveries.
Despite Kant’s attempts to *practically* rescue the very truths he so effectively demolished *theoretically*, the *Critique of Pure Reason* left many of his readers disappointed. Some resented the fact that Kant took away the ultimate truths which formed the basis of religion and philosophy since antiquity. Moses Mendelssohn, though a friend of Kant’s, bitterly referred to him as the “all-destroyer.” The Romantic writer Heinrich von Kleist, after seeing Kant question all the truths he cherished, fell into existential despair and would eventually commit suicide. Kant was also criticized both by Christian fundamentalists and religious radicals. Friedrich Heinrich Jacobi believed that Kant’s system led ultimately to atheism, while radicals (like Schelling) contended that Kant, with his “practical proof” of God, had simply smuggled religion in through the back door. Thus, Kant’s *Critique of Pure Reason* initially drew more criticism than admiration. And in 1785, an attractive philosophical alternative arose when the German public suddenly warmed to the pantheism of Baruch Spinoza, who argued that, contrary to the Christian tradition, God does not dwell outside the physical world, but rather is identical to it. Spinoza argued for a particular form of monism: he believed that there was only *one* substance in the world, a substance which actually created itself. That one substance is God. Spinoza used this idea to solve the Cartesian problem of mind-body dualism. Descartes had suggested that there were two substances in the world: mind and extension. Spinoza, on the other hand, said that mind and extension were merely two “attributes” of God, and that there was no difficult explaining their interaction.

The idea that nature was universal, all-powerful, and even divine seemed like an answer to many philosophical and natural-scientific problems in the mid 1780s. Indeed, the *Pantheismusstreit* would spur Kant to write his *Critique of Judgment*, which would
play a crucial role for German Idealism as a whole and Schelling’s *Naturphilosophie* in particular.\(^{121}\) Although European and German intellectuals had never forgotten about Spinoza, few dared to discuss him publicly.\(^{122}\) His reputation as an atheist, combined with his radical political views, had rendered him a “dead dog,” at least in public discourse.\(^{123}\) If one used the term “Spinozism” in the 1700s, it was usually intended to slander an opponent. That all changed in 1785, when Friedrich Heinrich Jacobi (1743-1819) published a little book accusing the great German *Aufklärer* G.E. Lessing, who had died a few years earlier, of Spinozism.\(^{124}\) Jacobi’s accusations were based on a conversation with Lessing in 1780, during which Lessing supposedly declared allegiance to Spinoza’s system. Regardless of the veracity of Jacobi’s account, his little book set off a firestorm of controversy, both personal and philosophical. Since “Spinozist” was still a dirty word, Lessing’s friend Moses Mendelssohn rose to his defense, arguing that Jacobi had certainly misunderstood what Lessing had meant. Mendelssohn would actually die of pneumonia attempting to clear his friend’s name.\(^{125}\)

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\(^{121}\) The *Critique of Judgment* dealt both with aesthetics and natural teleology. The latter aspect will be discussed in chapter 4.

\(^{122}\) In Chapter 4, I will show how Spinoza’s legacy lived on for natural scientists, especially for strict materialists like Diderot who whittled away at the boundary between life and non-life.

\(^{123}\) On the legacy of Spinoza, see Jonathan Israel’s *Radical Enlightenment: Philosophy and the Making of Modernity 1650-1750* (New York: Oxford University Press, 2001). Perhaps the only glaring weakness in Israel’s book is the fact that he misses the ways in Spinoza could be “creatively misread.” This will be a large theme of this dissertation, and we will see more of this in Chapter 4.


\(^{125}\) Mendelssohn’s first refutation of Jacobi was *An die Freunde Lessings*. He caught pneumonia while carrying a second work, *Morgenstunden*, to the publisher. Both these works are available in Scholz, *Die Hauptschriften*. 
The philosophical fallout of the *Pantheismusstreit* was even more important. In one sense, Jacobi held Spinoza in high regard: he argued that Spinozism is the most consistent of all philosophical systems, and that *all* philosophy, if taken to its logical conclusions, ends up at Spinozism. Jacobi himself was a skeptic and a follower of David Hume, but he actually used this skepticism in service of traditional religion. Jacobi wanted people to embrace religion not for rational reasons, but through a *leap of faith*, and thus he used Hume to demonstrate reason’s impotence.\(^\text{126}\) Jacobi’s contention that all philosophy ends in Spinozism provoked opposition from established philosophers, and in the public debate that followed the publication, Jacobi needed allies. He turned towards two of the most important figures in German intellectual life: Goethe and Herder. This move backfired spectacularly.

Little did Jacobi know that Goethe and Herder had been reading Spinoza together during the early 1780s. When Jacobi asked for their support in a letter, Goethe gave an incredible answer. Quite simply, he and Herder read Spinoza in an entirely different way than Jacobi did. Spinoza, Goethe wrote, was not an atheist, but rather a firm believer in an immanent God, a God who dwells *in* the world, in every “rock and stone.” Herder, in his *God: Some Conversations* (1787), simply expanded on Goethe’s short response to Jacobi. According to Herder, had Spinoza lived in a later epoch, he would have abandoned his deterministic mechanism and embraced a view of divine nature as creative

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\(^{126}\) Jacobi argued that he and Hume both emphasized the importance of “belief.” Hume, in his own way, argued for a leap of faith, for despite the uncertainty which our mind confronts about its knowledge, at some point it must assume that objects exists in the world and go about its practical business. Jacobi often quotes Hume at length. See for example the citation of Hume’s definition of “belief” in Jacobi, *David Hume über den Glauben oder Idealismus und Realismus* (1787) with the Vorrede to the 1815 edition (New York: Garland, 1983), 1st ed: 45.
and active. The "new" Spinoza which Herder and Goethe invented appealed to a new generation of philosophers, eager to grasp philosophy and the world as a totality. What could be more appropriate than the pantheism of Spinoza, which identified the world with God.

Kant was justified in seeing the growing enthusiasm for Spinoza as a threat to his own system. Every unpopular aspect of Kant's system seemed to be corrected by the new Spinoza. Where Kant put up a barrier between knower and known, Spinozism, with its presumption that everything in existence is actually divine, seemed to unify subject and object. Whereas Kant's system was rife with divisions—between sensibility and intellect, between theoretical and practical philosophy—Spinozism seemed to give philosophy unity and coherence. Kant objected vehemently to those—especially his former student Herder—who seemed to be lapsing into the same "dogmatism" Kant believed he had defeated in the *Critique of Pure Reason*. Unfortunately for Kant, he would never succeed in reigning in the next generation of philosophers, who sought to "complete" Kant's own system with or without his authorization.

**REINHOLD, FICHTE, AND GRUNDSATZPHILOSOPHIE**

The first philosopher to seriously attempt a grand synthesis of Kant's Critical Philosophy was Karl Leonhard Reinhold. Reinhold, a former Austrian monk turned *Aufklärer,*

127 For a brief summary of Herder’s simultaneous rehabilitation and revision of Spinoza, as well as Kant’s response to it, see Zammito, *The Genesis of Kant’s Critique of Judgment,* 243-247.

128 Serious interest in Reinhold has dramatically increased over the last thirty years, resulting in a staggering number of recent works on his philosophy. Alfred Klemmt’s *Karl Leonhard Reinholds Elementarphilosophie: Eine Studie über den Ursprung des spekulativen deutschen Idealismus* (Hamburg: Felix Meiner, 1958) dominated the literature for a long time. In 1974, Reinhard Lauth published a collection of essays on Reinhold that gave rise to a revival, *Philosophie aus einem Prinzip: Karl Leonhard Reinhold* (Bonn: Bouvier, 1974). Among the newer generation of Reinhold scholars, Wolfgang Schrader
spent time as an advocate of the enlightened policies of Joseph II before moving to Leipzig and converting to Protestantism in 1783. He was originally a follower of Johann Gottfried Herder’s (1744-1803) philosophy, and butted heads with Kant over the latter’s negative review of Herder’s *Ideas for a Philosophy of the History of Mankind*. Shortly afterwards, in the midst of a spiritual crisis, he read Kant’s *Critique of Pure Reason*, which renewed his faith in the possibility of a rational religion. He converted to Kantianism almost immediately and quickly became the most important popularizer of the new system. His *Letters on the Kantian Philosophy*—which dealt disproportionately with Kant’s moral and religious ideas—presented that system to the reading public in a simplified but convincing form, and in the wake of the

John Zammito demonstrates the importance of Kant’s intellectual feud with Herder in *The Genesis of Kant’s Critique of Judgment* (Chicago: University of Chicago Press, 1992). Kant believed that the poor reception of his *Critique of Pure Reason* was the result of machinations by his former student, and he was thus delighted by the opportunity to write a hostile review of Herder’s *Ideen* in 1784, a review which Reinhold criticized in turn. I will discuss Herder’s scientific contributions—which Kant also opposed—in Chapter 4.

Frederick Beiser, *The Fate of Reason*, 229.

Letters two through six deal almost exclusively with questions of God, religion, morality, and immortality. In Letter Three Reinhold goes so far as to compare Kant with Jesus Christ: “...The Critique of Reason has fulfilled the conditions by which alone, as we have previously seen, our philosophy could be put in a position to nullify metaphysical proofs for God’s existence for the benefit of the moral ground of cognition, to ground the first basic truth of religion on morality, and to complete thereby the unification of boy by means of reason—a unification that was the aim of Christianity and that had been introduced by its exalted founder by means of the heart. (Reinhold, *Letters on the Kantian Philosophy*, trans. James Hebbeler, ed. Karl Ameriks (New York: Cambridge University Press, 2005), 38).
Pantheismusstreit, Reinhold successfully portrayed Kant as the middle ground between Mendelssohn and Jacobi. When Reinhold became chair of philosophy at Jena—a position later occupied by Fichte—he established that university as the hub of Kantianism in Germany.

Nevertheless, despite his enthusiasm for Kant’s thought, Reinhold began to see a problem with the Critical philosophy. Unlike the systems of other philosophers—Descartes and his Cogito being the best example—there was no first principle or Grundsatz for Kant’s system, from which all other aspects of the system could be deduced. Kant had written much about sensation, the intellect, and morality, but he was never able to demonstrate how they might be connected. This was a grave problem if one wanted philosophy to ascend to the status of a “science” or Wissenschaft. At the very time Reinhold realized this, Kant’s system was under assault from skeptical thinkers like Friedrich Heinrich Jacobi, Solomon Maimon, and G.E. Schulze, better known by his pseudonym “Aenesidemus.” All three ruthlessly exposed the inconsistencies in Kant’s system. Reinhold reasoned that the best way to insulate Kant from these objections was to find a Grundsatz for the entire Critical Philosophy, and he found it in what he called the “principle of consciousness (Satz des Bewußtseins),” which stated that, “In consciousness, the subject distinguishes the representation from the subject and the object

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132 Beiser, The Fate of Reason, 233.

133 Beiser, The Fate of Reason, 237-239.

134 In German, Wissenschaft does not refer only to the natural sciences, but to any organized system of knowledge.
and relates the representation to both."\(^{135}\) Using this as his starting point, Reinhold recapitulated the Kantian system in a new form.

Despite his initial desire for his philosophy to be “without a nickname,” it gradually came to be called the *Elementarphilosophie*.\(^ {136}\) In the course of a few years, he laid out this philosophy in three crucial works: *Attempt at a New Theory of the Human Power of Representation* (1789), *Contributions toward Correcting the Previous Misunderstandings of Philosophers* (1790), and *On the Foundation of Philosophical Knowledge* (1791). As he developed his system, he became increasingly critical of Kant and more convinced that he was offering not just a defense of the Critical Philosophy, but a superior version of it.\(^ {137}\) Reinhold’s “deductions” of Kant’s philosophy from the “principle of consciousness” are usually dismissed by present-day commentators: Beiser calls them “not in the slightest convincing,” while Henrich calls them “sophistical.”\(^ {138}\) But one should not forget the staggering influence Reinhold exerted on the following generation. Kant held out the promise of a new metaphysics, but he spent his whole career laying the foundations for a system he would never complete. Reinhold arrived and gave hope to a new generation of philosophers that Kant’s revolution in thought could be completed. Although Fichte and Schelling regarded Reinhold’s system as a

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\(^{135}\) Reinhold’s unwieldy “Principle of Consciousness” certainly lacks the elegance of *Cogito ergo sum*, but Reinhold deployed it cleverly, asserting that this single principle was the unacknowledged root of Kant’s own system. Reinhold believed that, by analyzing the nature of representation, he could bind together what Kant referred to as “sensibility” and “understanding.” We already saw that Kant was quite content simply to investigate these aspects of the mind, and he placed them next to one another in the first section of the *Critique of Pure Reason*. In fact, he explicitly left open the possibility that they were connected (*CPuR*, A15/B29).


\(^{137}\) See Bondeli, *Das Anfangsproblem*, 35-41.

failure, they commended him for recognizing the need for a *Grundsatz* of all philosophy. Fichte, who attempted to go beyond Reinhold and find a new foundation for philosophy, can only be understood in this context.

Today, it is difficult to understand how Fichte's philosophy—written as it was in an awkward, almost unreadable form—could be seen by college students as fresh and exciting. But for Schelling's generation, not just in Württemberg, but throughout Germany, Fichte was the very embodiment of political and philosophical revolution. Born in Saxony as the son of a poor ribbon weaver and given an education by a nobleman impressed with his ability to recite sermons verbatim, Fichte was among the best examples of the social mobility dreamed of by middle-class intellectuals like Schelling. Fichte was also one of the most vocal supporters of the French Revolution in Germany, and concomitantly demanded that the Kantian philosophy be taken to its logical conclusions, pushing past the boundaries that Kant so desperately wanted to maintain. Fichte's thunderous lectures at Jena, beginning in 1794, drew listeners from across Germany, including Schelling's older friend Friedrich Hölderlin. Fichte famously claimed that he was loyal not to the "letter" of Kant's philosophy but to its "spirit," and Schelling and his friends in Tübingen, themselves resentful of the "pseudo-Kantianism" epitomized by their teacher Johann Friedrich Flatt, immediately seized on this aspect of Fichte's thought. Finally they had found someone who intended to use Kant not as a bulwark for orthodoxy and tradition, but for political and philosophical revolution. Thus, Fichte's dry prose ignited a fire in the minds of Schelling and his peers.

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139 For an exhaustive, contextually sensitive account of Fichte's first forty years, see Anthony La Vopa, *Fichte: The Self and the Calling of Philosophy 1762-1799* (New York: Cambridge University Press, 2001).
The project of *Grundsatzphilosophie* was fundamental to Fichte's early philosophical concerns. Before his discovery of Kant—which he likened to a sort of religious conversion—Fichte himself had doubted human free will. This made him especially receptive to Kant's *Critique of Practical Reason*. While earning a meager living as a private tutor in Leipzig in the summer of 1790, Fichte found a potential client who wanted to study Kant.\(^{140}\) Though he lacked any knowledge of the critical philosophy, Fichte promised to tutor him, and devoted himself to an intense study of all three *Critiques*. The result was profound. Suddenly, his belief in "absolute freedom" and "the concept of duty" were restored. "It is unbelievable how much respect for mankind and how much strength this system gives us!"\(^ {141}\)

Fichte quickly came to idolize Kant, going so far as to travel to Königsberg to ask for Kant's patronage. Kant turned him down, but did convince his publisher to print a little book Fichte had written called *A Critique of all Revelation*, in which Fichte applied Kantian principles to the reading of scripture. This led to a quite fortuitous public confusion: because everyone was expecting a work on religion from Kant at that time, many mistakenly believed that this anonymous little tract was written by the sage of Königsberg himself. When Kant cleared the air and named Fichte as the true author, he became a philosophical celebrity overnight.

Despite his newfound fame, Fichte did not rest on his laurels. He, like Reinhold, was concerned with the impact of the skeptical attacks on Kant, and began his own search for a unifying *Grundsatz*. However, he felt that Reinhold's own attempt to find it had


\(^{141}\) Fichte to Weisshuhn (August-September 1790). Translation from Fichte, *Early Philosophical Writings*, 357.
failed, and it was G.E. Schulze who convinced him of this failure. Schulze, a former schoolmate of Fichte's, anonymously published a little book in 1792 entitled *Aenesidemus*. The book was a supposed correspondence between Hermias, a Kantian, and Aenesidemus, a self-professed Humean skeptic who obviously spoke for Schulze himself. “Aenesidemus” questioned both Kant and Reinhold, and Fichte saw it as a serious challenge to his own beliefs. Aenesidemus shattered his faith and prompted him to begin his own search for the true *Grundsatz*.

In recognizing the importance of the skeptical attacks on Kant and Reinhold, Fichte continually insisted that Kant had spoken the truth, but that he had, for some reason or another, not adequately described the foundations of his system. Earlier we saw that Reinhold had done something similar. Both Reinhold and Fichte believed that Kant had correctly described the operations of reason but failed to trace them back to a single point from which they all derived. Fichte claimed that Kant had not “presented the system” but nevertheless “had it in his possession,” wondering aloud whether Kant “consciously realized” that he possessed this system, or whether he simply “had a genius [in him] which told him the truth without communicating to him the reasons for it,” or even whether Kant purposely left the task to someone else. No doubt Fichte—and Schelling after him—was attracted by the third possibility.

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142 Fichte wrote to none other than Flatt, describing the importance of this critique. “Aenesidemus, whom I count as one of the notable products of our age, convinced me of what I already suspected; that Kant’s and Reinhold’s work had not [made] philosophy into a science. This shook the foundation of my own system, and since one cannot live well under the open sky, it forced me to rebuild it anew. I convinced myself that philosophy can only be made into a science if it is developed from a single principle, like in geometry....I believe I have found [this principle], and as far as I have advanced in my own project, it has been proven worthy. (Fichte to Flatt (November or December 1793), in Fichte, *Gesamtausgabe*, ed. Reinhard Lauth and Hans Jacob, with contribution from Hans Glitwitzky and Manfred Zahn (Stuttgart: Bad Cannstatt: Frommann, 1970), III, 2, 18. Hereafter cited as *GA*.

143 Fichte to Flatt (November or December 1793), *GA*, III, 2: 18.
Fichte used the *Aenesidemus* review as an opportunity to offer his own solution to the problem of the *Grundsatz*.\(^{144}\) He agreed with Schulze that Reinhold’s “Principle of Consciousness” was invalid as a philosophical starting point, and paid deference to skepticism’s contributions in the history of philosophy.\(^ {145}\) But Fichte refused to give up on the search for a *Grundsatz*, stating that “the Principle of Consciousness is a theorem which is based upon another first principle, from which, however, the Principle of Consciousness can be strictly derived, a priori and independently of all experience.”\(^ {146}\)

Therefore, Reinhold’s principle *is* valid, but it is not the true starting point of philosophy. Reinhold himself, according to Fichte, had cleared the path for this new solution: the first principle of philosophy, for Fichte, is the “self-positing I,” and everything that is not-I only obtains reality through its relation to the I. Thus “the notion of a thing in itself, to the extent that it is supposed to be a not-I which is not opposed to any I, is self-contradictory....”\(^ {147}\) This self-positing I is *not*, however, the “subject” that appears in Reinhold’s Principle of Consciousness. The self-positing I “is because it is and is what it is” and is thus “absolutely independent and autonomous.” It is an “absolute I.” But the “absolute I” strives towards consciousness, requiring it to create, *ex nihilo*, something


\(^{145}\) Schulze’s argument against Reinhold’s principle is actually rather simple. Since it is a sentence containing a subject and a predicate, the “Principle of Consciousness” actually stands below another, higher law, namely the law of non-contradiction (Fichte, *GA*, I, 2: 43). As for skeptical thinkers, Fichte argues that they have always helped push philosophy forward by relentlessly exposing “the insecurity of every resting place (jedesmaligen Ruhespunktes) yet obtained by reason.” (Fichte, *GA*, I, 2: 42). Kant himself had acknowledged his debt to Hume in his *Prolegomena to Any Future Metaphysics*. However, there is some debate as to whether Hume was actually the prime mover in Kant’s so-called Critical turn.

\(^{146}\) *GA*, I, 2: 46.

\(^{147}\) *GA*, I, 2: 62.
opposed to it, a not-I. Empirical consciousness arises only as the mediation of these two; it is a lower standpoint which views I and not-I as equal.\textsuperscript{148}

This is extremely difficult material, and it smacks of mysticism. Yet somehow, it energized an entire generation. There is still debate as to what Fichte precisely meant. Did he believe that the entire world is literally “created” by this absolute “I,” and that there is truly nothing independent of it?\textsuperscript{149} If so, this would mean that, if humanity died out, the world itself would vanish. Recent interpreters have done much to call this reading of Fichte into question, arguing that he never denied the ontological reality of the “objective world,” but simply stressed the futility of discussing it independently of human consciousness.\textsuperscript{150} After all, if we are equipped to experience the world in a certain way, there is little point in trying—like Kant in his discussion of the thing-in-itself—to get outside that standpoint. Fortunately, one can understand Fichte’s importance for Schelling—especially for his \textit{Naturphilosophie}—without resolving this debate. The key to doing so is grasping Fichte’s conception of the “I” as active and unconditioned.

\textsuperscript{148} \textit{GA}, I, 2: 133.

\textsuperscript{149} Goethe and Schiller read him this way.

\textsuperscript{150} Sally Sedgwick comments that the Idealism of Fichte, Schelling, and Hegel “does not mean that, according to the idealist, human self-consciousness has the capacity to bring mind-independent objects or things-in-themselves into being. Rather objects are grounded in human intelligence for the idealist in the sense that self-consciousness grounds or makes possible objects as they are experienced or thought by us.” (“Introduction, The Reception of Kant’s Critical Philosophy, 2). Leonardo Distaso, in \textit{The Paradox of Existence: Philosophy and Aesthetics in the Young Schelling} (Boston: Kluwer, 2004) makes a point about Schelling interpretation that can apply equally to the reading of Fichte on this point. It is worth quoting at length: “Many misinterpretations of Schelling’s philosophy are the consequence of misunderstanding this crucial point. The starting point of philosophy is not the “absolute as the I” but the I that is not conditioned by anything objective, but \textit{necessarily opposed} to a not-I in its negative unconditionality....Schelling’s I is not an absolute subjectivity but the principle of the determination of both subjectivity and objectivity; it is, in Schelling’s words in his letter to Hegel, freedom” (61). Likewise, it is \textit{crucial} to understand that the “Absolute I” is \textit{not} the same as the human intellect or “Empirical I.”
One of the key innovations of the Aenesidemus review is Fichte’s distinction between seeing the mind as a fact (*Tatsache*) and as an act (*Tathandlung*). Recall that in the *Critique of Pure Reason*, Kant emphasized that the human mind is no passive receptor of information, but rather that it *imposes* order on the data of sense experience. However, Kant was adamant that the categories operate on data given to us from real, external objects (things-in-themselves), and that therefore the mind is nonetheless constrained from without. If it is constrained, it is conditioned (*Bedingt*), literally “made a thing.” Fichte played up the first tendency while downplaying the second. For him, consciousness is not static—it arises out of opposed spiritual or mental forces, or as he puts it, the conflict between the absolute I and not-I. This emphasis on the “activity” of the mind gives us an insight into Fichte’s popularity. While his system seems almost insane by twenty-first century standards, it offered solutions to a number of post-Kantian dilemmas. By insisting that the mind “creates” the external world, the boundary between knowing subject and thing-in-itself—which plagued Kant’s system—was dissolved. This bridges the gap between sensibility and intellect, since both sensible “experience” and the human intellect are dictated by the “self-positing I.” Finally, Fichte’s ideas offered readers a connection between theoretical and practical philosophy. Practical or moral philosophy deals precisely with willing and action. But in Fichte’s new philosophy, knowing is a form of acting! Kant had talked of the “primacy of practical reason,” but he never demonstrated that theoretical philosophy was, in its very essence, subordinate to the practical.

The *Aenesidemus* review established Fichte as one of the most promising young philosophers in Germany, and he was eventually called to replace Reinhold as Chair of
Philosophy in Jena in 1794. For the duration of the 1790s, Fichte attempted to give his system a final and satisfactory articulation, writing several versions of his *Wissenschaftslehre*. While Schelling was advancing towards his new standpoint, Fichte kept re-writing his own system. A few things never changed, however. The self-positing I forever remained the *Grundsatz* of Fichte's system, and he never ceased to emphasize that the mind is characterized by a conflict of opposing forces. In 1794, Schelling was drawn into the orbit of Fichte, and he would begin his own search for a *Grundsatz*. But the early system he arrived at, although at times inconsistent, would go beyond what Fichte had imagined. In his first two philosophical works, Schelling would deviate from his mentor by appealing to none other than Spinoza, precisely because Spinoza's God, when slightly reconfigured, offered Schelling a better way to reunite what Kant had separated. Amazingly, Schelling did this all while simultaneously finishing his theological studies in Tübingen.

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151 The term *Wissenschaftslehre* been translated as "Science of Knowledge" or "Doctrine of Science," but these somewhat clumsy renderings only serve to obfuscate the meaning of the German term. Recall that *Wissenschaft* in German, although it can be translated as "science," refers to any coherent and organized body of knowledge. The German *Lehre* can literally be rendered as "lesson," "teaching," or "doctrine." Thus, the *Wissenschaftslehre* is literally a "teaching about organized knowledge." Fichte, however, provides an even better rendering of what exactly the *Wissenschaftslehre* is, one understandable even to an English reader. At one point he calls it "The science of science as such" (*die Wissenschaft von der Wissenschaft überhaupt*). (GA, I, 2: 117) Thus the *Wissenschaftslehre* is the supreme "science" that grounds all other, subordinate sciences. Most philosophers in the 21st Century have dismissed the idea that philosophy reigns supreme over all other aspects of knowledge, especially the natural sciences. But for Fichte, and for Schelling and Hegel after him, philosophy towered above everything else. This is what Fichte means by a *Wissenschaftslehre*: it "has the responsibility for establishing the systematic form for all possible sciences" (GA, I, 2: 120).

152 One could say that Fichte would never adequately express his philosophy. Fichte obsessively revised his system without ever arriving at a version of it that completely satisfied him. Thus, Fichte is one of those philosophers without a true, agreed-upon *Magnum Opus*. 
SCHELLING’S DISCOVERY OF REINHOLD AND FICHTE

In Chapter 1 we saw that all the theological students at the Tübingen Stift undertook two years of “philosophical studies” before moving on to the theologically-oriented phase of their training. At the end of these two years, the students were required to write a dissertation (usually on a topic given to them by a professor) and also complete two shorter papers called “Specimina.”¹⁵³ Schelling’s dissertation on the origin of human evil broke from the traditions at the Stift. Normally, students defended a thesis given to them by one of their teachers. Schelling, however, wrote about a topic of his own choosing. The dissertation shows the influence of Herder and other eighteenth century biblical critics, and Schelling introduces a conception of the Edenic “Fall” that will reappear—in philosophical guise—in his Ideas of 1797.¹⁵⁴ Schelling defended his work in September of 1792, before none other than Ephorus Schnurrer. Schelling’s two “Specimina,” however, are much more important in the context of post-Kantian philosophy, and it is extremely unfortunate that they are both lost. However, from their very titles we can see that, already in 1792, Schelling was familiar with some of the central elements of Grundzatzphilosophie. The first was an essay on Reinhold, entitled “On the possibility of


¹⁵⁴ Even in this work, Schelling sees myth on a lower level than philosophy. Mythmakers did not use concepts and thus were unable to articulate their ideas in a clear, philosophical format. See Nauen, Revolution, Idealism, and Human Freedom, 29-30. There is a significant strain in Schelling scholarship which takes his early work on myth as crucial for his development. Unfortunately, since my focus is on his uptake of eighteenth century natural science, I don’t feel it prudent to explore it extensively. For a basic summary, see Wilhelm G. Jacobs, “Anhaltspunkte zur Vorgeschichte von Schellings Philosophie“ in Schelling: Einführung in seiner Philosophie, eds. Hans Michael Baumgartner (Freiburg: Karl Alber, 1975), 32-37. Schelling’s study of Plato’s Timaeus has also fascinated a number of scholars. See especially Harald Holz’s essay “Das Platonische Syndrom beim jungen Schelling (Hintergrundtheoreme in der Ausbildung seines Naturbegriffs),” in (Die Idee der Philosophie bei Schelling: Metaphysische Motive seiner Frühpensophie (Freiburg: Karl Alber, 1977). There is also an English-language essay on the subject: Manfred Baum, “The Beginnings of Schelling’s Philosophy of Nature,” in Sally Sedgwick, ed., The Reception of Kant’s Critical Philosophy, 199-215.
a philosophy without a nickname, with some remarks about the Reinholdian

*Elementarphilosophie.*” The second shows that Schelling was concerned with the unity
of the critical philosophy: “On the agreement of the critique of theoretical and practical
reason, especially relating to the use of the categories and their realization.” It is very
likely that these two “Specimina” loomed larger for Schelling, who had familiarized
himself with Kant’s philosophy early in 1791, than his larger dissertation.\(^{155}\) The timing
of Schelling’s interest in Reinhold—recall that Fichte also published the *Aenesidemus*
review in 1792—makes his relationship with Fichte all the more fascinating: apparently
the seventeen year old Schelling had independently started along the same path as the
thirty year old Fichte, looking for a way to ground the Kantian philosophy.

Since he was a theological student—one prone to embrace the most radical trends
in biblical criticism—Schelling must also have known of Fichte from his *Attempt at a
Critique of All Revelation*. In June of 1793, Fichte made a trip to Tübingen, and returned
once again in May of 1794. There is some debate as to whether Schelling and Fichte
actually met during either of these visits.\(^{156}\) Horst Furhmans says they did, but Reinhard
Lauth argues that they did not.\(^{157}\) The editors of the *Historisch-Kritische Ausgabe* offer a
middle position, suggesting that Schelling at least *saw* Fichte during these visits but likely
did not get the chance to speak to him.\(^{158}\) Regardless of whether they spoke, Schelling
already idolized him, especially because of Fichte’s political reputation.\(^{159}\) Could anyone

\(^{155}\) Plitt, I: 52.

\(^{156}\) Furhmans says that it is “highly probable” that they met. (*BuD*, I: 26).

\(^{157}\) See Lauth, “Die erste philosophische Auseinandersetzung zwischen Fichte und Schelling 1795 bis


\(^{159}\) *BuD*, I: 27.
be more admirable than this fiery champion of the French Revolution who was also improving Kant’s system? As soon as Schelling got a copy of *On the Concept of the Wissenschaftslehre*, he dedicated himself to an original formulation of Fichte’s principles. He sent his own text, which would soon be published, to Fichte himself, along with a deferential letter that praised Fichte’s “latest work, which introduced new and great views to the philosophical world.”¹⁶⁰ Fichte’s reply is lost, but Schelling’s initial letter began a fruitful correspondence that would last until their bitter falling out in 1802.¹⁶¹

**ON THE POSSIBILITY OF A FORM OF ALL PHILOSOPHY**

Schelling published *On the Possibility of a Form of All Philosophy* in 1794, and most of the material in this little book is derivative; in many respects, it closely follows Fichte’s *On the Concept of the Wissenschaftslehre.*¹⁶² In introducing the project, Schelling wastes no time connecting his own thoughts with the search for a *Grundsatz* for the Kantian philosophy. Like Reinhold and Fichte before him, Schelling finds fault with Kant’s first Critique, which attempts to “lay the foundation” for philosophy “without having anywhere established a principle that would not only form an original form as the root of all particular forms but also give the reason for its necessary connection with the

¹⁶⁰ BuD, 1: 51.


¹⁶² Of course, this is not incompatible with the notion that it was really *Kant* who drove Schelling’s early philosophy. Indeed, the work is primarily “[an attempt] to ground Kant’s critical philosophy” (Motokiyo Fukaya, *Anschauung des Absoluten in Schellings früher Philosophie (1794-1800)* (Würzburg: Königshausen und Neumann, 2006), 15. Rosenkranz, as well, summarizes the work as an attempt to derive Kant’s categories from a higher principle (*Schelling*, 8).
particular forms that depended on it.”¹⁶³ According to Schelling, this fault naturally led to the “important objections” of skeptics like Aenesidemus and Maimon, who ruthlessly exposed Kant’s lack of “a basic principle.”¹⁶⁴ Furthermore, according to Schelling, Reinhold’s answer to these objections was insufficient, for his *Elementarphilosophie* adequately explains only the content of philosophy, not its form. Taking his inspiration from Fichte’s early work, Schelling claims that he will “arrive at a solution of the entire problem of the *possibility of philosophy as such.*”¹⁶⁵ Ultimately, for philosophy to be established as a true science, indeed the science of all sciences, it needs a firm starting point, “a *plainly absolute axiom* that has to contain the condition of all content as well as of all form if it is really to condition it at all.”¹⁶⁶

The argumentative strategy of *On the Possibility of a Form of all Philosophy* is poor. Schelling himself admits that “The whole investigation, of which the above is a sample, is necessarily dry and not very promising in the beginning.”¹⁶⁷ Schelling begins by presupposing that philosophy is a science, one that stands above all other sciences and whose first principle cannot be taken from any other science.¹⁶⁸ This first principle of philosophy must give it both content and form simultaneously. He also follows Fichte’s argument *against* two incorrect methods of reaching the first principle. First among these (thought not the first he mentions) is the search for the ultimate axiom by means of

¹⁶³ Schelling, *AA, I, 1: 265*

¹⁶⁴ *AA, I, 1: 267.*

¹⁶⁵ *AA, I, 1: 266.*

¹⁶⁶ *AA, I, 1, 273.*

¹⁶⁷ *AA, I, 1, 299.*

¹⁶⁸ *AA, I, 1, 271.*
regress. Schelling asks, “Should we retrace our steps from axiom to axiom, from condition to condition, until we arrive at the ultimate, absolute, categorical axiom?”\textsuperscript{169} Obviously not, for how could we ever reach our goal by randomly picking out a lower-level axiom and groping around for its connection to the highest? This procedure seems to violate the very essence of philosophical investigation. Instead, Schelling insists that “the absolutely unconditional proposition” must be found in a “quite different way.” It must come at the beginning, as something “given only by its own criteria.” By rejecting infinite regress, Schelling announc

With this “regressive search” ruled out, Schelling now deals with two interrelated dead ends, taken by Reinhold and Leibniz, respectively.\textsuperscript{170} Reinhold tried to make the ultimate axiom a material axiom, by locating it in consciousness. His first principle (“In consciousness, the subject distinguishes the representation from the subject and the object and relates the representation to both”) asserts something very factual about the operations of the subject. But how can a “fact” like this be the ultimate axiom? How could everything in philosophy be deduced from this one sentence? Here Schelling acknowledges the power of one of Aenesidemus’ objections: Reinhold’s “axiom” is in fact a proposition with a subject and a predicate, and as such, presupposes “a form which expresses the relationship of subject and predicate.”\textsuperscript{171} In other words, the very fact that Reinhold’s principle is a normal sentence means it depends on the way we construct all sentences. But the ultimate axiom needs to be something that presupposes nothing: it

\textsuperscript{169} AA, I, 1, 279.

\textsuperscript{170} I am reconstructing the argument in a more coherent way. In the text itself, he refutes Reinhold and Leibniz before examining the regressive method.

\textsuperscript{171} AA, I, 1, 275.
must determine itself completely. Thus, Reinhold’s principle cannot be what we are looking for. In this way Schelling sweeps aside Reinhold, and he simply reverses his procedure in refuting Leibniz, whose principle of non-contradiction represents an attempt at making the ultimate axiom purely formal. Here, Schelling offers less of an argument, instead simply asserting that there can be “no general form that does not presuppose, by necessity, some definite content.”

Regardless of the strength of his logic, Schelling’s twin dismissals of Reinhold and Leibniz show that the ultimate axiom must be one in which form and content are not derived one from the other, but one in which they are “mutually conditioned.” The form must be deduced from content and vice versa.

None of this is innovative; Fichte had ruled out these two false means of reaching the first principle. After thoroughly investigating how not to reach the absolute axiom of philosophy, Schelling finally identifies it. It is Fichte’s self-positing I. It is worth quoting Schelling at length as he makes this revelation:

A strictly unconditional axiom has to have a content which is in turn unconditional, that is, this axiom cannot be conditioned by the content of some other axiom (be the content a fact or an abstraction and reflection). This is possible only insofar as that content is something which in its very origin is posited unconditionally as a content not determined by anything but by itself and which, therefore posits itself (by absolute causality). But nothing can be

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172 AA, I, 1, 276.

173 AA, I, 1, 278.
posited absolutely except that which contains an absolutely independent original self and is posited not because it is *posited* but because it is itself that which *posits*. This is nothing other than the originally self-posited I, which is marked by all criteria enumerated.\(^{174}\)

Schelling wrote this fully in the spirit of Fichte’s early work. Like Fichte, Schelling recognizes something unique about the structure of the I. Everything said earlier in this Chapter about Fichte’s formulation of the “Self-positing I” applies here as well. Very little in this text is original: Schelling’s only new contribution to Fichte’s doctrine is a precise account of how all twelve of Kant’s categories flow from the self-positing I. In this sense, Schelling’s talents as a historian of philosophy—a talent also shared by his friend Hegel—are already beginning to show, and he will further develop those talents in his next work, *On the I as Principle of Philosophy*, one in which he begins—ever so slightly—to advance a uniquely Schellingian doctrine.\(^ {175}\) By the time he wrote this next work, he harbored a complete disdain for theology, and was eager to leave the *Stift*.

“**I LIVE AND BREATHE PHILOSOPHY**”

After the writing of *On the Possibility of a Form of All Philosophy*, Schelling became even more enchanted by philosophy, and while he still planned on completing his theological training, it was only out of necessity. Because Hegel and Hölderlin had graduated, Schelling’s letters to them provide evidence of how disillusioned he was with

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\(^{174}\) *AA*, I, I, 279

\(^{175}\) Knittermeyer stresses Schelling’s attention to the history of philosophy in *Schelling und die Romantische Schule*, 46-47.
theology. A letter from Hegel on Christmas Eve, 1794, must have reminded him of how badly he wanted to leave Tübingen. "How does it look in Tübingen?" Hegel asked.

"Until someone like Reinhold or Fichte sits at a teacher's desk there, nothing that matters will come out of that place. Nowhere is the old system more enthusiastically propagated than there."\(^{176}\) Hegel complained about the "mechanical heads" that predominated in Tübingen and made references to Storr's attacks on Kant's religious philosophy.

I have already quoted Schelling's response to Hegel, in which he declared his allegiance to philosophy and wrote that his theological studies were worthless in the present age. But he also speaks of the need to advance beyond the Kantian philosophy, and praises Fichte for doing just that. "We need more from philosophy! Kant has swept everything away, but who would know it?....Oh you Kantians who are now everywhere! You stick only to the letter [of his philosophy] and bless yourself for not seeing very far!"

Fichte, however, had "raised philosophy to new heights," and Schelling tells Hegel that he wants to "greet the new hero, Fichte, in the land of truth!"\(^{177}\) Significantly, it was in this letter that Schelling announced his intention to write "An Ethics à la Spinoza," an obvious reference to On the I as Principle of Philosophy.\(^{178}\)

Hegel responded at the end of the month, again complaining about the "theological-Kantian path" of philosophy in Tübingen.\(^{179}\) Schelling fired back with a letter on February 4, which gives us a great deal of insight into his study of Kant,

\(^{176}\) Hegel to Schelling (24 December 1794), in BuD, II, 54.

\(^{177}\) Schelling to Hegel (6 January 1795), in BuD, II, 59-60.

\(^{178}\) This is one of the most famous of Schelling's letters. Alan White's Schelling takes this as the central project of his entire career, from the early writings all the way up to his philosophy of revelation 50 years later.

\(^{179}\) Hegel to Schelling (End of January 1795), in BuD, II, 61.
Reinhold, and Fichte. Reinhold is to be praised, Schelling says, because his philosophy was “a step,” albeit one that must be passed over, and without Reinhold, philosophy might not have progressed so rapidly. Schelling describes Kant as the “dawn” of philosophy and describes the situation of theology as a “satire.” But the most amazing statement in Schelling’s letter pertains once again to Spinoza. What must Hegel have thought when he read the following lines?

Orthodox conceptions of God are not for us anymore—

My answer is, we must go further than a personal God. I have therefore become a Spinozist! Do not be surprised. You will soon hear why. For Spinoza, the world (the object in opposition to the subject) was everything, for me the I [is everything]. The actual difference between the critical and dogmatic philosophies appears to me to be that one begins from the absolute I (conditioned by no object), the other from an absolute object or Not-I. The latter leads in its final consequences to the system of Spinoza, the former to Kant’s. Philosophy must begin from the absolute. One asks oneself where the absolute lies, in the I or in the not-I. Once this question is decided, everything is decided.—For me, the highest principle of all philosophy is the pure, absolute I, i.e. the I which is simply I,

180 Schelling to Hegel (4 February 1795), in BuD, II, 63-64.

181 This is a reference to Lessing.
unconditioned by any object, but rather posited through freedom. The alpha and omega of all philosophy is freedom.\textsuperscript{182}

Has Schelling really become a Spinozist? Not in the true sense: what he has done is move towards a \textit{substantialization} of Fichte’s absolute I. Spinoza’s philosophy is admirable because his God is exactly the type of “ultimate axiom” the post-Kantians have been looking for. Spinoza’s only mistake was that he made God an object, not a subject.

A few months after he wrote this letter, Schelling published \textit{On the I as Principle of Philosophy}, in which this theme is more fully developed, and which moves beyond Fichte’s “subjective Idealism.”

\textbf{ON THE I AS PRINCIPLE OF PHILOSOPHY}

In \textit{On the Possibility of a Form of All Philosophy}, Schelling had explicitly connected his work to the search for a unifying \textit{Grundsatz} and clung closely to Fichte’s philosophy as presented in \textit{On the Concept of the Wissenschaftslehre}.\textsuperscript{183} In \textit{On the I as Principle of Philosophy}, he stays within the boundaries of \textit{Grundsatzphilosophie} while drawing extensively on the philosophies of Spinoza and Leibniz, particularly in his usage of the term “substance.”\textsuperscript{184} This was a crucial innovation, and his interest in these great

\textsuperscript{182} Schelling to Hegel (4 February 1795) in \textit{BuD}, II, 65.

\textsuperscript{183} Rosenkranz treats the first part of the text as completely derivative: “In this book he connects [his ideas] completely to Fichte’s \textit{Wissenschaftslehre}.” At the same time, however, Rosenkranz admits that “Schelling hardly mentions Fichte,” instead focusing on Kant and Reinhold (Schelling, 22).

\textsuperscript{184} Dieter Henrich argues that \textit{On the I} represents a departure from \textit{Grundsatzphilosophie}. I do not see how his position is tenable, given the introduction to this work, which is replete with the language of \textit{Grundsatzphilosophie} and which I will shortly discuss. In the next Chapter, I will argue that Schelling’s true departure from this tradition is marked not by \textit{On the I} but by his \textit{Philosophical Letters on Dogmatism and Criticism}. 
rationalists will later be essential to the development of his *Naturphilosophie*. By 1799 he will refer to *Naturphilosophie* as the “Spinozism of physics” and will construct a monadological account of nature. For now, though, Schelling is still trying to follow in Fichte’s footsteps, although he takes a much more exciting and creative path than he had a year earlier.

The Preface to *On the I as Principle of Philosophy* is a strange mixture of admiration for Spinoza and by-the-book *Grundsatzphilosophie*. Schelling states that he intends “to annul explicitly the very foundations of Spinoza’s system,” by overturning Spinoza’s rejection of human freedom. On the other hand, “Spinoza’s system seems to me more worthy of high esteem, because of its bold consequences, than the popular coalition-systems of our intellectual world, which through a patchwork of all possible systems spells death to all true philosophy.” Schelling’s negative comment about “patchwork” systems reinforces a major theme in German Idealism: the desire for unity. Repeating what he had written to Hegel at the beginning of 1795, Schelling states that one day he will hopefully “bring to realization the idea of writing a counterpart to Spinoza’s *Ethics*. ” Apparently he conceived *On the I* as the groundwork for this project, and one could presume that his 1801 *Presentation my System of Philosophy* is its culmination.

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185 This strange brew is stressed by Wilhelm Metzger. In *On the I*, there is “an obvious discrepancy. “The young thinker, on the one hand, follows the Kantian-Fichtean train of thought...and on the other hand” gives a much more extensive description of the “unconditioned” which Kant and Fichte saw as necessary but didn’t explore. (*Die Epochen der Schellingschen Philosophie*, 24).

186 *AA*, I, 2, 69-70.

187 *AA*, I, 2, 80.
Regardless, the rest of the preface falls squarely under the heading of *Grundsatzphilosophie*. Schelling says that his book “will depict the results of critical philosophy in its regression to the last principles of knowledge,” repeating the charge that Kant had not “established the principles of all knowledge” and that “the *Critique of Pure Reason* cannot possibly be the way of philosophy as a science.” Schelling also complains about the lack of unity between Kant’s theoretical and practical philosophy. The latter “does not seem to be of the same structure with the theoretical; instead it seems to be a mere annex (Nebengebäude) to his philosophy as a whole and, what is more, an annex wide open to attacks from the main building.” Schelling reiterates that *On the I as Principle of Philosophy* will “establish the principles” of “the original sense of [Kant’s] thoughts.”

Schelling then commences his search for “something in which and through which everything that is reaches existence, everything that is being thought reaches reality, and thought itself reaches the form of unity and immutability.” Schelling seems to dispose with the terminology of “first principles” and use the term “unconditioned” instead. Is this just a meaningless shift in terminology? Absolutely not. This hints at Schelling’s willingness to do what Fichte had never done: *substantialize* the absolute I, to understand it as a noumenal reality. Whereas Fichte searched merely for a “principle,” *On the I as Principle of Philosophy*...
Principle of Philosophy is after something with real ontological status.\(^{193}\) This explains the ease with which Schelling slides between his own philosophy and Spinoza’s: Spinoza had, indeed, come very close to the ultimate truth of philosophy. He correctly described the properties of the unconditioned, but simply located it in the wrong place.\(^{194}\)

Let us make the above paragraph more intelligible. Much like in On the Possibility of a Form of All Philosophy, Schelling explores two incorrect pathways to the first principle or, in his new terminology, the unconditioned. One dead end is to locate the unconditioned in an object, and in the case of Spinoza and Leibniz, that object is God. But this is self-contradictory, owing to the very precise meaning of the German term for “unconditioned.” In German, the word is Unbedingt, or literally, that which is “not thinged” or “not a thing.” Schelling rejoices in the connotations of this word, saying that it “contains almost the entire treasure of philosophical truth.”\(^{195}\) Any external object is, quite simply, a thing, and therefore no object can possibly be unconditioned, even God! By appealing to the precise meaning of the term, Schelling swiftly dismisses all dogmatic systems of philosophy, which by definition begin with an object outside of human consciousness.

\(^{193}\) Frederick Beiser, in his German Idealism, makes a remarkable comment about On the I as Principle of Philosophy. He identifies it as the only text in the history of German Idealism in which “the absolute subject, the infinite ego, or universal spirit, understood as a metaphysical principle or noumenal reality” plays a large role. “If it appeared as all, it was only very briefly, confined to a short phase of Schelling’s philosophical development, the few months he adhered to the doctrines espoused in his early Vom Ich als Prinzip der Philosophie (1796); but Schelling quickly moved away from this position, and even during this period he equivocated whether he meant to commit himself to the existence of the absolute subject.” (German Idealism: The Struggle Against Subjectivism 1781-1801, (Cambridge, MA: Harvard University Press, 2002), 5.). Beiser argues that Schelling was not yet familiar with the practical aspect of Fichte’s philosophy, and thus had not seen his mentor qualify the theoretical part of his thought. Had been familiar with the third part of Fichte’s Foundations of the Entire Wissenschaftslehre, he might have not tried to “dogmatize” the Absolute I. (475).

\(^{194}\) AA, I, 2, 94

\(^{195}\) AA, I, 2, 89.
But Schelling also rejects an equally erroneous conception of the unconditioned, one which locates it in the empirical subject. Here, Schelling obviously has Reinhold in mind. This approach also "carries a contradiction within itself, which is obvious at first glance." Every empirical subject needs a relationship with objects just to be an empirical subject. In a way, the empirical subject needs objects, because it is unthinkable without objects against which it can define itself. Therefore, "Neither [subject nor object] can contain the unconditional because both are conditioned reciprocally." Since the approach of Reinhold is as unfruitful as that of the dogmatists, what is the answer? We should already know it by now: it is the absolute I or self-positing I, which "is, only because it is," and which attains reality only through itself:

The absolute can be given only by the absolute....The last ground of reality is something that is thinkable only through itself, that is, it is thinkable only through its being; it is thought only inasmuch as it is. In short, the principle of being and thinking is one and the same." Like Fichte before him, Schelling reminds us of the fact that we cannot "prove" that this is the starting point. It simply is because it is, and we have access to it not through discursive reason, but only through intellectual intuition. To ask the philosopher to "prove" the unconditioned is ridiculous: for if someone cannot recognize the fact that she is an I, no amount of philosophizing will ever convince her. But there is no elitism here: "intellectual intuition," the recognition of oneself as an I, is not a privilege of great

196 AA, I, 2, 88.
197 AA, I, 2, 88.
198 AA, I, 2, 86.
minds: ""I am because I am!' That takes possession of everyone instantaneously."199

Furthermore, the very meaning of the unconditioned is that it is dependent on nothing higher than or outside of itself. "Proving" something means using an external criterion to assert its validity, which would be self-contradictory in the case of the unconditioned.

Once Schelling has established what the unconditioned is, he can follow Spinoza in granting it certain properties. In perhaps the most striking section of On the I as Principle of Philosophy, he begins talking exactly like Spinoza and identifying the Absolute I as not just a "first principle" but as an actual substance.200 This is the crucial innovation mentioned at the start of our reading of this text:

If substance is the same as the unconditioned, then the I is the only substance. If there were several substances there would be an I outside the I, which makes no sense.

Therefore everything that is is in the I, and outside the I is nothing. For the I contains all reality, and everything that is, is through reality. Therefore everything is in the I.

Without reality there is nothing. Now, there is no reality except in the I, therefore there is nothing outside the I. If the I is the only substance, then everything that is, is merely a quality (Accidens) of the I.201

199 AA, I, 2, 91.

200 Harald Holz recapitulates one of the most dominant summaries of Schelling's On the I. Trying to choose between Spinoza and Fichte, he opts for the former, but with an important correction: "He transforms Spinoza's absolute substance into a subject, or, in Fichte's terminology, into an "I" (Die Idee der Philosophie bei Schelling: Metaphysische Motive seiner Frühphilosophie (Freiburg: Karl Alber, 1977), 44.

201 AA, I, 2, 119.
But one must remember that Schelling is not reverting to Spinozism, which asserts the "substantiality of the not-I."\textsuperscript{202} Recall that the whole point of this text is to "annul" Spinoza's system insofar as it sets out from an object and renders humans unfree.

Schelling, like Fichte before him, believes in the priority of practical reason. "The beginning and the end of all philosophy is freedom."\textsuperscript{203} The "I am I" again represents not a mere fact but the free act by which the structures of human consciousness are brought about.

For this reason, Schelling tries to explain how the human being, as a finite I, is free. Explaining the freedom of the Absolute I is unproblematic: like Spinoza's substance, it possesses absolute power, and what appears to humans as a "moral law" is for the Absolute I a "natural law" flowing necessarily from its very essence.\textsuperscript{204} Schelling offers a somewhat unconvincing resolution to the problem: the empirical I, he claims, is indeed partially conditioned by objects. It cannot negate them like the Absolute I can. But still, "objects alone could never produce an I. The empirical I owes the act that it is empirical to objects, but it owes the fact that it is an I at all to a higher causality."\textsuperscript{205} Because the empirical I is only partially dependent on objects, it partakes in the same causality of the Absolute I, only to a lesser degree. "Thus the causality of the empirical I differs from the causality of the absolute I not at all in principle (in quality) but only in quantity."\textsuperscript{206} Schelling strongly believes that our similarity to the absolute I makes us

\textsuperscript{202}AA, 1, 2, 120.
\textsuperscript{203}AA, 1, 2, 101.
\textsuperscript{204}AA, 1, 2, 125.
\textsuperscript{205}AA, 1, 2, 168.
\textsuperscript{206}AA, 1, 2, 169.
capable of heroic striving. Thus, he makes an interesting criticism of Kant's demand that virtue be rewarded by happiness. "Empirical happiness," which is simply the aligning of human will with natural causality, is nothing to be glorified. Infinite striving demands that we not try "to become happy, but no longer to need happiness, indeed to become incapable of needing it, and to elevate our very being to a form that is repugnant to the form of happiness as well as to [the form of] its opposite."\(^{207}\) Similarly, in the *Philosophical Letters on Dogmatism and Criticism*, Schelling will sneer at Kant's belief that we need a God to reward our virtue with happiness.

Despite the innovations of *On the I as Principle of Philosophy*, Schelling remains attached to Fichte's methods, emphasizing the primacy of practical reason and demanding that the very purpose of philosophy be the advancement of human freedom. Still cooped up in Tübingen, still watching the events taking place across the Rhine, he believed that philosophy could, quite literally, change the world. The empirical I, because it shares some of the characteristics of the absolute I, "ought to strive to elicit in the world that which is actuality in the nonfinite, and which is man's highest vocation—to turn the unity of aims in the world into mechanism, and to turn mechanism into a unity of aims."\(^{208}\) Although his use of the term "mechanism" reveals that he has yet to achieve the breakthroughs of his *Naturphilosophie*, this conclusion to *On the I* is still a powerful demand for both political and philosophical revolution which hints at atheism. We do not need a God to ensure the harmony of natural causes and human will. Although we can never achieve this harmony perfectly, human freedom is powerful enough to approximate

\(^{207}\) *AA*, I, 2, 124-125.

\(^{208}\) *AA*, I, 2, 175.
it through infinite striving. And despite his continuing philosophical maturation, this is an ideal which will remain with Schelling after his graduation from the Stift and into his next philosophical text, the *Philosophical Letters on Dogmatism and Criticism*.

**GRADUATION AND BEYOND**

Between 1781, when Kant published the *Critique of Pure Reason*, and 1795, when Schelling wrote *On the I*, German philosophy had developed rapidly, with successive system builders giving way to one another. Reinhold believed he improved on Kant, and Fichte believed he had improved on Reinhold. Schelling, on the other hand, preferred to remain a disciple of Fichte, although he was already on his way towards superseding him. Furthermore, he had mastered the use of Fichte's concepts, which stressed the activity and conflict within the I, and which he would soon deploy in his *Naturphilosophie*. This was a remarkable accomplishment; by the age of 20, Schelling had inserted himself into the mainstream of German philosophical circles, and proposed his own unique variant of *Grundsatzphilosophie*, which drew on Spinoza's pantheism. *On the I as Principle of Philosophy* established him as a promising young philosopher, but he would soon graduate from Tübingen and be forced, like so many of his colleagues, to take a position as a private tutor. Nonetheless, his position did not stop his productivity. In fact, it was during his time as a tutor that he move beyond Fichte's *Grundsatzphilosophie* and turn to the natural sciences. The first of these is the subject of the next chapter.
Chapter 3: Schelling’s Exodus from Tübingen: from Stuttgart to Leipzig

IDEALISM IN TRANSITION: FROM SUBJECT TO NATURE

In *On the I as Principle of Philosophy*, Schelling had established himself as Fichte’s most talented disciple, but his obvious interest in Spinoza, and his substantialization of Fichte’s I, showed that the student was headed in a different direction than his master. Fichte’s main concern had always been ethical: even if his system began with a theoretical grounding, namely the self-positing I, theory was always subordinated to practice in the *Wissenschaflslehre*. This is why Fichte reminded his readers that knowing is a form of acting or willing: the centrality of *action* in his system allowed him to reinforce humanity’s belief that it could *shape* the objective world, and bring it into alignment with reason. This is also the reason his dry prose could excite an entire generation: Fichte’s theory seemed to give a perfect explanation of and justification for what was happening across the Rhine. Today, we think of philosophy as hopelessly isolated from the “real world.” But for the Germans in the 1790s, philosophy was precisely what sanctioned a revolt against tradition.

Schelling, too, saw human freedom as central to his early Idealism, and he supported the Revolution. But he was reluctant to treat theoretical philosophy as complete and move towards an ethical theory. Schelling saw theoretical problems which Fichte did not, and was willing to exploit philosophical resources—such as Spinoza—
which Fichte dismissed. *On the I* is evidence of this tendency. As the review in the *Allgemeine Literatur Zeitung* stated, that book offered the reader a real ground (*Realgrund*) of our knowledge, not simply a first principle. Schelling found an ontological basis for our knowledge, and that alone could be considered just another sort of “dogmatism” which set out from an external, objective absolute. Still, Schelling had managed to stay—albeit uncomfortably—in the territory of *Grundsatzphilosophie*, and his condemnation of Spinoza’s system showed that he still harbored prejudices against dogmatic system. For Schelling, those systems are self-contradictory, because an object is necessarily conditioned (*bedingt*).

This makes Schelling’s next philosophical work, the *Philosophical Letters on Dogmatism and Criticism*, all the more striking. This work is crucial for Schelling’s development and as such I give it relatively more weight than his earlier works. It is vital for two reasons: first, it proved beyond a shadow of a doubt that Schelling was no “theologian in disguise.” The vitriol of the first four letters—largely directed at the theologians in Tübingen—is truly startling. Secondly, and more importantly for the development of his *Natprphilosophie*, he incorporates Hölderlin’s criticisms of Fichte, and comes to the conclusion that dogmatism (epitomized by Spinoza) and criticism (epitomized by Kant) are both irrefutable philosophical systems, one of which deduces the subject from an absolute object, the other of which deduces the object from an absolute subject. At the end of the text, Schelling still sides with criticism, but the very admission that dogmatism is irrefutable points towards a growing tension in his own thinking. Gradually Schelling realizes—and this is reinforced by the *Oldest System*

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209 *ALZ* 319 (11 October 1796): 89-92. The review’s description of Schelling’s argument is quite accurate.
Program of German Idealism—that the objective world is a mirror of the subjective world, and that Fichte's focus is too narrow. Simply examining the "I" is insufficient. Philosophy cannot be grounded solely in the subject, but in fact needs to be balanced by the object. Therefore, the objective world, i.e.: nature, must also be examined, with close attention to its relationship to man. This belief in the parallelism of subject and object characterizes not only Schelling's Naturphilosophie, but his System of Transcendental Idealism (1800) and Presentation of my System of Philosophy (1801) as well. Thus, Schelling's writings between his graduation from Tübingen and his scientific education in Leipzig help dictate the methodology of his early Naturphilosophie. In these years, his writings begin to transcend the dichotomy between criticism and dogmatism and open up a completely new form of Idealism, one which equates subject and object, spirit and nature. Amazingly, Schelling advanced steadily along this philosophical path despite his time-consuming duties as a tutor for an aristocratic family.

SCHELLING AS HOFMEISTER

Schelling graduated from Tübingen in the summer of 1795\textsuperscript{210} with no desire to pursue a theological career; given the dearth of clerical positions available at this time, it would have been difficult for him to secure a job anyway.\textsuperscript{211} However, Schelling was also wary

\textsuperscript{210} F.W.J. Schelling, \emph{Briefe und Dokumente}, ed. Horst Furhmanns, (Bonn: Bouvier, 1973), I, 33. Hereafter cited as \emph{BuD}.

\textsuperscript{211} During the 18th Century, the economic situation of the clergy in Württemberg had deteriorated significantly, and there was little opportunity for graduates of the Stift to advance their careers. Typically, upon leaving seminary, young theologians would go into the Vikariatsdienst, which rewarded them with horrible pay. Furthermore, they were often forced to stay in this position until they were 30 years old, at which time they might actually attain a real position in the church, which itself was no guarantee of a comfortable life. Indeed, the clergy in Württemberg were forced "to make a virtue out of poverty," something that meshed well with bourgeois Swabian pietism. On these economic hardships, see Martin Hasselhorn, \emph{Der Altwürttembergische Pfarrstand}. 1-23: Quotation from 22.
of becoming a University professor in general, partly because of his disdain for the orthodoxy promoted by his teachers in Tübingen.\textsuperscript{212} He would have much preferred to earn a living as an independent writer, something only possible in the wake of the blossoming of the German reading public in the \textit{Hochaufklärung} and the work of men like Mendelssohn and Lessing.\textsuperscript{213} Still, regardless of his own personal wishes, he was forced—like so many other famous German intellectuals of his day—to take up work as a private tutor or \textit{Hofmeister}. Even before his graduation, Schelling's father entered into correspondence with Ströhlin, a professor of French literature in Stuttgart, about the Riedesel brothers. These two young barons, who at the time were living with Ströhlin, were in need of a tutor. Originally, those in charge of the barons' education wanted the tutor to be a jurist or a Frenchman, but Ströhlin strongly recommended Schelling because of his familiarity with the German university system.\textsuperscript{214} His efforts succeeded with the proviso that the barons approve of their new tutor. Thus, Schelling went for a time to

\textsuperscript{212} Schelling's correspondence with Hegel during the years 1795-1796 are, along with the \textit{Philosophical Letters}, his most concise expressions of disdain for his teachers at Tübingen. Schelling complained that the atmosphere of the Stift reeked of a "moral despotism" more dangerous that any political oppression. "Ignorance, superstition and enthusiasm (Schwärmerie) have assumed not only the mask of morality but also—even more dangerously—the mask of enlightenment." Schelling to Hegel (21 July 1795), \textit{BuD}, II, 69. Earlier, Hegel had responded to Schelling's complaints dryly: "What you say about the theological-Kantian path of philosophy in Tübingen is not surprising. Orthodoxy will not be shaken so long as the profession [of theology], with its worldly advantages, is woven into the whole of the state." Hegel to Schelling (End of January 1795), \textit{BuD}, II, 61. It is obvious that both Schelling and Hegel looked skeptically upon academic careers at universities run by the German states.

\textsuperscript{213} "Schelling found [the path of a university professor] frightening, frightening in its bondage, in the danger of falling into pedantic scholarship. To go out into the world, to live somewhere independently as a free author" was his "future ideal." Horst Furrhman, "Schellings Berufung nach Jena," \textit{BuD}, I, 127. In the introduction to the \textit{General Overview}, which will be discussed in a later chapter, Schelling mocked scholars whose research meant nothing more to them than the earning of "praise and nourishment," and who didn't fear bad ideas but rather the "interruption of their cozy peace." \textit{AA}, I, 4, 59. This is a clear indictment of University professors. Schelling's letter to Hegel from January 1796, cited below, also hints at his desire to eschew the path of a professor and become a self-sufficient writer. \textit{BuD}, II, 77. Benjamin Redekop discusses the creation of a German public sphere in \textit{Enlightenment and Community: Lessing, Abbt, Herder and the Quest for a German Public}, (Montreal: McGill-Queen's UP, 2000).

Stuttgart to live with Ströhlin and become familiar with his future students, whose trust he gained almost instantly.\textsuperscript{215}

In November 1795, Schelling arrived in Stuttgart, where he continued his philosophical development despite his exhaustive duties as \textit{Hofmeister}. Because the Riedesels were studying law, Schelling took up the subject and penned a "New Deduction of Natural Right" and he also finished his work on the \textit{Philosophical Letters on Dogmatism and Criticism}. Despite his productivity, Schelling was miserable in Stuttgart. But he was looking forward to accompanying his students to Leipzig, and perhaps beyond. He wrote to Niethammer in January 1796 describing his situation:

Since November I have been here in Stuttgart as the future guide and attendant for two barons von Riedesel, in Professor Ströhlin's house. This position has hardly been pleasant for me, because a large part of my time is as good as lost. Yet I put myself through this trouble in the hope that I will be repaid for it in the future. Next spring I am to accompany them to Leipzig, and if I endure their years of study there, on further journeys—perhaps to England, and—if the monarchy is restored in France!—also there.\textsuperscript{216}

Schelling's dreams of trips to England and France never materialized, but he could hardly have envisioned that the coming stay in Leipzig would be one of the most fruitful periods of his life. In spite of his uncertainty, a departure from Stuttgart would, as

\textsuperscript{215} Plitt, I, 90-91.

\textsuperscript{216} Schelling to Niethammer (22 January 1796), in \textit{BuD}, I, 60. All translations are my own unless otherwise noted.
he indicated to Hegel, still be welcome, because he had tired of living in Württemberg.\textsuperscript{217} However, the stay in Stuttgart was not completely devoid of intellectual stimulation, for in November and December of 1795 he met often with his erstwhile Tübingen classmate, Friedrich Hölderlin. Hölderlin—having just returned from Fichte's famous lectures in Jena—was crucial in driving Schelling away from Fichte's subjective idealism and towards a new "appreciation of nature, a philosophy of all-encompassing unity, which celebrated the beautiful and understood itself as close to Hellas..."\textsuperscript{218} In other words, Hölderlin pushed Schelling further in a theoretical direction and forced him to question the assumptions which had guided his early philosophy.

HÖLDERLIN, SCHELLING, AND THE PHILOSOPHICAL LETTERS ON DOGMATISM AND CRITICISM

Considering their philosophical reputations today, it is perhaps ironic that Hegel and Schelling never had the chance to hear Fichte's famous lectures in Jena in 1794, but Hölderlin—the most neglected of the three Tübingen friends—did.\textsuperscript{219} Although he did not stay long, he flirted with the idea of following in the footsteps of Friedrich Immanuel Niethammer, a friend of Schelling's and also a Tübingen graduate, who had habilitated and become a professor of philosophy at Jena.\textsuperscript{220} This alone is sufficient to show that,

\textsuperscript{217} Schelling to Hegel (January 1796), in Briefe und Dokumente, II, 77. It is interesting to note Schelling's reasoning for wanting to leave his homeland. He worries that the Riedesels' guardians will meet him personally and make "demands that I cannot fulfill." Schelling suspects that these "demands" will arise because of his reputation as a freethinker. "In this case I'll at least be outside of Württemberg." Schelling intimates that if his heterodoxy becomes a problem, he will settle elsewhere and attempt to serve "the public good" as a writer. \textit{BuD}, 78.

\textsuperscript{218} Furhmanns, Briefe und Dokumente, I, 55.


\textsuperscript{220} Henrich, "Hölderlin in Jena," 99.
although Hölderlin conceived of himself first and foremost as a poet, he saw philosophy as an indispensable companion to his poetic work and took theoretical questions very seriously. "Philosophy is a tyrant," he would write to Niethammer, "and I serve her needs moreso than if I had freely submitted myself to her."

But his enthusiasm for Fichte's particular brand of philosophy was short lived. Although he religiously attended Fichte's famous lectures—and recommended them to Hegel—he quickly became skeptical of Fichte's philosophy. Hölderlin began to suspect that Fichte was not as innovative as everyone first believed. Perhaps, Hölderlin suggested to Hegel, the *Wissenschaftslehre* was simply a modified version of Spinozism, which replaced "God" with the "I". "At first I very much suspected [Fichte] of dogmatism," for his thinking seemed "as obviously transcendent as previous metaphysicians who proceeded from the existence of the world." If Hölderlin's interpretation of Fichte sounds familiar, there is good reason for this; Hölderlin attacks Fichte for *implicitly* arguing what Schelling had *explicitly* argued in *On the I as the Principle of Philosophy*. For Hölderlin, infusing the "I" with the attributes of Spinoza's substance is simply philosophical sleight of hand, and surely he would not have been pleased by his former classmate's newest book.

Hölderlin would launch a more extensive critique of Fichte in a famous philosophical fragment first published in 1961 by Friedrich Beißer in the *Grosse Stuttgarter Ausgabe*, who gave it the title "Judgment and Being." Hölderlin penned

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221 Hölderlin to Niethammer (24 February 1796), *Grosse Stuttgarter Ausgabe*, VI, 203.

222 Hölderlin to Hegel (26 January 1795), *GSA*, VI, 154.

223 The fact that this fragment remained unknown until well into the 20th Century is evidence that Hölderlin's philosophical contributions have only been recognized recently. When it was first discovered, it was judged so irrelevant that it was sold at auction to a library in Jerusalem, where it remained until it was sold again to the government of Württemberg.
the little fragment on a page of a book, most likely in early April 1795, which, considering that Fichte had only begun to give his lectures in May of 1794, “is astonishingly early in the history of speculative idealism.” In this text, Hölderlin took aim at Fichte’s contention that the statement “I am I” is the starting point of all philosophy. Fichte said that this short sentence not only gave us the law of non-contradiction (A=A), but captured the inner dynamic of consciousness, in which we see ourselves as both agent and object, both free and constrained. In his criticism of Fichte, Hölderlin makes philosophical use of the German word for Judgment, Urteil. The prefix Ur means “original,” while the verb teilen means to divide or cut, and thus, according to Hölderlin, Urteil connotes an original division between subject and object. Hölderlin argues that the statement “‘I am I’ is in fact “the most fitting example of this concept of original division.” Remember that Fichte—and Schelling in his first two philosophical works—believed that the whole of philosophy could proceed from the firm basis of the “self-positing I.” Fichte had made it a principle, and Schelling had made it a substance, but they both believed that this was the true starting point. But, as typical post-Kantians, Fichte and Schelling were striving for unity, and Hölderlin points out that “I am I” is not a unified statement. Indeed, it already contains a division within it—the division between I as subject and I as object or predicate. One cannot separate the I as subject from the I as object without “violating the essence” of being, and therefore there is a great difference

224 Dieter Henrich, “Hölderlin on Judgment and Being,” in The Course of Remembrance, 75. Henrich discusses the controversy over the dating of this text from 74-89. The strongest evidence for the April 1795 dating is a change in spelling that Hölderlin adopted while in Jena, coupled with the early philosophical work of Isaak Sinclair, which closely followed the philosophy espoused by “Judgment and Being.”

between mere "identity" and "absolute being." Hölkerlin, as Dieter Henrich notes, believes "that the consciousness 'I am' is neither basic nor self-sufficient and that one must revert to an even deeper foundation."  

These criticisms of Fichte, though remarkable because of their timing, should not lead one to believe that Hölkerlin is merely shifting the Grundsatze of philosophy from the "I am I" to absolute being. Rather he is rejecting any attempt to find what Schelling earlier called an "absolute axiom" for philosophy. For if being cannot be separated without "violating its essence," any attempt to use it as a "first principle" will fail. Henrich astutely remarks that "One could say, then, that Hölkerlin attempts to base a form of monism on the principle without at the same time falling into a methodological monism by deriving principles from it."  

In other words, Hölkerlin has not given up the search for a deep, satisfactory, and unified basis for all philosophy. He has, however, given up the idea that we can find a first principle, and then proceed from there, as if we were doing a geometry proof. With respect to Hölkerlin's meetings with Schelling in late 1795, this fact is crucial, for his letters to Niethammer show quite clearly that he saw Schelling's On the Possibility of a Form of all Philosophy, and, most likely, On the I as Principle of Philosophy as dragged down by just this sort of "methodological monism." However, by December of 1795, he apparently believed that the faults of Schelling's first book had been remedied. He wrote to Niethammer in December that "Schelling, as you may know, has defected a bit from his original convictions."  

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226 GSA IV, 217. Translation from The Unconditional in Human Knowledge, 262.  
229 Hölkerlin to Niethammer (22 December 1795), GSA VI, 191.
he noted that, although he and Schelling were “not always in accord with one another,” Schelling had, “with his new convictions, gone down a better road, without ever reaching the destination on the worse one.”

There is little doubt that the finest example of Schelling’s departure from his earlier Grundsatzphilosophie is the Philosophical Letters on Dogmaticism and Criticism. Henrich argues that this departure actually took place in On the I, but there are good reasons to doubt this. First, Hölderlin’s positive reports to Niethammer came at a time when Schelling had already begun work on the Philosophical Letters. Secondly, if Hölderlin was tepid about accepting Fichte’s claim that the I = Spinoza’s substance, he would have been utterly repelled by On the I, which makes that very claim in stronger language than Fichte ever desired. In that text, Schelling had stated:

If *substance* is the same as the unconditional, *then the I is the only substance*. If there were several substances there would be an I outside the I, which makes no sense.

Therefore *everything that is is in the I, and outside the I is nothing*. For the I contains all reality….Therefore everything is in the I.

Based on this passage alone, if Hölderlin merely “suspected” Fichte of dogmatism, he most certainly would have convicted Schelling of the same offense. Therefore, it is likely

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230 Hölderlin to Niethammer (24 February 1796), GSA VI, 203.

231 Violetta L. Weibel, Hölderlin und Fichte (1794-1800), (Munich: Schöningh, 2000), 165. Waibel hypothesizes that Schelling began working on the Letters as early as the end of 1794, giving ample time for Hölderlin to see the deviation from his original Grundsatzphilosophie.

232 AA, I, 2, 119. Translation from The Unconditional in Human Knowledge.
that the text expressing Schelling’s “new convictions” is not On the I but the eclectic
Philosophical Letters on Dogmatism and Criticism.

The varying subject material of this text betrays the fact that Schelling composed
the Philosophical Letters over a long period of time. Indeed, the work itself was
published in two separate installments in Neithammer’s Philosophisches Journal.233
Written as an imagined correspondence with a friend—one can easily imagine Hölderlin
as the recipient of the letters—the text is united insofar as Kant is the lynchpin.234 The
first four letters, composed while Schelling was still awaiting his final exams at the
Stift235, are primarily attacks on the Tübingen Kantians who had, according to Schelling,
lapsed into a new form of dogmatism, one vastly inferior even to the old dogmatism of
Spinoza, Leibniz and Wolff. As we saw in the previous chapter, Gottlob Christian Storr
was the most powerful force in the Stift, and at first, he had no urge to use Kant to
buttress his orthodoxy. But his students clearly saw the incompatibility of Storr’s biblical
literalism with Kant’s teachings. After all, “What opposition could be both greater and
clearer than the one between Storr’s insistence on the divine authority of the word and
Kant’s principle of the autonomy of reason?”236 But as Kant became more famous and

233 The first four letters were published in November of 1795, but Schelling had completed them much
earlier, as is evidenced by a letter to Hegel in July. “[Niethammer] asked me for a contribution [to the
Philosophisches Journal]. In the fifth part—you are able to read the journal—you will find
philosophical letters, written by me. Schelling to Hegel (21 July 1795), BuD, II, 71. The editors of the AA
place the composition of the first four letters as occurring simultaneously with the writing of his
dissertation on Marcion. Letters five through ten, which appeared in April of 1796 were composed partly
in Schorndorf, while still preparing for his final exams, and partly in Stuttgart after he had assumed his
position as Hofmeister to the Riedesels. For these dates, see AA, I, 3, 7.

234 Fritz Meier characterizes each of Schelling’s early works as focused on a particular philosopher. In his
schema, the main figure of the Philosophical Letters is Kant. Meier, Die Idee der

235 See note 21.

more powerful, more philosophically inclined professors like Johan Friedrich Flatt and students like Schelling’s classmate Süßkind began to incorporate Kant’s moral philosophy into their own theological systems. Storr, originally uninterested in Kant, accepted these innovations. This incensed Schelling, and he complained to Hegel that there were now “hordes of Kantians” in Tübingen, all of whom “have taken some of the ingredients of the Kantian system (from the surface, of course)” in order to create “powerful philosophical soups (kräftige philosophische Brühen)” which rendered theology stronger than ever. Schelling ridiculed these “philosophical soups” in the Letters. And along with this harsh condemnation of his Tübingen teachers and colleagues comes a powerful argument against the possibility of any supramundane God. Indeed, if one wanted to label Schelling an atheist, the first part of the Philosophical Letters— with its sneering rejection of a “moral God”— would provide compelling evidence. At the very least, Schelling was advancing an extremely heterodox conception of God.

In the remaining letters, Schelling examines the theoretical and practical claims of dogmatism and criticism. According to Schelling, these are the only possible philosophical systems. Considering his reputation as a disciple of Fichte, he comes to a surprising conclusion: neither dogmatism nor criticism can be refuted, either theoretically or practically. Furthermore, both systems lead to the same endpoint: the complete vanishing of the objective world. These contentions are inseparable from Schelling’s interpretation of the Critique of Pure Reason, which he sees as merely the “canon” of all (i.e. both) possible philosophical systems. But although he goes to great lengths to

237 Schelling to Hegel (6 January 1795), BuD, II, 56.
establish the irrefutability of both systems, in the end, he sides with criticism. Criticism, Schelling maintains, can avoid arriving at the disastrous consequences of dogmatism so long as it refuses to imagine its endpoint as either attained or attainable. By preserving the possibility of an infinite struggle against the objective world, criticism safeguards human freedom. Schelling even leaves open the possibility that someday, when all people stand on the same level of freedom, dogmatism will disappear. Thus, despite its theoretical agnosticism, the Philosophical Letters openly favors the system of criticism.

Before delving into a close examination of the text, a few points must be made clear: first, the Philosophical Letters, as we saw from Hölderlin’s newfound approval of Schelling’s philosophical path, represents a definite departure from the Grundsatzphilosophie of his previous major philosophical works. The Letters seek no first principle for philosophy; in fact, they establish that opposing principles can lead to the same endpoint. Furthermore, Schelling argues that the principles of a system are not set up by theoretical reason and then followed out to their logical implications. Rather, whatever principle one chooses, one does so by an activity prior to the establishment of the principle. Second, the Philosophical Letters incorporates an incorrect yet fruitful misreading of Kant’s critical philosophy. Schelling sees Kant as revolutionary even when the implications of his moral philosophy tend towards orthodoxy, and as we will see, Schelling dismisses Kant’s staunch rejection of dogmatism by a mere change in vocabulary. Of course, Schelling is not alone in this creative misreading of Kant: it is a central feature of all German Idealist speculation.²³⁸ A last point to keep in mind is a

²³⁸ Dieter Henrich explains how the Idealists were able to misread Kant. Kant, he notes, had set out firm boundaries for philosophical speculation. “Everything that goes beyond these limits also goes beyond a meaningful philosophical program. Of course, his successors were not aware of this. Nevertheless, it is precisely this limitation that is Kant’s teaching, and his reason for not doing more than he actually did in
cautionary one. It would be a mistake to read the *Philosophical Letters* as a drastic departure from Fichte. Some commentators have identified this text as the ultimate source of the later schism between Fichte and Schelling, but this is overstating the case.\(^{239}\) Surely, it may have shocked Fichte to see his supposed disciple admitting that dogmatism is irrefutable, and surely Schelling incorporated some of Hölderlin’s criticisms of Fichte within this work. But the *Philosophical Letters* still retains a Fichtean tone in the sense that it is primarily an ethical tract: Schelling argues that reality is obtained not theoretically but practically, not through knowledge but through productivity.\(^{240}\) In the end, the Fichtean notion of infinite striving is for Schelling the guarantor of the legitimacy of criticism.

**PHILOSOPHICAL LETTERS, PART I**

The first four letters are, as mentioned above, an attack on the Tübingen Kantians, at times hinting at outright atheism. The assault is one of the most scathing in Schelling’s works. Although he does not mention them by name, Schelling clearly targets his “Kantian” teachers Storr and Flatt, as well as his classmates Süsskind and Rapp. To

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\(^{239}\) Reinhard Lauth argues that Schelling’s framework of two equally valid metaphysical systems, originating in this work, will lead to the public split between Fichte and Schelling. For Lauth, who is staunchly pro-Fichte, the *Philosophical Letters* thus represents the first sign of Schelling’s lapse into a pre-critical dogmatism, and he agrees with Fichte that Schelling’s understanding of the first critique is severely flawed. For his discussion of the *Philosophical Letters*, see Lauth, *Die Entstehung von Schellings Identitätsphilosophie in der Auseinandersetzung mit Fichtes Wissenschaftslehre* (Freiburg: Karl Alber, 1975), 35-55. Lauth, of course, may be correct about Schelling’s misinterpretation of Kant, but one can hardly exonerate Fichte of that crime.

\(^{240}\) Meier, *Die Idee der Transzendentalphilosophie*, 24-25.
Schelling, these men are imposters and not really Kantians at all.\(^{241}\) They are a new breed of dogmatists and pose a danger to those who would unwittingly become their allies; as such, they should be shunned by those who embrace the advance of reason and freedom.

The time has come to part company so that we may no longer nourish in our midst a secret enemy who, laying down his arms here, takes up new weapons elsewhere in order to massacre us, not in the open field of reason, but in the recesses of superstition. ... The time has come to make the freedom of minds known to the better kind of men and to stop man from deploring the loss of his fetters.\(^{242}\)

Schelling identifies two major problems with their interpretation of Kant. First, they falsely imagine that Kant emphasized the weakness of reason, and they rejoice in what they perceive as a resulting license to maintain their old prejudices. Whatever they “cannot prove,” they simply “mark with the stamp of practical reason....”\(^{243}\) But in doing so, they are perverting Kant’s revolutionary teachings. According to Schelling, interpreting Kant solely as the man who “found it necessary to deny knowledge, in order to make room for faith,” misses the point.\(^{244}\)

\(^{241}\) *AA*, I, 3, 14-15.


\(^{243}\) *AA*, I, 3, 58. This exact phrasing is also present in Schelling’s complaints to Hegel. See note 25

“[Kant’s] system has been misunderstood or misused; it has been perverted into conventional phrases and preachers’ litanies…If Kant meant to say: Dear people, your (theoretical) reason is too feeble to comprehend a God, but even so you ought to be morally good people, and for the sake of morality you ought to assume a Being who rewards the virtuous and punishes the vicious—if Kant meant to say nothing but this, then there was nothing unexpected, uncommon, or unheard of in Kant.”

In Schelling’s estimation, the revolutionary aspect of Kant proclaimed not the weakness of reason but its strength, and when the “new dogmatists” appeal to Kant in order to justify their old religious beliefs, they betray their intellectual laziness and lack of character. “Give me the old honest Wolffian!” says Schelling—at least the Wolffians regarded those who “had no faith in their own demonstrations” as “lacking all philosophical sense.” The new dogmatists, on the other hand, rejoice in the “weakness of their demonstrations,” for that weakness, in their estimation, guarantees theological dogma. The “weak reason” they embrace, however, is nothing to be proud of. “…weak reason is not a reason which cannot know an objective God, but a reason which desires to know one.”

245 *AA*, I, 3, 55.

246 Indeed, for Kant, reason is far from weak. It is so powerful that it can carry out an investigation of its own powers!

247 *AA*, I, 3, 58.

248 *AA*, I, 3, 56.
Besides mocking the "weak reason" of his "secret enemies," Schelling argues that their "moral God" is incompatible with human freedom. This argument is incomprehensible unless one has Spinoza in mind. For Schelling, the only possible objective God (a God outside of the I) is that of the Ethics, which is equivalent to "absolute causality." Spinoza rejected human freedom precisely because he believed in this "absolute causality" located solely within God. Schelling sees the pseudo-Kantians as unwittingly rejecting human freedom as well. They want to preserve orthodox religion, and thus invoke God because they believe him necessary for morality. They presuppose a "moral God" who has created, along with everything else, the moral law itself. But in doing so, they negate their own freedom. If the only possible "God" is the first and only cause, then just as in Spinoza's system, human beings are merely modifications of the divine and have no causal power of their own. Hence, their argument is a reductio ad absurdum, negating its own premise. The only way to maintain consistency is to postulate a moral law higher than any God. What Storr and Flatt should do is begin their system with the moral law and have God come afterwards.\footnote{AA, I, 3, 54.}

As radical as it may seem, even this unorthodox version of the practical postulate seems flawed to Schelling. In the second letter, Schelling argues that free action can never be understood in terms of God. When we act freely, he claims, we do so independently and before any conception of God. If one acts and then believes in God afterwards, "[God's] causality has rendered your own null." Thus, Schelling seems shockingly close to one of Sartre's arguments for atheism: if God exists, his absolute
causality renders our own freedom impossible. At the very least, the only possible God is one immanent in the subject. It should come as no surprise that Schelling chose to publish these letters anonymously—he was still living in Tübingen, preparing for his examinations by the very same “secret enemies” he lambasted in the text.250

In spite of the apparent force of his argument about God and freedom, there is an ambiguity in Schelling’s condemnation of a “moral God.” Despite the famous distinction between the “spirit” and the “letter” of the Kantian philosophy, made not only by Fichte but by Schelling himself, he is not on firm Kantian footing. It is clear that Schelling is not defending Kantian moral philosophy, but using it to advance an even more radical conception of the moral law.251 In §87 through §89 of the Critique of Judgment, a text which Schelling knew very well, Kant had discussed the “moral proof” of the existence of God.252 According to Kant, the moral law alone obligates us to be virtuous, “but it also determines for us, and a priori, a final purpose, and makes it obligatory for us to strive toward [achieving] it...”253 This final purpose is the highest good, but unfortunately, the physical world seldom rewards men with the happiness that should accompany virtue. In Kant’s words, “the concept of the practical necessity of [achieving] such a purpose by applying our forces does not harmonize with the

250 This point is supported by Henrich. By November of 1795, it is clear that “Schelling had ceased to maintain Kantian doctrine true to Kant’s own words and arguments against the Tübingen theologians....We must assume that he had long since begun to move in the direction of a new and, as it was soon called, ‘deeper’ grounding of the truths that ‘with Kant’ had only just ‘dawned.’ “Dominant Problems in the Tübingen Stift,” The Course of Remembrance, 49.

251 There is ample evidence of Schelling’s familiarity with the third Critique. During this period of his life, he regularly reported on planned projects to Niethammer. Unfortunately, the majority of these plans never came to fruition. One project he mentioned was “an interpretation of the Critique of Judgment according to my principles.” Schelling to Niethammer (22 January 1796), BuD, I, 61.

theoretical concept of the *physical possibility* of its being achieved...."²⁵⁴ Kant says we must presuppose the existence of something beyond the mere causality of nature which will ensure "a happiness of rational beings that harmoniously accompanies their compliance with the moral law."²⁵⁵ Something supernatural must be invoked: "We must assume a moral cause of the world...in other words, that there is a God."²⁵⁶ Thus, God is brought in solely as a means to give us hope that virtue will—at some point at least—be rewarded with happiness.

Unlike the "proofs" of the Tübingen pseudo-Kantians, however, Kant's proof was not a theoretical one. The inference we make about the existence of God is made only "for [the use of] judgment in accordance with concepts of practical reason, and hence for reflective rather than determinative judgment."²⁵⁷ Furthermore, Kant distinguishes between the assumption of a "*moral basis* for assuming a final purpose of creation" and a "*moral being* as the original basis of creation." The former is legitimate, while the latter is a misuse of reason. Kant never ceased to emphasize the theoretical impossibility of proving God's existence:

Hence it is merely *for the practical use* of our reason that we have established sufficiently the actuality of a supreme author who legislatates morally, and we have not determined

anything theoretically regarding the existence of this
author.\textsuperscript{258}

It is precisely this restriction of theoretical reason that, according to Kant, prevents
\textit{theology} from becoming mere superstition.\textsuperscript{259}

Schelling is thus correct in condemning the Tübingen Kantians for their misuse of
practical postulates. He is also right to insist that they make the moral law higher than
any God; this has firm foundations in Kant’s teachings. Indeed, Kant explicitly states
that he is “not trying to say that it is as necessary to assume that God exists as it is to
acknowledge that the moral law is valid....”\textsuperscript{260} The moral law always comes first for
Kant, and God is brought in afterwards to secure the correspondence of happiness and
virtue. This is again related to Kant’s insistence on restricting theoretical reason’s access
to God:

But as far as religion is concerned, i.e., morality in relation
to God as legislator, [the benefit of restricting reason’s
theoretical claims is this]: if we had to cognize God before
[having morality], then morality would have to be governed
by theology: not only would we have to replace an inner
[and] necessary legislation of reason by an introduced
external and arbitrary legislation of a supreme being, but all
the deficiencies of our insight into the nature of this being

\textsuperscript{258} Kant, \textit{AA}, V, 456.

\textsuperscript{259} Kant, \textit{AA}, V, 459.

\textsuperscript{260} Kant, \textit{AA}, V, 451.
would have to affect the ethical precept[s] in this legislation
and so pervert religion and make it immoral.

Thus, two of Schelling’s main criticisms seem to be in accordance with Kantian
doctrine. Still, according to Schelling, even a post-hoc assumption of an external,
objective God negates human freedom. *This* is radically un-Kantian. In essence,
Schelling has taken Kant’s argument a step further. Kant believes that, in order to make
sense of our own moral efforts, we could assume a creator of the world, “even if only for
the sake of avoiding the risk of [having to] regard that striving as wholly futile in its
effects and of therefore allowing it to flag.”\(^{261}\) This, we have seen, is grounded in Kant’s
worry that natural causality cannot be relied upon to reward virtue with happiness.

Schelling, on the other hand, not only disapproves of a *theoretical* proof of an external
God, but opposes its *practical* proof as well, since it would negate our own freedom.
This is intimately related to Schelling’s dismissal of Kant’s worries about happiness. In
the eighth letter, he bluntly states that the idea of rewarding virtuous men with happiness
is a “moral delusion.”\(^{262}\) This attitude stems from Schelling’s association of happiness
with passivity rather than with action and freedom—the happy man is one kindly *acted
upon* by objects, not a free *actor*:

\[
\text{...happiness, as long as it can reward us at all, is a}
\text{happiness not as yet brought to pass by reason itself (how}
\text{were reason and happiness ever to meet?)—a happiness,}
\]

\(^{261}\) Kant, *AA*, V, 446.

\(^{262}\) *AA*, I, 3, 92.
therefore, which no longer has any value in the eyes of a reasonable being.263

Given his total dismissal of Kant’s anxiety over the relationship between virtue and happiness, it is not surprising that Schelling does, if only briefly, insinuate that Kant is not totally innocent of Storr and Flatt’s theological crimes. In letter five, Schelling admonishes Kant for agreeing with the “spirit of the age,” in which the new dogmatists claimed only to think what the older dogmatists thought they could know.264 This method “was to be applied by Kant himself to the thus renewed system of dogmatism rather than to the system of criticism first founded by him.”265 In Schelling’s estimation, Kant had unwittingly stumbled upon a system which he subsequently abandoned in favor of orthodoxy. Schelling’s cryptic comment, unfortunately, does not identify where Kant had gone off his “revolutionary” track. Nonetheless, it is certain that the conflict between the idealized Kant and the real Kant looms large in the Philosophical Letters, and is wholly symptomatic of the ambiguous role Kant played in the construction of German Idealism. And if Schelling is only partially on firm Kantian footing in the first four letters—at least in the sense that he emphasizes that the moral law should come before God—he forfeits every bit of it in letters five through ten. There, his “creative misreading” of the sage of Königsberg reaches new heights.

263 AA, I, 3, 93.
264 AA, I, 3, 71.
265 AA, I, 3, 71.
PHILOSOPHICAL LETTERS, PART II

In the first four Philosophical Letters, Schelling focused largely on the misuse of Kant and hardly discussed the Absolute, which was central to On the I. Remember that, in that work, Schelling argued that where one locates the Absolute is of crucial importance. In the remaining Philosophical Letters, he returns to this topic. All philosophies, he insists, are ways of dealing with the problem of the Absolute, and the Critique of Pure Reason is no exception. Kant’s question about the possibility of synthetic judgments is, according to Schelling, really a question about the relationship between the I and the Absolute:

“How do I ever come to egress from the absolute, and to progress toward an opposite?”

To put that incredibly esoteric into ordinary language: why does anything exist all, and how does consciousness—without which there is no difference between knower and known—arise? One way to answer this question is through Naturphilosophie, which explains how inorganic matter ascends to the level of living, conscious organisms. But Schelling is not yet equipped to answer the question in that way, and he sticks to the method of transcendental philosophy for the time being.

Schelling wants the reader to remember that philosophy begins with a division between subject and object, that Urteilung which figured so prominently in Hölderlin’s Judgment and Being. Because theoretical reason always seeks the unconditioned, every possible philosophical system strives towards an overcoming of this division, towards that which is prior to and higher than this division. There are two possible ways philosophy can reach this goal: the object must become identical with the subject, or vice versa. “Either

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266 AA, I, 3, 60.
no subject and an absolute object, or no object and an absolute subject.” The former is
the path of dogmatism, while the latter is the path of criticism.

Schelling maintains that the Critique of Pure Reason leaves both options open, precisely because it is too limited in its scope. In the schema of the Philosophical Letters, he traces the following four steps leading from the absolute to human experience:

Absolute Unity → Manifold → Synthesis → Empirical Unity

The division of or egress from the absolute leaves us with a manifold in need of cohesiveness, data in need of organization. The mind, in turn, imposes a synthesis on the manifold in order to yield coherent experience. Anyone familiar with the Critique of Pure Reason should recognize elements of Schelling’s sketch in Kant’s Transcendental Deductions. But Schelling finds fault with Kant’s method, for it is a critique of the cognitive faculty alone, one which concerns itself only with the “formal acts of the subject.” Consequently, “Instead of deducing the formal and the material steps of all synthesis from a principle at the base of both steps, the critique of the cognitive faculty explains the progress of one synthesis by that of the other.”

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267 AA, I, 3, 65.

268 For instance, in the A Deduction, Kant writes: “Every intuition contains in itself a manifold which can be represented as a manifold only in so far as the mind distinguishes the time in the sequence of one impression upon another; for each representation, in so far as it is contained in a single moment, can never be anything but absolute unity. In order that unity of intuition may arise out of this manifold (as is required in the representation of space) it must first be run through, and held together. This act I name the synthesis of apprehension, because it is directed immediately upon intuition, which does indeed offer a manifold, but a manifold which can never be represented as a manifold, and as contained in a single representation, save in virtue of such a synthesis.” Norman Kemp Smith, 132.

269 AA, I, 3, 63.

270 AA, I, 3, 63.
the ultimate root of philosophy, a root which determines both content and form. In essence, this is a repetition of Schelling’s argument in *On the Possibility of a Form of all Philosophy*, where he says that the absolute axiom of philosophy, the self-positing I, must determine both content and form simultaneously. Kant never aspires to this, instead staying on a lower level concerned only with the way the subject thinks. Thus, Kant is unable to overcome the division between subject and object and fulfill theoretical reason’s demand that philosophy should arrive at the unconditioned.

Schelling’s talk about synthesizing a divided absolute unity hints at the role Hölderlin played in the composition of the *Philosophical Letters*. Hölderlin’s theory of “Ur-Teilung” apparently suggested to Schelling that he could explicate the problems of the Kantian philosophy in a new framework, that of an “original conflict within the mind.”271 Thus arose the radical transformation of Kant’s question about the possibility of synthetic *a priori* judgments into a question about egress from the absolute. This new formulation is, however, “clearly incompatible with Kant’s theory.”272 But Schelling, perhaps subconsciously invoking the spirit/letter distinction, believes that the *Critique of Pure Reason* supported his position.

Schelling’s fifth and sixth letters further develop the argument that the *Critique of Pure Reason* supports both criticism and dogmatism. As Schelling states succinctly,

> ...the *Critique* is destined to deduce from the essence of reason the very possibility of two exactly opposed systems; it is destined to establish a system of criticism (conceived

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as complete), or, more precisely, a system of idealism as well as and in exact opposition to it, a system of dogmatism or realism.\(^{273}\)

Kant correctly demonstrated—at least according to Schelling—that the conflict between criticism and dogmatism is impossible to decide in the realm of theoretical reason. But given Kant’s obvious prejudice against dogmatism, how does Schelling’s interpretation square with the *Critique of Pure Reason*?\(^{274}\) Schelling slyly explains the inconsistency away by inventing a new word! What Kant “really meant” by “dogmatism” was what Schelling termed “dogmaticism,” or unsophisticated and unexamined speculation.\(^{275}\)

Therefore, since Kant was really attacking “dogmaticism” when he referred to “dogmatism,” Schelling’s interpretation is safe: the *Critique* indeed leads both ways. As a result, practical postulates can be used by both criticism and dogmatism; in fact, practical postulates are necessary for both. Since theoretical reason cannot decide the contest between the two systems, it must be transferred to the realm of practice. Even Spinoza knew this, and this is precisely why he called his system an *Ethics*. He correctly realized that “No man can convince himself of any system except practically, that is, by realizing either system in himself.”\(^{276}\)

\(^{273}\) *AA*, I, 3, 69.

\(^{274}\) Kant is quite clear in his rejection of dogmatism: “We may, then, and indeed we must, regard as abortive all attempts, hitherto made, to establish a metaphysic *dogmatically*.” (B23). It is difficult to characterize the Paralogisms or the refutations of the proofs of God’s existence as anything other than a complete rejection of dogmatism.

\(^{275}\) *AA*, I, 3, 69. talk about how the first letters didn’t properly follow Schelling’s manuscript with this distinction

\(^{276}\) *AA*, I, 3, 73.
This demand that “we must be what we call ourselves theoretically” rears its head again in letter six.277 Recalling his earlier statement that we must make the absolute either a subject or an object, Schelling buttresses his argument about the indemonstrability of either system. We cannot prove what the absolute is, because proofs exist in the realm of the conditional. The absolute is unconditional and therefore we cannot prove anything about what it is or isn’t. Furthermore, the contest between systems cannot even be resolved by a “choice.” “Choosing” would imply that we simply pick a first principle and follow its implications. Our freedom will lead us to one system or another and we will live that system. “We should not establish these principles unless our freedom had already decided about them....”278 And as long as humans exist as they do now, both systems will continue to exist:

Either of the two absolutely opposed systems, dogmatism and criticism, is just as possible as the other, and both will coexist as long as finite beings do not all stand on the same level of freedom. That is my thesis, and this, briefly, is my reason: both systems have the same problem, and this problem cannot be solved theoretically, but only practically, that is, through freedom. Now, only two solutions are possible; one of them leads to criticism, the other to dogmatism.279

277 AA, I, 3, 75.
278 AA, I, 3, 81.
279 AA, I, 3, 75.
This quotation, concise and powerful, could serve as a short summation of the entire Philosophical Letters.

Although Schelling is careful to remain balanced in his assessment of the weaknesses of both dogmatism and criticism, there is no doubt that, contrary to what Fichte may have feared, Schelling opts for the latter as the better of the two systems. Indeed, the passage quoted above implies that there will eventually be a day when all human beings "stand on the same level of freedom" and presumably live the system of criticism. Furthermore, Schelling investigates the "ethics of dogmatism" in an essentially negative light, reminding the reader that Spinoza's embrace of an absolute object is the common principle of all Schwärmei.\footnote{AA, I, 3, 85, 86, 90 for example. Schwärmei, which is usually translated as "enthusiasm," was a standard pejorative word in the eighteenth century, used to deprecate either religious fanatics or anyone deemed unphilosophical. Kant did not hesitate to refer to Herder as a Schwärmer.} The ethical imperative that Spinoza and other Schwärmer embrace is "Annihilate thyself!"\footnote{AA, I, 3, 84.} Schelling describes this as a "destructive and annihilating principle,"\footnote{AA, I, 3, 86.} and though he admires Spinoza for his ability to be cheerful in light of something so horrible, he nevertheless insists that this idea of self-annihilation is the spot on which "The most sacred thoughts of antiquity and the phantoms of human insanity meet...."\footnote{AA, I, 3, 85. Unfortunately for those who prefer to see even the young Schelling as an emanationist, kabbalist, or mystic, he unequivocally renounces emanationism in the seventh letter, destroying any illusion that he could be linked persuasively to the theosophy of Boehme or Oetinger. Spinoza was correct, Schelling argues, in rejecting the emanation of the kabbalists because it is impossible to move from the infinite to the finite. In replacing the emanating principle with an immanent principle, Spinoza made the right move. Schelling explicitly denigrates the philosophy of the kabbalists, noting that Spinoza's thought was "more abstract and pure" than theirs. (82) Schelling has far more allegiance to and respect for Spinoza than any minor occult figure, and suggesting that the latter in fact is dominant in Schelling's early philosophy is absurd.} Furthermore, although Schelling will later
admit that criticism could also become Schwärmerei, he believes dogmatism rests upon an error in the interpretation of intellectual intuition.

Schelling maintains that “We all have a secret and wondrous capacity of withdrawing from temporal change into our innermost self....”284 In this intuition, subject and object are temporarily united, for in this state “I cease to be an object for myself.”285 Spinoza, Schelling argues, objectifies this intellectual intuition and imagines that the identity has been gained at the expense of his own self: he believes that he has been swallowed up by the absolute object! At this point, the reader would expect that Schelling would excuse Spinoza’s interpretation and declare that one can choose two paths. Quite the opposite: Schelling calls Spinoza’s interpretation of this experience a delusion:

Believing this, [Spinoza] deceived himself. It was not he who had vanished in the intuition of the absolute object.

On the contrary, everything objective had vanished for him, in the intuition of himself.286

So, in spite of Schelling’s ardent defense of the theoretical irrefutability of dogmatism, he does identify its objectification of intellectual intuition as a fundamental error and betrays himself as a proponent of criticism. By the time the reader reaches Letter 9, she sees that

284 AA, I, 3, 87.

285 AA, I, 3, 88. This description of intellectual intuition deviates somewhat from Fichte’s. Fichte indeed believed that intellectual intuition is the beginning of all philosophy, “the act whereby the self arises for [the philosopher].” But Fichte believed that in intellectual intuition, “I distinguish my action, and myself therein, from the objection of action before me.” Schelling here makes intellectual intuition the location of the union of subject and object, while Fichte describes it as a state in which we distinguish the two. Fichte, Second Introduction, GA, I, 4, 217-218. The translation here is from Peter Heath and John Lachs in their Fichte: Science of Knowledge with the First and Second Introductions (New York: Meredith, 1970), 38.

286 AA, I, 3, 88.
Schelling reverts to his Fichtean beginnings and sides with criticism, offering a way in which criticism can avoid the pitfalls of Schwärmerei.

Schelling begins Letter 9 with an important admission. Criticism, like dogmatism, can fall into Schwärmerei. If dogmatism explicitly demands that we annihilate ourselves as subjects, criticism indirectly leads to the same result; the abolition of the division between subject and object, the attainment of the absolute, obliterates both. Criticism demands “that everything called object shall vanish in the intellectual intuition of myself. In either case, every object is lost for me, and therewith also the consciousness of myself as subject. My reality vanishes in the infinite reality.”

Surprisingly, the seemingly opposite paths of dogmatism and criticism lead to a single endpoint. At this juncture, the agnosticism of the Philosophical Letters reaches its high water mark, for Schelling will quickly move to establish that, in spite of this convergence of the two systems, criticism can be preserved as superior. Schelling jumps from a concise formulation of that agnosticism to his modified version of criticism:

Thus it is confirmed throughout that all contradicting systems become identical as soon as one rises to the absolute. All the more urgent becomes your question, Wherein does criticism excel dogmatism, if both meet anyway in the same ultimate goal, in the last aim of all philosophizing?

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287 AA, I, 3, 97.

The answer to the question is this: criticism can be superior so long as it never envisions its goal, the attainment of the absolute, as either attained or attainable. If it makes these mistakes, it becomes dogmatism, and “Philosophy is abandoned to all the horrors of Schwärmerei.”

Schelling demands—just like his teacher Fichte—that humanity live in a state of infinite striving.

Criticism, therefore, differs from dogmatism, not in the ultimate goal which both of them set up, but in the approach to it, in the realization of it, in the spirit of criticism’s own practical postulates. Only the immanent use which we make of the principle of the absolute in practical philosophy for the knowledge of our vocation gives us the right to proceed unto the absolute.

Thus, though some scholars see the Philosophical Letters as a crucial departure from Fichte, the ninth letter makes it quite clear that Schelling has no intention—yet—of abandoning his hero. And with his approval of criticism now on the table, he makes an open assault on dogmatic philosophy in letter ten.

Letter ten recalls the opening of letter one. Dogmatism is passivity in the face of an objective absolute, while Greek tragedy is one of the finest examples of resistance to it. Still, for the vast majority of humanity, the ideals of Greek tragedy—the simultaneous acceptance of and battle with fate—would lead only to despair. Only a “race of titans” could cope with a life in which we have no power over the objective world.

289 AA, I, 3, 102.
290 AA, I, 3, 103.
we must embrace freedom. We must not surrender to the objective absolute, not
disappear in its arms. And we must certainly not conjure up new justifications for our
pre-critical beliefs. We must fight against the new dogmatists, for their “moral God”
with its concomitant abolition of our causal powers is no less threatening to our freedom
than Spinoza’s open and honest surrender of his own subjectivity. We must “bring into
the open these results of dogmatism” so that its repugnant consequences are obvious. “In
this alone lies the last hope for the deliverance of humanity.”

This provocative and final battle cry is followed by hints of Schelling’s future
projects. For according to Schelling, it is only the victory of criticism and the
supersession of this conflict—one which cannot be won theoretically but only in
practice—that allows us feel at home in the world, and indeed be able to know it. “We
feel freer in spirit if we now return from the state of speculation to the enjoyment and
exploration of nature without fear that the ever-recurring anxiety of our unsatisfied spirit
might lead us back into that unnatural state.” This is a powerful clue that Schelling did
not simply stumble upon natural science in Leipzig, but that he rather envisioned a turn
towards nature once theoretical questions had been settled. Thus the *Philosophical
Letters* end with a simultaneous reaffirmation of Fichte’s ideal of infinite striving and
foreshadowing of Schelling’s eventual departure into the seas of *Naturphilosophie.*

The *Philosophical Letters* are therefore eclectic but significant. They are the
evidence of Schelling’s own philosophical transformation as he finished his studies and
tried to enter the German republic of letters. On the one hand, they owe much to his

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293 *AA*, I, 3, 111.
disdain for the orthodoxy of his teachers at Tübingen. But they also represent an increasing willingness to "creatively misinterpret" Kant's works. He suggests that Kant's system, which was too limited in scope, sanctions both dogmatism and criticism, and that real philosophy must go further. Finally, the Philosophical Letters are evidence of Schelling's departure from Reinhold's and Fichte's Grundsatphilosophie. As I have shown, he was indebted to Hölderlin in this respect. Nevertheless, despite this change in attitude, one should not suggest—as Reinhard Lauth does—that this text laid the seeds for the destruction of the Fichte-Schelling alliance. Despite all the innovations of the Philosophical Letters, Schelling ends on a Fichtean note, clearly siding with criticism and recapitulating Fichte's idea of infinite striving. Perhaps the most interesting aspect of the text, at least in the context of this dissertation, is Schelling's cryptic reference to the exploration of nature in letter ten. This passage shows that Schelling may already have been deeply interested in natural science in 1796. This hypothesis will be borne out again in the Oldest Systemprogram of German Idealism, which despite its brevity contains a stunning demand that we change the way we view the natural world.

THE OLDEST SYSTEM-PROGRAM

If the Philosophical Letters can be read as a document of Hölderlin's influence on the young Schelling, this is no less true of the famous "Oldest System Program of German Idealism," a text found in Hegel's handwriting but which was most likely written by Schelling.294 The text begins by proclaiming the primacy of practical reason, "of which

294 "Das sogenannte 'Älteste Systemprogramm,'" in Materialien zu Schellings philosophischen Anfängen, ed. Manfred Frank and Gerhard Kurz, (Frankfurt a.M.: Suhrkamp, 1975). Franz Rosenzweig, the discoverer of the fragment, was certainly convinced of Schelling's authorship. I do not intend to render a decisive judgment in the heated debates over the author of this short work. Although Hölderlin may be the author,
Kant with his two practical postulates gave only an example.” The "new ethics," which fully appreciates this primacy, will constitute a “complete system of all ideas. The first of these ideas, the author declares, is “the representation of myself as an absolutely free being.” This free, self-conscious being creates the entire world, a creation which is “the only true and thinkable creation out of nothing.” At this point, the OSP is on firm Fichtean footing. Fichte himself called for a unification of Kant’s theoretical and practical spheres under the banner of the latter, and his Wissenschaftslehre took the self-positing I as the ultimate foundation of his system.

In spite of the Fichtean beginnings of the text, it quickly proceeds to an area which was more or less unimportant in the Wissenschaftslehre, namely natural science. How, the author asks, “must the world be constituted for a moral being?” In other words, how must physics look if it is to be compatible with freedom? Quite simply, we must "lend wings to physics once again" by allowing it to progress faster than the typical experimental physics allows. The OSP is nothing if not ambitious. For the author now moves to the relationship between physics and politics. The state, he says, must always treat free human beings as a “mechanical wheelwork,” and therefore we must “move beyond the state!” by demanding the “absolute freedom of all spirits.” Thus, in the space of one page, the OSP deals with ethics, physics, and politics. How are these heterogeneous ideas to be unified? The answer is art. “Finally the idea that unites

the spirit of the text is wholly in line with Schelling’s writings in the Stuttgart period. For a comprehensive review of the history of this debate, see Frank-Peter Hansen, "Das älteste Systemprogramm des deutschen Idealismus": Rezeptionsgeschichte und Interpretation (Berlin: Walter de Gruyter, 1989). Eckhart Förster has presented a strong case for Hölderlin as the author in his “‘To Lend Wings to Physics once again’: Hölderlin and the ‘Oldest System-Programme of German Idealism’,” European Journal of Philosophy 3 (1995): 174-198.
everything is the idea of beauty, taken in the word’s highest platonic sense.” Philosophy itself must become poetry, which is the real educator of mankind:

I am now convinced that the highest act of reason, insofar as it encompasses all ideas, is an aesthetic act, and that truth and goodness are only made sisters in beauty—the philosopher must therefore possess as much aesthetic power as the poet. Men without aesthetic sense are our letter-philosophers (BuchstabenPhilosophen)...Poetry thereby attains a higher worth, she becomes in the end what she was at the beginning—educator of mankind, for there is no philosophy, no more history. Poetry alone will survive all the other sciences and arts.\textsuperscript{295}

To make philosophy truly into poetry, a new religion, a “new mythology” is needed, a “mythology of reason” which makes philosophy “sensual.” This is the only path by which the unphilosophical Volk can be made reasonable.\textsuperscript{296} Once this goal is attained, then “No power will be suppressed; then, universal freedom and equality will reign!” This new religion “will be the last, greatest work of mankind.”\textsuperscript{297}

The Oldest System Program foreshadows a host of developments in Romantic and Idealist Philosophy, from Schelling’s later philosophy of art to Friedrich Schlegel’s and Novalis’s call for a new mythology upon which to ground society. But once again, we

\textsuperscript{295} BuD, 1, 70.

\textsuperscript{296} Even at their most radical, Schelling, Hölderlin, and Hegel were always elitists—they believed themselves to be members of a spiritual elite but saw no contradiction between this position and their radical political views at the time. Franz Nauen, Revolution, Idealism, and Human Freedom, 3.

\textsuperscript{297} BuD, 1, 71.
also see a reference to nature which suggests a future plan to frame natural science in a way that reinforces human freedom. One of the main problems of Kant’s philosophy of nature was the way it set up a rigid boundary between (noumenal) free human action and the cold necessity of the laws of nature. How can a free being be a causal force in a natural world governed solely by mechanical causality? Kant never really answered this question, instead insisting on a bland compatibility between the two. Later in this dissertation, I will suggest that Schelling dissolves the problem by making the actions of nature themselves free and eliminating this boundary line between man and nature. Thus the Oldest System Program, like the Philosophical Letters, foreshadow the turn to natural science later in Schelling’s career.

SCHELLING AS IDEOLOGUE: THE ROAD TO LEIPZIG

On March 28, 1796, Schelling left Stuttgart along with his students, who were to begin their studies at the University of Leipzig. The trip relieved some of the gloominess of Schelling’s stay in Stuttgart. When his students met up with some old friends in Darmstadt, he wrote to his parents that “It pleased me to see their genuine sensibility for old friendship burst forth....The love for [my students] goes so far that a part of it passes over to their Hofmeister. In two days I’ve made an abundance of new acquaintances through them.”298 He finally met with Christian von Gatzert, the guardian of the barons, in Darmstadt. Gatzert, he said, told him he appreciated his “New Deduction of Natural Right,” which Schelling found remarkable. Normally, “With these people, what is

\[298\] Schelling to his parents (3 April 1796), BuD II, 87.
written impresses. That is because they simply babble, but don’t learn to think.”

Gatzert, an aristocrat, surprised him by being “a man of spirit and knowledge, and I count myself lucky that he is the guardian of my students.” Twice, Schelling mentions that he hopes to be a buttress against aristocratic behavior, and seems elated with Gatzert’s orders for him and his students:

I expected aristocratic pretensions. Not at all! I am to educate them like one would educate any other person who wants to become a useful, knowledgeable, cultured man. I am to nip noble pride and aristocratism in the bud…[Gatzert] is familiar with the spirit of the age and knows well how the nobility must be secured, in order to maintain itself against the rush of the bourgeois class, which always comprises an endless majority of useful, cultured, knowledgeable and spirit- and talent-filled people.

Schelling’s trepidation over his duties as Hofmeister might seem at first glance to be the delusional products of a paranoid, anti-aristocratic Swabian mind. However, it is perfectly understandable given the social standing of his pupils and the typical role the Hofmeister played in the education of the nobility. In 18th Century Germany, noble families often required the Hofmeister to be little more than a travel guide, managing their sons’ finances and leading them on the Grand Tour. In this case, the cultivation of proper aristocratic manners was prioritized, while “methodical, continual, and disciplined

299 Schelling to his parents (3 April 1796)
intellectual work stood in the background.... Schelling was fortunate to serve a
family who, in spite of the possibility of travel to England and France, wanted their sons
to be educated in a bourgeois manner, with the Hofmeister serving more as a teacher than
as a tour guide.

Schelling’s anti-aristocratic prejudices were confirmed by his stay in Darmstadt.
He regaled his parents with tales of aristocratic buffoonery. For the most part, the
population was symptomatic of the degeneration prevalent in an aristocratic city. Even
the best minds, Schelling reported, enjoyed only “lucida intervalla.” For example, the
philosopher Friedrich Bouterwerk attempted to give lectures on Kant in the city, but half
his listeners simply slept and the other half didn’t understand anything. Even freethinkers
were pulled down by the city’s vices! “The most freethinking head I’ve met is a
bookseller and printer, Krämer, who once had contact and dealings with Voltaire, but he,
too, is drunk all day long.” Still despite Schelling’s bourgeois indignation towards life
in Darmstadt, he looked forward to going through Frankfurt, where he almost assuredly
met Hölderlin again. From there, he traveled to Jena and Weimar where he was able to
meet both Schiller and Herder (but unfortunately, not Goethe or Fichte).

Schelling’s arrival in Leipzig was a happy one. He was introduced to many
“excellent acquaintances” right away, including the “famous doctor and philosopher,”

Ernst Platner, who was then a professor of Medicine at the University. Platner, according

300 Hans Gerth, Bürgerliche Intelligenz um 1800: Zur Soziologie des deutschen Frühl Liberalismus,
(Göttingen: Vandenhoeck and Ruprecht, 1976), 52.
301 “Yet I soon discovered that eating and drinking is part of the spirit of the people. Already the company
we found here in the guesthouse was half-drunk, and since then, no midday or evening has passed without
me seeing drunken officers, councillors, lawyers, and even clericals (above all a pair of Catholics). This
belongs to the tone of an aristocratic country like the local one.” BuD, II, 88
302 BuD, II, 90.
to Schelling, was “a man who had everything which makes contact with a person pleasant: an expressive visage, effortless movements, proficient and refined speech, wit, and a treasury of knowledge.” Platner seemed to have ensnared Schelling into a trap, forcing him and his students to listen to his often anti-Kantian teachings. Indeed, Schelling indicates to his parents that he is more likely to benefit from Platner’s social connections than his philosophy. Nevertheless, and in no small part due to Platner, Leipzig made a good first impression on Schelling. He even compared it favorably to Jena, through which he had passed on his journey. While Leipzig was filled with worthy architecture, public gardens, music and theater, “the world-renowned Jena” was simply a “little town of partly ugly design, where one sees only students, professors, and philistines.”

THE TURN TO NATURE PHILOSOPHY IN LEIPZIG

Trying to understand exactly why Schelling devoted himself to Naturphilosophie in late 1796 and early 1797 requires a great deal of conjecture and speculation. Unfortunately, as Horst Fuhrmans states, “‘Leipzig,’ for us, is Schelling’s most unknown period” and much about it remains murky. Given his past letters to friends like Hegel and Niethammer, in which he clearly outlined his philosophical projects, one would expect to find his correspondence littered with evidence of his newfound interest in natural science. In fact, just the opposite is the case. Not only do we have few letters to begin with—

303 BuD, II, 93.
304 Schelling to his Parents (29 April 1796), BuD, II, 93.
305 Schelling to his Parents (29 April 1796), BuD, II, 93.
306 BuD, I, 73.
certainly Schelling had little extra time to correspond with anyone, given his own studies and those of the Riedesels—but even the extant letters shed no light on his *Naturphilosophie*. Schelling only discusses planned books about Leibniz and Kant, or his work on the *General Overview of the Latest Philosophical Literature*, a text I will discuss in the next chapter. In fact, what seems to captivate Schelling entirely, at least from the summer of 1796 until June of 1797, is his desire to publicly confront the famous German *Aufklärer*, Friedrich Nicolai. Although few works on Schelling even mention this episode, a short summary of it seems necessary given its centrality in Schelling’s correspondence during this period. Indeed, one is almost bewildered by the fact that hardly any of his letters from Leipzig fail to mention Nicolai.

The root cause of Schelling’s outrage at Nicolai was the eleventh volume of the latter’s *Description of Journey through Germany and Switzerland in the Year 1781*, which was published in 1796. Although it purports to describe the events of 1781, Nicolai openly mocks Schelling’s father (or, as Nicolai calls him, Magister Schelling the First) and equally disparages the philosophy of Friedrich himself (Magister Schelling the Second), particularly his *On the I as Principle of Philosophy*. Nicolai’s criticism of Schelling’s father rests primarily on his early work on the Arabic language. When he was only twenty-four, Schelling’s father believed that the Arabic language was “the key to the proper understanding of the Hebrew language and therefore to the proper understanding of the Old Testament.”

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307 Fuhrmans agrees with this characterization, noting that Leipzig was a “time of intensive work, which left little room for personal contact.” *BuD*, I, 76.

308 The first volume of the series was published in 1784, so it was by no means a new enterprise for Nicolai.

with “a gravity which sometimes descends into comedy,” “speculated so deeply into Arabic that he couldn’t see left or right.”

Nicolai mocks him for not realizing that eighteenth century Arabic is very different from original Arabic, a fact which other scholars had quite easily exposed. Schelling’s father should have realized “that modern Arabic scholars have to learn the language of the Koran as a dead language.”

Nicolai’s description of Schelling’s father lasts only two pages in the original text. He dedicates much more space to the son, obliquely attacking Fichte in the process. Nicolai notes that Schelling’s “profound” On the I owes something to Fichte for his discovery of the “important Grundsatze” that “I is I.” Schelling, however, “took this great discovery to a new level of deduction, which Professor Fichte himself was hardly capable of doing, despite [Fichte’s] unspeakable capability in the formal deduction of fantasies (Hirngespinsten).” Nicolai pokes fun at Schelling’s “hatred” of empiricism and characterizes his search for a Grundsatze as a retreat into the subterranean. Schelling and other “critical philosophers” build their systems not “upwards, in the sunlight,” but rather they burrow into the earth, seeking “ground after ground (Grund unter Grund)” so that the “main story (Bel - etage)” of their system is located in “the darkest cellar.” There, they do not seek the sunlight, but rather prefer the “dim little lamps of their formal deductions, which shimmer through their musty cellars.” Nicolai’s critique is through and through that of an empiricist. One has the data of the world in front of us, and thus

310 Nicolai, GW, 20, 119
311 Nicolai, GW, 20, 120
312 Nicolai, GW, 20, 121.
313 Nicolai, GW, 20, 122.
314 Nicolai, GW, 20, 122.
we need no subterranean tunneling to see the ground of this everyday experience.

Nicolai contends that:

It seems to me that the profound Indian philosophy, which
through its transcendental contemplation in the end goes
only far enough to see the tip of its own nose, and which is
impossible for any material, sensual man to understand, is
completely on the path [of] Professor Fichte and Magister
Schelling....

Furthermore, Nicolai argues that “in truth, Schelling has absolutely nothing in common
with Kant.”

It should not be surprising that Nicolai’s comments, which are throughout
bitingly satirical, should have incensed the proud young Swabian. Not only did Nicolai
characterize Schelling’s philosophy as an unnecessary “fantasy,” but he challenged
Schelling’s fundamental belief that he was completing Kant’s philosophical project. In
addition, Schelling most likely felt a more mundane threat from Nicolai’s criticisms: he
may have feared that a souring of his reputation could cost him his job with the
Riedesels.

Schelling’s reaction to Nicolai’s Reisebeschreibung was quick. On May 8, 1796,
he began his letter to Niethammer expressing his “great desire” to respond to Nicolai’s
criticism, going so far as to ask Niethammer for advice on how to proceed. “The plan is
for I myself to write letters to Herr Nicolai. I hope [I can find] a publisher here to take

\[315\] Nicolai, GW, 20, 128.
\[316\] Nicolai, GS, 20, 127.
\[317\] BuD, 1, 78n.
them. Could you recommend one to me...?" Schelling also asked Niethammer to announce his plans in the *Allgemeine Literatur Zeitung* and the *Intelligenzblatt.* In his next letter to Niethammer, he returns to the subject of Nicolai without pause. "My only intention is to publicly ridicule that book-dawdler (*jenen Büchervertrödler an liter. Pranger zu stellen*). Because the rabble always assembles where there is something to gape and laugh at, they will surely assemble at the pillorying of Nicolai." Schelling rambles on, again noting that he will "prove Nicolai’s ignorance," and judging from the letter, he sent something to Niethammer which has not survived. Schelling orders Niethammer: "If the document which you have in your hands is appropriate to bring before the public, don’t hold it back." Apparently Niethammer judged that it shouldn’t be published, but Schelling continued to write out drafts of his "fragments on Nicolai." He even reassured his father in February of 1797 that "[The answer to Nicolai] lays on my desk, written and ready. There are good reasons it is being held back from this book fair; all the more certain it will come out next summer."

The public confrontation with Nicolai never occurred, and Schelling’s furious work on an attack-piece apparently did not hinder his composition of the *Ideas for Philosophy of Nature,* whose completion he reported to Niethammer on June 4, 1797.

318 Schelling to Niethammer (8 May 1796), *BuD* I, 77-78.
319 Schelling to Niethammer (24 May 1796), *BuD* I, 79.
320 Schelling to Niethammer (24 May 1796), *BuD* I, 80.
321 Schelling to Niethammer (29 July 1796), *BuD,* I, 84
322 Schelling to his parents (4 February 1797), *BuD,* II, 115. This letter happens to be the first in which he mentions the *Ideen* to his parents.
323 "I have – God forgive me – produced a large book. I was horrified when I came back and saw hordes of paper in front of me." Schelling to Niethammer (4 June 1797), *BuD* I, 105.
While we lack extensive evidence—even in spite of the hints in the *Philosophical Letters* and the *Oldest System Program*—about why Schelling turned to nature in the first place, we *can* piece together an account of the professors he learned from at Leipzig. Plitt noted that Schelling’s first year of scientific studies in Leipzig focused on mathematics, physics, and chemistry, while the second focused on physiology.\(^{324}\) Perhaps this order sheds light on the structure of the *Ideas*, which tends heavily towards physics and chemistry and barely mentions the organic—a concept which would dominate his later works of *Naturphilosophie*. Despite the paucity of sources on Schelling’s Leipzig period, one can still piece together a rudimentary account of his intellectual activities there. A number of professors at the University provided the scientific groundwork upon which Schelling would draw in his philosophy of nature. Therefore, at this point we enter the often unfamiliar world of eighteenth century science, a world which almost all English-speaking scholars prefer to ignore, either because they lack even a rudimentary knowledge of it, or because their projects are too broad to incorporate it.\(^{325}\) They never mention the dozens of scientists whose works Schelling studied while composing his

\(^{324}\) Plitt, I, 129.

\(^{325}\) Dale Snow’s otherwise commendable *Schelling and the End of Idealism* is a perfect example of both of these tendencies. In attempting to navigate Schelling’s entire career, she devotes only one chapter to his *Naturphilosophie*. But even this chapter is more of a shortcut than a serious attempt to understand Schelling’s philosophy of nature. It focuses entirely on the introduction to the *Ideas*, a valuable but very incomplete statement of Schelling’s beliefs, because it was superseded very quickly by his *On the World Soul* and his later, more systematic works. To suggest—even implicitly, as she does—that the introduction to the *Ideas* is the best summary of Schelling’s *Naturphilosophie*, rather than his much more mature and systematic works from 1799-1802 (the *First Outline*, the *Introduction to the Outline, General Deduction of the Dynamic Process*, *On the True Concept of Naturphilosophie*) is misguided. Even Joseph Esposito’s excellent *Schelling’s Idealism and Philosophy of Nature* deals only with the *philosophical* context of the *Naturphilosophie*, not the scientific context. At least Frederick Beiser, in *German Idealism: The Struggle against Subjectivism* recognizes the importance of the later works on *Naturphilosophie*. Robert Richards’ account of Schelling in *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe* does succeed in examining Schelling’s scientific context. Ironically, so too does Peter Hans Reill in his *Vitalizing Nature in the Enlightenment* (Berkeley: University of California Press, 2005), even though he despises *Naturphilosophie*. 
Naturphilosophie, and neither do they mention contemporary scientists like Cristoph Heinrich Pfaff or Carl Friedrich Kielmeyer, with whom Schelling shared a mutual respect. This is a grave defect in the existing Schelling literature, and one which the following chapter will remedy. Not only will I chronicle Schelling’s interactions with his professors at Leipzig, who themselves were allied to particular schools of eighteenth century scientific thought, I will give the 21st Century reader the context necessary to fully understand the larger scientific context of Schelling’s Naturphilosophie from 1797 to 1802. I will also examine another intermediary philosophical text, the General Overview of the Latest Philosophical Literature, which was composed alongside Schelling’s scientific studies in his early Leipzig period.
NEWTON AND NEWTONIANISMS

No one in history dominated the opening of a new age the way Isaac Newton dominated the early years of the Eighteenth Century. He successfully united terrestrial and celestial mechanics and laid bare the workings of nature on a scale hitherto deemed impossible, leading Pope to declare famously that, after the arrival of Newton, “all was light.”

With the publication of the *Principia* in 1687, Newton became the most important man in Europe. His staggering success led not only to lionization by his English countrymen, but also produced a fervent group of continental admirers who saw Newton’s method—through which the world was to be understood mathematically, experimentally, and mechanically—as the key to unraveling the mysteries of other emerging scientific disciplines. Newton’s dominance was assured not only by his scientific successes but by the aid his system lent to supporters of the social and political status quo, who were eager to ward off an emerging republican “Radical Enlightenment,” born of the English civil war and furthered by men like Toland and Collins in England and Spinoza on the

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326 Newton’s epitaph reads:

*Nature and Nature’s laws lay hid in night:*

*God said, “Let Newton be!” and all was light.*

327 This is not to say that Newton himself was wholly in line with the experimental approach championed by scientists like Robert Boyle. At times, Newton had to squeeze his abstract work into the expected experimental format, and his lifelong rivalry with Robert Hooke began when the latter criticized him for not being experimental *enough* in his theory of light. Nevertheless, it is accurate to say that the Newton idolized by scientists on the continent was a version of Newton who stressed the importance of experiment.
Newton's very definition of matter as impenetrable and powerless buttressed both political and religious orthodoxy. For Newton, passivity meant imperfection. And if matter—the fundamental building block of the natural world—is indeed passive, then there are no active powers or forces inherent in nature. Instead, all force comes from God's direct and tangible intervention in the world, an intervention Newton believed was periodically needed to keep the universe in order. From this, Newton's followers drew political conclusions: just as God must "impose order" upon "dead" matter in order to create a harmonious world, so must a strong monarchy impose order upon human individuals in order to create a viable society.

Newton's writings, however, were Janus-faced. The deductive, mathematical Newton of the Principia—the Newton presented in the orthodox Boyle lectures—was complemented by the experimental and sometimes speculative Newton of the General Scholium and the Queries. Contra Pope, all things were not yet light, and Newton fully

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328 Margaret Jacob emphasizes Newton's usefulness as an opponent to the radical sects that arose during the English Revolution in The Radical Enlightenment: Pantheists, Freemasons, and Republicans, (Boston: George Allen, 1981). See especially p. 65-108. Jonathan Israel's Radical Enlightenment similarly distinguishes between the "moderate Enlightenment" of men like Newton and Locke and a revolutionary fringe. Israel argues that, instead of fighting all forms of Enlightenment, "rulers and Churches" instead chose to "forge a new orthodoxy" by "discard[ing] old structures and ally[ing] with one or another strand of the moderate Enlightenment..." Radical Enlightenment: Philosophy and the Making of Modernity, 8.


332 In his correspondence with Samuel Clarke, Leibniz criticized Newton's "odd opinion" that "God Almighty wants to wind up his watch from time to time." The Leibniz-Clarke Correspondence, ed. H.G. Alexander, (New York: Philosophical Library, 1956), 11.

recognized this. The *Principia* left the cause of gravity unexplained, as well as the cause of such phenomena as electricity, magnetism, chemical attraction, and even life. In the *Opticks*, Newton allowed himself to make conjectures he called *Queries*. Some dealt with the nature of light, some with Newton’s proposed ether theory, and some, such as the massive *Query 31*, proposed solutions to the puzzles of chemistry and electricity. Eighteenth century experimental scientists appreciated the *Opticks* because they believed that research into these hitherto unexplored phenomena could not be conducted mathematically. Inductive experimentation was the only conceivable angle of attack. Thus, we must be careful when we talk about “Newtonianism” as a homogenous entity. As Bernard Cohen reminds us,

That there were in the eighteenth century two quite different traditions of Newtonianism—the hypothetico-experimental or speculative-experimental tradition associated with the *Opticks*, and the mathematico-deductive (although not wholly unempirical) tradition associated with the *Principia*—is plain from studying the respective sources of the experimentalists and the mathematical physicists in the age of Newton.³³⁴

Thus, it would be a mistake to describe the eighteenth century life sciences, or Schelling’s *Naturphilosophie*, as a “revolt against Newton” in general. In fact, Schelling was most deeply interested in precisely the sciences (chemistry, electricity, magnetism, physiology) whose foundation had been laid by the “hypothetico-experimental” Newton.

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However, Schelling and others clearly revolted against the *other* Newton: the Newton of the *Principia* and the Boyle lectures.

Earlier in the century, a revolt against this *other* Newton could be downright hazardous. The career of Gottfried Wilhelm Leibniz exemplified this best. Not only did Leibniz became embroiled in a bitter controversy with Newton’s handlers over the discovery of the Calculus, but his metaphysics emphatically rejected the notion that matter and motion can fully account for the operations of the physical world, instead arguing that “in corporeal things there is something over and above extension, in fact, something prior to extension, namely, that force of nature implanted everywhere by the Creator.” Unsurprisingly, when Leibniz’s patrons in the House of Hanover became English royalty, bringing the “plagiarist” Leibniz along with them was out of the question. Doing so would have been political suicide for a foreign-born monarch wary of stepping on native toes. Thus, the great polymath remained in Germany and died not as a court intellectual, but as a mere librarian. However, the philosophy of Leibniz lived on. In Germany, he was the founder—by way of Christian Wolff—of German *Schulphilosophie.* In mathematics, he played a posthumous role in the *Vis Viva* controversy. And he was often appropriated by life scientists—sometimes for heterodox purposes—who were dissatisfied with the idea of “dead matter.” Leibniz’s

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336 For a short summary of the vis viva debate, which revolved around whether $mv$ or $mv^2$ was the true “living force,” see Margaret D. Wilson, “The Vis Viva Controversy” in *Leibniz: Metaphysics, and Philosophy of Science* (New York: Oxford University Press, 1981).
refusal to see matter as powerless no doubt was a reason the young Schelling praised him as a prophet of his own deeply unorthodox *Naturphilosophie*.\(^{337}\)

This constant invocation—whether explicit or implicit—of Leibniz, Newton's greatest opponent, during the eighteenth century, is significant, for it highlights an important fact: the story of the life sciences (as well as of chemistry and the physics of electricity and magnetism) in that epoch is often the story of the gradual overthrow of the mathematical-mechanical paradigm, and Romantic *Naturphilosophie* can therefore be seen as the endpoint of this trajectory. In Leibniz's time, attacking Newton was hazardous, yet by 1810 Goethe staked his scientific reputation on a bitter and sometimes misguided dismissal of Newton's entire empirical and mathematical approach to natural science. Pioneers such as Haller, La Mettrie, Buffon, Herder, and Blumenbach had long since made a new understanding of life possible. And although no less a philosopher than Kant still clung desperately to Newtonian mechanism as the only way to understand natural organisms, by 1780 the majority of life scientists considered this approach less than satisfactory.\(^{338}\)

Schelling and *Naturphilosophie* stand at the end of this sequence, and they represent the boldest and most comprehensive rejection of mechanical natural philosophy. Although some historians see Romantic *Naturphilosophie* as the antithesis of science or the rejection of what Peter Hans Reill calls "Enlightenment Vitalism," this

\(^{337}\)There is some evidence that Leibniz flirted with Spinozism in his youth, most notably in his Paris period. However, his opposition to Spinoza in his mature writings is undeniable. That God is identical to nature is a "doctrine of ill repute which a recent writer [Spinoza], subtle indeed, though profane, either introduced to the world or revived." "On Nature Itself," in *Philosophical Essays*, 155-167. Quotation from 160.

\(^{338}\)Kant clung especially tightly to Newton's demand that empirical science be mathematical. He famously declared in the *Metaphysical First Principles of Natural Science* that "in any special doctrine of nature there can be only as much proper science as there is mathematics therein." (Cambridge Translation, 185).
dissertation will establish just the opposite. Rather than being a manifestation of a “Counter-Enlightenment” or the abandonment of a cautious empiricism, Schelling’s Naturphilosophie was a much-needed reevaluation of the relationship between man and nature in the wake of eighteenth century developments in the natural sciences. For all its flaws—and there are many—Schelling’s Naturphilosophie offers the modern reader a new picture of nature, one regrettably lost over the past two centuries. It offers us a nature teeming with life, and a nature from which man cannot be divided. Unfortunately, seeing the world through Schelling’s eyes is almost impossible for a modern reader unfamiliar with the science of his time. To facilitate a better understanding of Schelling’s works from 1797 to 1802, a brief but comprehensive introduction to this sometimes bizarre world is needed. What follows is a narrative focused mainly on the life sciences, but also encompassing developments in chemistry and physics.

FROM “NEWTONIAN MEDICINE” TO VITALISM

Biology was not established as a formal discipline until the early Nineteenth Century; indeed, the word “biology” was coined almost simultaneously by Treviranus and Lamarck around 1800. What we call “biology” today was, in the early 1700s, largely the domain of physicians. During the first half of the Century, the fountainhead of medicine in Europe was Leyden, where Hermann Boerhaave, the most important physician on the Continent, trained students from across Europe, many of whom, after completing their education, returned to their native countries and set up their own medical schools.\(^{339}\)

Boerhaave was among those on the continent who saw Newton’s method as the key to attaining knowledge in all sciences, and he intended to carry that method over to medicine. Boerhaave believed in interpreting the human body as a machine: he contended that the solids and fluids of the body could be described mechanically. He lavished immense praise upon Hippocrates, but his particular Hippocrates was a construct of Boerhaave’s own time, one who was dressed in the garb of mechanical philosophy. And although he saw Descartes as an enemy, his so-called iatromechanism has much in common with Descartes’ own assertion that animals are natural machines. The difficulties of this approach are obvious to the modern reader, and they would soon become obvious to some of his best students, who would eventually discard it.

Nonetheless, Boerhaave’s contribution to medicine in the eighteenth century was enormous, for although he embraced a flawed method, he standardized medical training across Europe and created a network of physicians who would push the life sciences forward towards their eventual disciplinization.

Despite Boerhaave’s successes, mechanical medicine did not go unchallenged in his lifetime. The most important of his opponents was the German physician Georg Ernst Stahl, who created his own medical community at the University of Halle before eventually becoming the King of Prussia’s personal physician. Stahl’s medical

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342 “In truth the doctrine of Descartes is opposed to the empirical basis of medicine, to which it offers a real stumbling block....And yet, Boerhaave did not totally escape the influence of the great French thinker:...[I]n Boerhaave’s mechanistic view of the functions of the body and in his idea of motion being the basic cause of life, Cartesian influence may be recognized.” G.A. Lindeboom, Hermann Boerhaave: the Man and his Work, (London: Methuen, 1968), 267-8.
philosophy was heavily tinctured by his Pietism, which led him to reject mind-body dualism and conceive of the human body as an organic union of soul and matter. In Stahl’s estimation, “The human body is therefore, in the true sense of the word organic, i.e. directed by and towards specific purposes. It is the organ of the soul, determined to serve its purposes.”

Stahl’s insistence that the body is directed by intelligent purposes was anathema to most of his contemporaries. Indeed, Stahl’s ideas seemed to flatly contradict the tradition of Descartes and Newton. By rejecting medical theories which called for investigation of the human body in terms of matter and motion, Stahl was swimming against the current. Because of this, later generations of physiologists dismissed him as an arrogant, closed-minded religious fanatic, and modern historians of science have stubbornly clung to this characterization. Nonetheless, although Stahl’s medical philosophy smacks of mysticism, residues of his philosophy, including his emphasis on the organic, would survive in Enlightenment vitalism and crop up again in Romantic Naturphilosophie.

ALBRECHT VON HALLER’S SUBVERSIVE ORTHODOXY

If Stahl’s religious commitments led him to question Boerhaave’s mechanical medicine, just the opposite was true in the case of Albrecht von Haller, a Swiss physiologist and


345 Albrecht von Haller and Johann Friedrich Blumenbach, for example, were unkind in their appraisal of their countryman. Blumenbach poked fun at Stahl’s followers, citing them as evidence that, unbeknownst to Stahl, “Good, pious souls don’t always reside in bright and great minds.” Quoted in Geyer-Kordesch, Pietismus, Medizin, Aufklärung, 37.
student of Boerhaave who became one of the greatest innovators in the Eighteenth Century life sciences. Christoph Heinrich Pfaff, a friend of Schelling, went so far as to call Haller’s work the true beginning of proper physiological research. “Stahl, Glisson, and Boerhaave, etc.” Pfaff said, were noteworthy, but their systems were characterized “mostly by hunches and a bit of reverie [Träumerei].” Haller, on the other hand, “by the method of his experiments, opened a new path for natural scientists [Naturforscher], which many after him happily followed.” Haller’s greatest contribution was the discovery of “irritability,” a concept which also played an important role in his opinions on embryology. What makes Haller so fascinating is that he embodied the struggle between, on the one hand, religious orthodoxy, and on the other, the growing trend among life scientists to transfer powers traditionally granted only to God into nature itself. Haller’s changing views on embryology perfectly capture this inner turmoil, but we must first begin by examining his discovery of irritability, a hitherto unrecognized, potentially non-mechanical force.

By 1752, Haller recognized that muscles could contract involuntarily, in response to certain stimuli. He reasoned that, because sensibility or feeling played no part in these muscular contractions, the muscles themselves must have some force inherent in them. He labeled this force “irritability,” and, as an admirer of Newton, likened this force to gravitation. The analogy seemed to be straightforward: in both cases, the effects of each force could be observed, and experiments could reveal the laws of their operation.


However, the roots of these forces seemed inaccessible to human reason.\(^{348}\) To Haller, this seemed consistent with his Calvinist ideology and his belief in a mechanically operated world directed by divine providence. Yet there were two major problems with his brainchild: first, irritability was inexplicable in terms of mechanical causes, thus defying the Newtonian paradigm, and second, the attribution of an inherent force to matter created an easily exploitable opening for materialism. If matter could move itself, then God was no longer needed to explain the operation of animal bodies. Thus, by introducing the "vital force" of irritability into his works, Haller unwittingly contributed to the downfall of the philosophy he cherished so dearly.\(^{349}\) Haller's desire to resist the materialist implications of his theory no doubt impelled him to convert back to the theory of embryological preformation, which buttressed orthodox religion by denying plants and animals the power to reproduce.

Embryological preformationism (commonly referred to as "evolution" in the eighteenth century\(^{350}\)) appears strange to twenty-first century eyes. Shirley Roe argues that part of its strangeness lies in the fact that it was "a theory that responded more to philosophical than to observational needs."\(^{351}\) Peter Hans Reill notes that it simply "boggles the mind."\(^{352}\) Essentially, preformation was the unique child of a mechanical philosophy desperate to deny inherent powers to matter. The question of exactly how


\(^{352}\) Reill, *Vitalizing Nature*, 57.
plants and animals reproduce had occupied natural researchers since Aristotle, and over
the years several theories had arisen. Aristotle had located the power of reproduction or
generation in the matter of the sperm, while William Harvey embraced an ovist vision by
maintaining that all organisms develop from an egg. But Descartes had ushered in a
philosophy which deprived matter of all inherent force, and Newton’s successes only
strengthened this philosophy. Thus, loyal mechanists had to find a way to explain
reproduction according to mechanical principles alone. If they could succeed in doing
so, it would not only salvage mechanical natural philosophy, but prove that God had a
direct hand in the creation of every plant and animal on earth. The stakes were high
indeed.

The great Cartesian philosopher Malebranche was the first to suggest a theory of
embryological “encasement” or emboîtement, and this concept was seized upon by a
number of eighteenth century life scientists, including Spallanzani, Haller, and Haller’s
good friend and countryman Charles Bonnet. In Malebranche’s system, every living
thing was created directly by God at the time of the creation, and “encased” in the egg of
the original creature. Thus—as preformationists were largely “ovist” preformationists—
every human being existed within Eve herself, and God’s plan dictated that each
successive generation would somehow be activated and unfold at the right time.
Organisms, in this system, were thus exactly like Russian dolls, each one being encased
in another in miniature, and being “opened” at some point in time. This fulfilled the
demand for an explanation which adhered to mechanical principles. No inherent force
needed to exist in matter, because God himself had started the chain of causes, and it

perpetuated itself simply in terms of matter and motion. In addition, it precluded materialists from explaining life apart from God, and thus warded off the specter of atheism. Desperate to find scientific evidence for that which they were ideologically inclined to believe, Haller and other preformationists looked for miniature animals already existing within the embryo, and in many cases began to see things that weren't even there. Such was the seduction of preformationism—in Kuhnian terms, the "paradigm" was so powerful that it dictated the experience of some of the greatest researchers of the era.

As mentioned above, the 21st Century reader will be mystified by the system of preformationism, and even the modern layman could identify some of its major problems. Foremost among these was the fact that children seem to resemble both their fathers and their mothers. If ovist preformationism were true, children should resemble only their mothers, not their fathers. Another difficulty with preformationism was the occurrence of what Eighteenth Century researchers referred to as "monstrous births," or what we would call mutations or birth defects. If God had created every single living being at creation, then he must have created the "monsters" as well. Consequently, God must be either an imperfect or malicious creator. Needless to say, both of these explanations were unattractive to the orthodox supporters of preformation; for them, God must be both wholly perfect and wholly good.

The final difficulty with preformationism, and perhaps the most significant from an empirical, scientific standpoint, was the ability of some animals to regenerate not only certain parts of their bodies (as in lizards and crustaceans), but to create "new" life from their individual parts. Nothing exposed this mysterious ability more than Abraham
Trembley's experiments on the polyp, or as modern science knows it, the freshwater hydra. Trembley, a Swiss researcher living in Holland, accidentally provided opponents of preformationism with an absolutely devastating piece of evidence in 1740. Trembley was initially interested in the polyp because scientists had difficulty deciding whether it was a plant or an animal. He conducted experiments on it, and discovered that, when cut in two, the polyp divides into two brand new organisms, and the procedure could be repeated ad infinitum. Trembley published his findings in 1741, and scientists were stunned. How could preformationism possibly account for this? Did God know ahead of time that Trembley would cut this or that polyp? As Reill bluntly puts it, "to pose the question pointed to its absurdity."

Despite Trembley's importance, it was another researcher who would become the foremost opponent of preformationism. In 1759, Caspar Friedrich Wolff completed his medical training at the University of Halle. His dissertation, *Theoria Generationis*, revived the epigenetic systems of Aristotle and William Harvey and meticulously undercut many arguments for preformationism. Rather than seeing the embryo as preformed by God, Wolff found evidence that the structures of the embryo arise gradually out of an undifferentiated organic material. Wolff quickly became embroiled in a public controversy with Haller himself, and the latter rewarded his young opponent by sabotaging Wolff's chances for an academic career in Germany. Eventually Wolff found a home in Russia at the Academy of Catherine the Great, where he remained for

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the rest of his life. But unlike later opponents of Haller, Wolff carried no radical religious or political agenda; indeed, he was as orthodox as Haller himself, and their disagreement arose more because of their differing methodologies than anything else. Indeed, as Shirley Roe points out, there is a strong strain of Leibnizianism in Wolff’s research. Even his attempt to make his theory friendly to orthodoxy smacks of Leibniz’s criticism of Newton and Clarke: if preformation were true, then “All organic bodies [would] thus be miracles.”

BOERHAAVE’S OTHER TRAJECTORY: FRENCH VITAL MATERIALISM

As we have seen, Boerhaave’s most famous student—Albrecht von Haller—unwittingly opened Pandora’s Box. By granting power to organic matter, Haller sabotaged the Newtonian orthodoxy that guided his research. If matter could act on its own, then perhaps God was no longer needed as an explanation for life. Those with more radical tendencies were happy to exploit Haller’s discovery. The first was another of Boerhaave’s students, Julien Offray de La Mettrie. La Mattrie as a man was Haller’s opposite—a radical who died from his supposed gluttony. With a devilish wit, La Mettrie tried to play up Haller’s sensuality! His most influential work, Man a Machine, opens with a bitingly satirical, erotic, and hyperbolic “dedication” to none other than Haller himself. La Mettrie invokes one of Haller’s youthful love poems and continuously compares the joys of study to the joys of sex.

356 Catherine seemed to be a savior for underappreciated German scientists. Leonhard Euler’s brilliant career was at the Berlin Academy was systematically undermined over a long period of time by Frederick II’s crass francophilia. He, too, found a home in St. Petersburg.

357 Quoted in Roe, Matter, Life, and Generation, 112.
Nonetheless, La Mettrie's philosophical disagreement with Haller is far more important than this entertaining prelude. First of all, like Wolff, he seizes upon Haller's own doctrine of irritability. However, unlike Wolff, he uses it to argue for a completely materialistic explanation of life. La Mettrie consistently argues that "matter is self-moved, and that only a small capability for action suffices to explain all the "higher" abilities of humanity." 358 "Given the least principle of movement, animated bodies have all they need to move, feel, think, repent, and in a word, to act in the physical world and also in the moral, which depends on the physical." 359 That matter has the ability to act on its own is confirmed by experimental evidence, and anyone who disagrees will have to "deny thousands of facts that anyone can easily verify." 360 The threat to orthodoxy here is clear: if "self-moving matter" can ground morality, then God becomes superfluous. Not surprisingly, La Mettrie also swiftly dismisses the system of preformation, claiming that Trembley's discovery "makes me feel sorry for the naturalist's system of generation." 361 Finally, La Mettrie pokes holes in the porous barrier separating human and animal life. He clearly states that "the transition from animals to man is not abrupt," and that "Nature employs the same dough for both man and the animals, varying only the leaven." 362

Given La Mettrie's attacks on the theologico-mechanistic systems of both Haller and Boerhaave, one might be surprised at La Mettrie's extensive use of the very

358 La Mettrie, L'Homme Machine, 48.
359 La Mettrie, L'Homme Machine, 59
360 La Mettrie, L'Homme Machine, ?
361 La Mettrie, L'Homme Machine, 61
362 La Mettrie, L'Homme Machine, 41, 50
“mechanical” metaphors so typical of seventeenth century scientific rationalism. La Mettrie variously describes the human body (and mind) as “a contraption of springs” or “an immense clock.”363 Therefore, many interpreters read *Man a Machine* as the final stage of Descartes “beast-machine” hypothesis.364 In this view, La Mettrie thoroughly deprivileges humanity (and removes God from the picture), relegating us to the same status as animals. Humans are machines, too. Nonetheless, considering La Mettrie’s early work, *The Natural History of the Soul*, and taking his ironic tendencies into account, it is possible to read his talk of “springs” and “clockwork” as satirical.365 Take, for instance, one long passage filled with “machine” metaphors. La Mettrie talks of Huygens’ “planetary pendulum” which requires “more instruments, wheelwork, and springs” than a simple watch.366 Similarly, in the case of the human body, “nature had necessarily to employ more art and install more organs to make and maintain a machine that might mark all the throbbings of the heart and mind over an entire century.”367 Somehow, the human “machine” is able make adjustments to itself and maintain a


365 The best work following this interpretation is Kathleen Wellman’s contextually sensitive *La Mettrie: Medicine, Philosophy, and Enlightenment*, (Durham: Duke University Press, 1992). Wellman builds her case with an impressive, synthetic look at La Mettrie’s conflict with the European medical establishment and his earlier writings. Wellman argues that La Mettrie’s praise of Descartes (and criticism of Locke) in *Man a Machine* is purely satirical. On the importance of Locke for La Mettrie and other *philosophes*, which I do not discuss much in this chapter, see John Yolton’s *Locke and French Materialism*, (New York: Oxford University Press, 1991).


number of separate, independently functioning systems. But this ability to self-organize and to self-regulate is, in fact, wholly in contradiction with what seventeenth century scientists meant by a "machine" in the first place. La Mettrie has constructed a machine so complex and sophisticated that it has ceased to be a machine at all. But perhaps most convincingly, La Mettrie dismisses those "fools and ignoramuses" who reject the machine explanation in favor of a focus on "the soul and all the anxieties this chimera raises." Right before this passage, La Mettrie had identified one person who did just this, by "resurrect[ing] the ancient and unintelligible doctrine of substantial forms." That was "the author of the Natural History of the Soul," none other than La Mettrie himself. Either La Mettrie is calling his previous work foolish, or he is "calling Descartes' bluff." If animals are machines, then so are we. Since it is impossible to explain the human in strictly mechanistic terms, then it is also impossible in the case of animals. La Mettrie was undoubtedly a materialist, but his materialism was of a new sort: rather than seeing matter as lifeless and inert, he saw it as vibrant, creative, and active. He was a vital materialist.

Of considerably more public repute than La Mettrie, but similarly enamored of an eroticization of nature, was the French scientist, mathematician, and explorer Pierre Louis Maupertuis (1698 – 1759). Maupertuis gained public acclaim in France for his expedition to Lapland, which helped prove that the globe was—contra Descartes and in

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368 La Mettrie, L'Homme Machine, 69-70.
369 La Mettrie, L'Homme Machine, 70
370 Here is an odd connection with Leibniz, who also attempted to revive substantial forms. Talk to Kulstad.
favor of Newton—flattened at the poles rather than at the equator.\footnote{Although Newton was fresh in the memory of European scientists at this time, Descartes still retained significant traction in France, creating a sort of national boundary between France and England. Voltaire powerfully expressed this divide—one aspect of which was the quarrel over the shape of the earth—in his chapter on Descartes and Newton in Letters Concerning the English Nation. “A FRENCHMAN who arrives in London, will find Philosophy, like every Thing else, very much chang’d there...At Paris you imagine that the Earth is shap’d like a Melon, or of an oblique figure; at London it has an oblate one.” (Voltaire, Letters concerning the English Nation, ed. Nicholas Cronk, (New York: Oxford University Press, 1994), 61.) Maupertuis, in siding with the Englishman Newton, was seen as a sort of traitor to his native country and aroused opposition to his findings. Indeed, despite the seeming irrefutability of his results, it took three years of polemic to settle the issue. (Mary Terrall, The Man who Flattened the Earth: Maupertuis and the Sciences in the Enlightenment, (Chicago: University of Chicago Press, 2002), 133).} He also made contributions to physics, including the Principle of Least Action, which played an important role in Kant’s thinking about the unity of natural phenomena. Unfortunately, that principle launched him into a public feud with Voltaire and a subsequent smear campaign, which has relegated him to the marginalia of most histories of science.\footnote{The affair oddly paralleled the conflict between Newtonians and Leibnizians over the discovery of the calculus. It started in 1751 when a Wolffian mathematician, Johann König, already perhaps bearing a grudge against the Berlin academy of which Maupertuis was President, accused Maupertuis of having “plagiarized” the principle of least action from Leibniz. König claimed as proof a letter in his possession that Leibniz had supposedly written in 1705. However, König refused to produce the letter, leading the Academy to suspect that it did not exist. They ruled in Maupertuis’ favor, and the issue would have been settled had not Voltaire—for purely petty and personal reasons—thrown his support behind the maligned Wolffian König. Voltaire published a vicious attack on Maupertuis, his former friend and mentor, which was subsequently seized and burned by none other than Frederick II himself. Nonetheless, despite the fact that he was defended by Leonhard Euler, surely a more reliable commentator on mathematical matters than the poet Voltaire, Maupertuis’ public reputation was severely damaged by the incident. Voltaire’s not altogether deserved status as one of the greatest Enlightenment thinkers no doubt contributed to scholarly neglect of Maupertuis’s scientific ideas. Terrall chronicles the whole affair in The Man who Flattened the Earth, 292-309. Her book is a monument to the renewed interest in Maupertuis, even in the English-speaking world, which the geneticist Bentley Glass largely initiated. See especially Glass’s “Maupertuis, Pioneer of Genetics and Evolution,” in Forerunners of Darwin, ed. Glass, et, al., (Baltimore: Johns Hopkins University Press, 1967), 51-83. Other works in English on Maupertuis include Michael Hoffheimer, “Maupertuis and the Eighteenth-Century Critique of Preexistence,” Journal of the History of Biology 15 (1982): 119-144 and David Beeson’s Maupertuis: An Intellectual Biography, (Oxford: The Voltaire Foundation, 1992).} But Maupertuis also made contributions to the development of the life sciences—most of which were published anonymously—which fit perfectly into our story. Maupertuis, whom La Mettrie briefly mentions in his “dedication” to Haller, also advanced the cause of vital materialism. He attacked preformationist embryology and developed an
alternative, epigenetic explanation for the growth of the fetus. He was also one of the first European thinkers to take seriously the notion of gradual species change. Indeed, he sought to undermine the distinction not only between humans and animals, but also that between the organic and the inorganic. Maupertuis provocatively begged his readers to "not be angry if I say you were a worm, or an egg, or even a kind of mud."³⁷³

Although Maupertuis took a lifelong interest in natural history, his first foray into public debate about the life sciences was a brief text about the scientific implications of an African albino boy brought to Paris.³⁷⁴ He used the sensational topic as an excuse to present his thoughts on generation, and subsequently added chapters to the little book until it became The Earthly Venus. In Part One, "Concerning the Origin of Animals," Maupertuis aims to "explain the different systems that have divided philosophers concerning the means of generation."³⁷⁵ But this is no neutral stock-taking, for Maupertuis clearly favors an epigenetic embryology. He rejects spermatic and ovist preformationism, as well as the "Intermediate system" which "comes out of the two preceding ones and combines the spermatic animalcules and the eggs."³⁷⁶ Instead he embraces William Harvey, who in the hopes of "discovering generation's mystery," had carried out a "scholarly massacre" on the stags and does of Charles I.³⁷⁷ Maupertuis does not exactly agree with Harvey's account of the process of development; his final theory is

³⁷⁴ Terrall, The Man who Flattened the Earth, 207-211
³⁷⁵ Maupertuis, The Earthly Venus, 5.
³⁷⁷ Maupertuis, The Earthly Venus, 23.
actually “more scholastic than scientific.” But Maupertuis is more than willing to take
seriously Harvey’s observations, none of which correspond to those of eighteenth century
preformationists. Harvey failed to see the homunculi supposedly present shortly after
conception. Maupertuis sarcastically asks “if some facts might have escaped this great
man?” “Have we the right to doubt such authentic observations and thus sacrifice
them to analogies and theories?” The implied answer is a resounding “no.” As he will
later explain, there is no reason to “give up the Ancients’ ideas on the manner in which
generation takes place, which ideas correspond pretty well with Harvey’s
experiments.”

Maupertuis moves from a discussion of Harvey to more explicit counterevidence
for preformation: the fact that both male and female “participate in the embryo’s
production.” One obvious case is that of a marriage between a black man and a white
woman. Their child, instead of resembling only one parent, has “features partially
resembling those of his father and of his mother.” But could not the “intermediate
theory” of preformation, in which the preformed spermatic animalcule derives its
nutrition from the egg, account for this? Not according to Maupertuis, and especially not
in the case of the mule, the infertile offspring of a horse and a donkey. Maupertuis revels
in the absurdity of all preformationist explanations:

381 Maupertuis, The Earthly Venus, 53.
382 Maupertuis, The Earthly Venus, 43.
Could the little colt, already completely formed within the mare’s egg, take on the donkey’s ears because a donkey had set the egg’s parts in motion? Will it ever be believed or imagined that because the spermatic vermicule has been nourished within the mother, he will have acquired a resemblance to her and her traits? Would it be much more ridiculous to think that animals should resemble the food they eat or the dwellings they live in?\textsuperscript{383}

Maupertuis also deploys other arguments for epigenesis, most of which are familiar to us by now: the existence of monsters, the sexual activity of hermaphrodites, and the reproduction of Trembley’s freshwater Hydra, “more wonderful than that of the fable.”\textsuperscript{384}

Ultimately, having failed at his disingenuous attempts to make preformationism fit empirical evidence, Maupertuis condemns the entire movement in terms the 21st Century would find accurate. “I apologize to the modern men of science for not accepting the theories they have so ingeniously evolved. My reason is that I am not one who believes that scientific progress is made by elaborating systems which are incompatible with certain known phenomena.”

Maupertuis rejection of preformationism is no doubt his central contribution to the story of the eighteenth century life sciences. But two other sets of conjectures contained in the Earthly Venus deserve mention; not only are they extremely forward-looking, but they further demonstrate how French scientists were discovering what this

\textsuperscript{383} Maupertuis, The Earthly Venus, 44.

\textsuperscript{384} Maupertuis, The Earthly Venus, 39.
dissertation calls the “creativity of nature.” The first is Maupertuis’ own hypothesis on the formation of the fetus, which strikingly although imperfectly predicts some of the discoveries of modern genetics. Maupertuis proposed that individual particles from both male and female fluid seek one another out and join together to form a new being. In addition, Maupertuis believed it possible that, over successive generations, new species could arise. While he framed this in terms of human races, such an idea could—and was—appropriated for more radical purposes, not least by his friend George-Louis LeClerc, Comte de Buffon.

BUFFON AND THE HISTOIRE NATURELLE

German Idealism was the first philosophical school to take “history” in its modern sense seriously. To be sure, Locke had described his enterprise as a “Natural History of the Understanding,” but he was using “natural history” in its 17th century sense: the collection and classification of individual facts. The idealists took history qua development more seriously: in Schelling’s System of Transcendental Idealism, he described the emergence of consciousness in a series of “epochs,” and Hegel gave philosophy an even more explicitly developmental recasting. In a sense, what Schelling and Hegel did for philosophy, Georges Louis-Leclerc, Comte de Buffon, had done for natural science a half-century earlier. At a time when most scientists believed that the

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385 This, of course, was also the approach of great Swedish taxonomist Linnaeus.

386 One could even argue that Buffon’s innovation paved the way for German Idealism; it would have been far more difficult for Hegel to argue that reason is developmental if scientists had not already shown that nature was, as well. It is no accident, either, that Kant took his categories of Naturbeschreibung and Naturgeschichte directly from Buffon, and that Schelling’s Ideas is littered with lengthy citations from the Histoire Naturelle.
only rational understanding of nature was static and mathematical, Buffon stressed the importance—and certitude—of the contingent. Reill argues that Buffon stood late-seventeenth-century mechanical-mathematical natural philosophy on its head, reversing its intellectual priorities.... For Buffon what was real was contingent. Grand mathematical descriptions, self-evident logical systems were delusions. Thus, he elevated history from the lowest form of understanding to a primary one.\(^{387}\)

For a number of reasons, few people read Buffon today, but he is absolutely critical to the story of this chapter.\(^{388}\) Buffon advanced a new theory of truth which dethroned mathematics and replaced it with history. Along with this, he undermined the biblical understanding of time, arguing that the universe is hundreds of thousands, if not millions of years old. And he also advanced the idea—unwittingly introduced by Haller—that there is a principle of movement inherent in matter, thus reviving an Aristotelian or Leibnizian worldview. In Buffon’s *moule interieure* we see something corresponding to Blumenbach’s *Bildungstrieb*, Goethe’s *Urtyp*, and—dare we say—Schelling and Hegel’s self-moving spirit. Buffon profoundly contributed to the dynamization and temporalization of nature so evident in the eighteenth century.

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\(^{388}\) Phillip Sloan discusses some of these reasons in “The Buffon-Linnaeus Controversy,” *Isis* 67 (1976): 356-375. Sloan argues that Buffon’s criticisms of Linnaeus—although they were radically misunderstood—were devastating to his reputation after his death. Furthermore, there are more mundane reasons for his disappearance from popular consciousness. Buffon died in 1788, and the French Revolution was unkind to figures associated with the *ancien régime.* (357) Buffon’s career was inextricably linked to the King’s *Jardin*. Had he lived, he might have—like Lavoisier, who was a tax-farmer—fallen victim to the terror.
Let us now turn to these accomplishments in detail, beginning with his reevaluation of the importance of mathematics. Like his countryman Descartes, Buffon left us with an exhaustive description of his philosophical method, with which any serious examination of his philosophy must begin. In the *Preliminary Discourse* to the *Histoire Naturelle*, “On the manner of studying and treating natural history,” Buffon discusses the multivalence of the word “truth,” which “has never had a precise definition.”389 Leaving aside types of truth irrelevant to natural history—such as truths of morality—he focuses his attention on two types of truth in particular: mathematical truths (*verités mathématiques*) and physical truths (*verités physiques*). Buffon notes that it is customary to place the former in the “first order of truths,” because they are absolutely certain. Unfortunately, their certainty is matched only by their emptiness. According to Buffon, mathematical truths are essentially truths of definition, which merely repeat the premises upon which they are based. As such, they are arbitrary, and are “reduced to identities of ideas and have no reality.”390 On the contrary, physical truths are those which are *observed*—not deduced—repeatedly in reality. “A frequent repetition and an uninterrupted succession of the same events is the essence of physical truth.”391 It is important to note that Buffon makes no gesture towards skepticism here; he does not, like Hume, argue that this “frequent repetition” results only in a high degree of probability. Rather, he asserts that a physical truth is not just a probability, “but a probability so great


390 *HN*, I: 54.

391 *HN*, I: 55.
that it is equivalent to certitude." In a sense, Buffon's rehabilitation of the contingent meant that he chose the "hypothetico-experimental" Newton over the "mathematico-deductive" Newton. What Franklin was for electricity, Buffon was for the "phenomenon" of life.

The "first discourse" of the *Histoire Naturelle* was a radical departure from the conventions of Buffon's day, for mathematics had been the "language of nature" since Galileo's time. Buffon's "second discourse" was no less radical, for it challenged all existing "histories" of the earth. When Buffon began writing about the earth's history, most books on the subject, such as those by English authors Thomas Burnet and William Whiston, were explicitly theological, and they invoked the great flood of Genesis to explain the (corrupted) geological features of the earth. On the other hand, during the first half of the eighteenth century, the French writers Henri Gautier and Benoît de Maillet proposed a cyclical view of the earth's history devoid of catastrophism and similar to ancient models. These theories were not usually taken seriously, and Buffon

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392 *HN*, I: 55. Hume is less impressed with repeated occurrences of the same event. In the *Treatise of Human Nature*, he describes the construction of causal inferences. "As the habit, which produces the association, arises from the frequent conjunction of objects, it must arrive at its perfection by degrees, and must acquire new force from each instance, that falls under our observation. The first instance has little or no force: the second makes some addition to it: The third becomes still more sensible: and 'tis by these slow steps, that our judgment arrives at full assurance. But before it attains this pitch of perfection, it passes thro' several inferior degrees, and in all of them is only to be esteem'd a presumption or probability." (I:III:XII 130). The upshot for Hume is that causal statements are only highly probable, not certain. "We may observe, that there is no probability so great as not to allow of a contrary possibility." (I:III:XII, 135). Phillip Sloan uses this aspect of Buffon to argue against those who see him as a disciple of Locke. "What Buffon is doing is effectively reversing Locke's conclusion on the relative degree of certitude of mathematical and physical knowledge." ("The Buffon-Linnaeus Controversy," 368).

393 Although I am not closely following Reill's argument, he frames Buffon's innovations in terms of language.


opted to choose neither the biblical-historical nor the cyclic theory of the earth’s history. He ridiculed the first for using extraordinary catastrophes and divine will instead of real, physical causes. He poked fun at Whiston for *contradicting* the Bible, thus mixing “bad physics” with the irreproachable “holy book.”

Although Buffon reserved most of his ridicule for the Flood theorists, he also dismissed the theories of less orthodox writers like Louis Bourguet, who similarly invoked catastrophes to explain geological changes. Buffon saw the invocation of catastrophes as an obstacle to a thoroughgoing naturalism; if the history of the earth could only explained by rare—or even miraculous—events, it precluded a natural/physical explanation, since the scientist can only comprehend “everyday” forces.

> For that matter, those causes whose effects are rare, violent, and sudden should not concern us; they are not found in the ordinary course of nature. But the effects which happen everyday, the movements which succeed each other and are renewed without interruption, the constant and always repeated operations; these are our causes and our reasons.

interpretation confronted each other. The more commonly accepted one implied an irreversible history and used the intervention of the biblical Flood. The other, that of Gautier or Telliamed, was cyclic and logically implied an eternal universe. Under these conditions, any choice Buffon made would necessarily have both philosophical and scientific implications.”

396 *HN*, I: 203.

397 Louis Bourguet, *Lettres philosophiques sur la formation des sels et des cristaux et sur la generation et le mechanisme organique*, (Amsterdam: Francois L’Honneur, 1729)

398 *HN*, I: 99.
Buffon prudently maintains the appearance of orthodoxy in this discussion, but he implicitly overturns the Biblical understanding of the earth’s history. If slow and gradual processes are responsible for all the features of the earth’s surface, then they must have been active for a very long period of time, certainly longer than 6,000 years, the commonly accepted age of the earth in the eighteenth century. In his later *Epoques de la Nature*, Buffon would attempt to give the earth’s age a precise number (~75,000 years), a figure exponentially exceeded by the one given in his manuscripts (at least ten million years).\(^{399}\) Clearly, Buffon knew he was treading on sacred ground, and preferred to remain silent on this issue in the bestselling *Histoire Naturelle*. Nevertheless, radical thinkers had no trouble drawing the obvious conclusions, and Buffon’s new understanding of time would influence the development of the life sciences up to Darwin. Perhaps ordinary processes, working over incredibly long periods of time, could explain both the earth’s features and the incredible variety of the organic world. In a way, time was a replacement for God.\(^{400}\)

Given the radical religious implications of Buffon’s history of the earth, it should not surprise us that he also opposed that most orthodox doctrine of preformation, whose proponents tacitly admitted that they had no understanding of generation at all.\(^{401}\) Yet he was not as enamored with Harvey’s proposals as his friend Maupertuis, whom Buffon nevertheless declared to be “the first to begin to approach the truth” about

\(^{399}\) Roger, *Buffon*, 409-413.


\(^{401}\) *HN*, II: 28.
reproduction. When discussing embryology, Buffon's language always retained traces of the mechanistic viewpoint; he could not free himself from the terminology of the "germ." But despite his reluctance to plunge headfirst into epigenesis, Buffon responded to the problem of generation by formulating a new theory which hinted at one of the major aspects of Schellingian Naturphilosophie: Buffon essentially made organism into the basic feature of nature. For Buffon, the building blocks of the natural world were "organic molecules," which, although they could not be observed directly, were living entities responsible both for reproduction and growth. Furthermore, the relationships or rapports between the organic molecules were paralleled by the wider relationships between animals and nature. "The animal," Buffon argues, "unites all the powers of nature," and thus is "a center where everything is interrelated, a point at which the entire universe is reflected, a world in miniature." The Leibnizian overtones are not accidental: like Leibniz, Buffon believed that matter, specifically organic matter, was imbued with force. Organic molecules did not unite mechanically; rather, they were driven together by a force Buffon called the moule intérieur, or internal mold. Buffon explicitly compared this force with Newtonian attraction. Newton (at least publicly) declined to speculate as to what exactly caused attraction; for him, it was sufficient to

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402 HN, II: 164.

403 Jacques Roger and Peter Hans Reill offer differing interpretations of this tendency. Roger argues that Buffon was essentially a "prisoner of mechanical theory." (Buffon, 138). Reill contends that Buffon was simply trying to find a middle ground between Cartesian mechanism and animism. (Vitalizing Nature, 44).

404 Roger, stressing continuity over difference, points out that Buffon and the preformationist theorists were in agreement in their refusal to separate reproduction and nutrition. Roger, Les sciences de la vie dans la pensée française du XVIII siècle, (Paris: Armand Colin, 1964), 547.

405 HN, II: 6.

406 HN, II: 37.
observe it as phenomena. Likewise, Buffon could not explain the inner workings of his own "penetrating force," but concluded—through observation—that such a force was indeed active. Buffon's *moule intérieur*, however, was multifaceted: it operated differently for different species, thus explaining the variety of the natural world. Ultimately, Buffon's new philosophy turned iatromechanism on its head. *Living forces*, not atoms, were the building blocks of nature, whose "main purpose is the production of organic bodies." Thus the principal innovation of Schelling's *Weltseele*—the primacy of the organic—is already contained in Buffon's *Histoire Naturelle*.

Buffon was a master of scholarly caution. His masterpiece—which would become one of the bestsellers of the eighteenth century—gave support to a plethora of radical ideas, yet Buffon made the text appear just orthodox enough to avoid censorship. A Jansenist attack briefly put Buffon in the crosshairs of the Sorbonne, but he skillfully compromised with that body and avoided serious trouble. Buffon enjoyed a comfortable position in the *ancien régime*, and had no desire to advance radical causes. That task would be left to others, none more important than Denis Diderot. The contrast between Buffon's *Histoire Naturelle* and Diderot's books on the life sciences could not be greater. Buffon's masterpiece was a bestseller, yet one of Diderot's most profound contributions, *D'Alembert's Dream*, was destroyed by the author himself, and we still have it today only by an accident of history. Diderot's contribution to the life sciences was nevertheless profound.

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Maupertuis and Buffon were trained mathematicians and natural scientists who devoted their lives to empirical research, and they were often content to avoid the dangerous philosophical issues lurking in their writings. Although they certainly recognized some of the radical implications of their discoveries, neither had any desire to push the envelope and risk their careers. Thus, Maupertuis recoiled when accused of being a materialist or a Spinozist, and Buffon chose to suppress his private calculations on the age of the earth. After all, he was an employee of the King and had to maintain the appearance of orthodoxy whenever possible. Given these constraints, only an outsider could grapple with these larger, more radical problems. This outsider was none other than Denis Diderot, whose role in the Encyclopédie is well known but whose contributions to the life sciences is sometimes overlooked. Those contributions were twofold: first, he was a philosopher of science in the modern sense of the term. He made no scientific discoveries, but synthesized existing knowledge and offered a method for research and interpretation. Second, he seized upon the most radical developments in the life sciences and advanced an atheistic—but still vitalist—materialism.

Diderot was keenly interested in the life sciences as early as 1749, and had a particularly warm relationship with Buffon. Diderot devoured and annotated the Histoire Naturelle while he was imprisoned in Vincennes, and even secured a promise—though eventually unfulfilled—from Buffon to write the article “Nature” in the Encyclopédie. But although Diderot’s early works reveal a strong interest in the natural sciences and the sensationalist philosophy of the eighteenth century, it was his Thoughts on the

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Interpretation of Nature (1754) which put vital materialism front and center, and revealed Diderot’s attempt to formulate a philosophy of science informed by the latest empirical research. Even the prefatory remark is striking; Diderot tells “young people inclined to the study of natural philosophy” that “Nature is not God, a man is not a machine, and a hypothesis is not a fact.”410 In the text itself, Diderot quickly sides neither with the metaphysicians, “who don’t know anything,” nor with mathematicians, who occupy a purely “intellectual world,” but with the experimentalist “chemists, physicists, and naturalists” creating a “great revolution in the sciences.”411

Although Diderot heaps praise on the experimental method, which he lauds for “proposing nothing” but being “content with whatever comes to it,” Diderot’s ideal scientist is not a mere passive observer.412 Rather, the mind must act upon the collected data—in terms familiar to us, it must form a hypothesis—and subsequently evaluate that hypothesis in light of experience. Diderot briefly sums up his method in Section XV:

We have three principal means [of interpreting nature]:

observation of nature, reflection, and experience.

Observation collects facts, reflection combines them, and experience verifies the result of the combination. The observations should be meticulous, reflection should be

410 Denis Diderot, Pensées sur l’interprétation de la nature, ed. Colas Duflo, (Paris: Flammarion, 2005), 59. Diderot thus rejects Spinoza’s Deus sive Natura and La Mettrie’s L’homme machine, and indicates his allegiance to experimentalist philosophy, in one brief sentence.

411 Diderot, Pensées sur l’interprétation de la nature, 62-63.

412 Diderot, PsIN, 75.
profound, and experience should be exact. One rarely sees these means come together.\footnote{Diderot, PsIN, 70.}

Interestingly enough, the scientist will not always discover what he originally sought. Well-formed hypotheses might send him down a blind alleyway, but they might also produce unanticipated knowledge. Thus, Diderot compares experimental physics to “the advice of a father, who on his deathbed tells his children that he has buried a treasure in his field, but does not know its precise location.” The children proceed to dig up the field, and though they do not find the treasure, they do produce “an abundant harvest they had not expected.”\footnote{Diderot, PsIN, 76.} Thus, despite Diderot’s condemnation of excessively “rational” speculation, he believes in the value of hypotheses—even incorrect hypotheses.\footnote{Those who dismiss Naturphilosophie for its sometimes outlandish theories should remember Diderot’s advice, for it is easy to argue that it produced unforeseen discoveries, much as the father’s advice to his children did.} In this spirit, Diderot concludes the \emph{Thoughts on the Interpretation of Nature} with a series of “questions” remarkably similar in format to Newton’s \emph{Queries}. Most significantly for our story, he grapples with the distinction between living and dead matter. “It is evident,” Diderot tells us, that “matter in general is divided between dead matter and living matter.”\footnote{Diderot, PsIN, 115.} But why does nature make this division? Why isn’t all matter dead or all matter alive? Furthermore, can there be a transition between the two? And how exactly can matter organize and move itself? Diderot leaves these questions unanswered for fifteen years, when he wrote a brilliant and radical dialogue entitled \emph{D’Alembert’s Dream}. 

\footnote{Diderot, PsIN, 70.}

\footnote{Diderot, PsIN, 76.}

\footnote{Those who dismiss Naturphilosophie for its sometimes outlandish theories should remember Diderot’s advice, for it is easy to argue that it produced unforeseen discoveries, much as the father’s advice to his children did.}

\footnote{Diderot, PsIN, 115.}
D'Alembert's Dream so scandalized D'Alembert and his patron, Julie de L'Espinasse, that it only survived in clandestine format. The work itself—comprised of a fictional conversation between D'Alembert and Diderot himself, and two conversations between L'Espinasse, the physician Bordeu, and a dreaming D'Alembert—touches on many aspects of Diderot's sensationalist empiricism, but a few in particular highlight his philosophy of Nature in general. In D'Alembert's Dream, we see Diderot embracing the most radical consequences of recent research in the life sciences. In general, Diderot postulates a materialism which endows matter with the powers of self-movement and organization, thus dismissing God from the realm of explanations. Concomitantly, Diderot—like La Mettrie—breaks down the barriers in the Great Chain of Being, explaining how "dead" matter could acquire life and vice versa. Finally, Diderot even advances a theory of the appearance and disappearance of species in the earth's history. To be sure, this is not "evolution" as we understand it, and because of his Lucretian allegiances, his view of species change is, unlike the Naturphilosophen or the young Darwin, completely devoid of teleology. For Diderot, chance is sufficient to explain change, so long as it is coupled with long periods of time, an idea Diderot no doubt inherited from Buffon himself.

Diderot's vital materialism emerges almost immediately in the first dialogue of D'Alembert's Dream. Diderot declares that there is "not very much" difference between a man and a statue, and the more moderate D'Alembert challenges this. 417 Diderot responds that the sensitivity so obvious in man is also contained in the stone, albeit only

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as “latent sensitivity.”\textsuperscript{418} He sounds downright Leibnizian when he proclaims that “motion is inherent in the thing itself, whether it is moved or remains stationary.”\textsuperscript{419} Even more interestingly, Diderot comes very close to Kant’s and Schelling’s views on repulsive forces. Even motionless objects possess an active repulsive force, and thus, “If by a sudden rarefaction you take away the air surrounding the trunk of that huge oak, the water it contains will suddenly expand and blow it into a hundred thousand splinters.”\textsuperscript{420} In addition to the motion inherent even in seemingly “dead” matter, Diderot also recognizes that each tiny part of an organic body—which he likens to a vibrating string—is also capable of “feeding and reproducing itself.”\textsuperscript{421} Diderot discusses generation, specifically the development of an egg, “with which you can overthrow all the schools of theology in the world.”\textsuperscript{422} He mocks those who “maintain, with Descartes” that a newly hatched chick is “an imitating machine pure and simple,” noting that “even little children will laugh at you, and the philosopher will answer that if it is a machine you are one too!”\textsuperscript{423} No, Diderot says, the chick is not a machine, and neither was “spirit” bestowed upon it by a creator. Rather, the philosopher finds that “from an inert substance arranged in a certain way and impregnated by another inert substance, subjected to heat and

\textsuperscript{418} D’Alembert’s Dream, 150
\textsuperscript{419} Ibid., 149.
\textsuperscript{420} Ibid., 150
\textsuperscript{421} Ibid., 158.
\textsuperscript{422} Ibid., 158.
\textsuperscript{423} Ibid., 159. Whether or not Diderot read La Mattrie in this manner, this is the true, ironic message of L’Homme machine.
motion, you will get sensitivity, life, memory, consciousness, passions, thought."\textsuperscript{424} Matter itself contains the sensitivity needed to explain life.

This vitalized matter, able to explain much more than the dead, inert particles of the corpuscular philosophers, allows Diderot to declare that there is "only one substance in universe, in man, in animals....A canary is flesh, a musician is flesh differently organized, but they have one and the same origin, formation, functions, and end."\textsuperscript{425} In other words, Diderot offers a materialist monism or what he occasionally referred to as "Spinozism."\textsuperscript{426} In addition to the blurred boundary between animal and man, there is also a blurred boundary between inorganic and organic. Diderot, like Buffon, believes that long periods of time bridge the gap between stone and human:

When this marble block is reduced to the finest powder I mix this powder with humus or compost, work them well together, water the mixture, let it rot for a year, two years, a century, for I am not concerned with time. When the whole...has turned into humus...I sow leguminous plants.

The plants feed on the earth and I feed on the plants.\textsuperscript{427}

Once Diderot has shown that he can make "flesh out of marble," it is an easy transition from flesh to "the greatest mathematicians in Europe," for "you will admit it is much more of a far cry from a piece of marble to a being who can feel than from a sentient

\textsuperscript{424} Ibid., 159.

\textsuperscript{425} Ibid., 160.

\textsuperscript{426} In the Encyclopédie, Diderot warns readers not to mistake the "old Spinozists" for the new ones. It is the latter who embrace the idea that matter is sensible. (Encyclopédie, 17 vols., eds. Diderot and D'Alembert (Paris: Imprimérie Royale, 1751-1765), 15: 474)

\textsuperscript{427} D'Alembert's Dream, 151-152.
being to a thinking one." Diderot took an even more radical step when he embraced species change, but this should not surprise us, for even he admits that "once I have seen inert matter change into something sensitive there is nothing left to marvel at." He puts the strongest words into the mouth of L'Espinasse: "Let the present species of animals pass away, let the great, inert sediment go on working for millions more ages," and species will come and go, moving from inorganic to organic and back again. Diderot's Evolutionsbegriff is, in this sense, dramatically different from that of his German followers like Herder, and Romantic Naturphilosophen. Whereas the Germans (aside from Kant) were steeped in teleology, and conceived of Nature as moving upwards from stone to plant to animal, and finally to man, Diderot preferred a Lucretian natural history, in which chance and time combine to produce ephemeral natural products. Species—presumably humans as well—arise and then die out, giving way to something completely different.

Diderot's entire philosophy of Nature thus took the steps from which Maupertuis and Buffon shrank. Maupertuis' work on generation led obviously to materialistic monism, but he dared not go that far. Buffon's philosophy led obviously to the conclusion that there are no firm boundaries in nature, yet he doggedly maintained a belief in the special status of man and denied the possibility of species change. Diderot, sitting on the fringe of French scientific culture, radicalized their contributions and in many ways paved the way for the Romantic Naturphilosophen. But Germany was not

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428 Ibid., 152.
429 Ibid., 176.
430 Despite this non-teleological approach, one passage from Schelling's First Outline seems remarkably similar to Diderot's conception of species change.
France, and for the most part manifested no drift towards, in the famous words of Peter Gay, "modern paganism." In France, advances in the life sciences pushed researchers towards outright atheism. In Germany, on the other hand, the crucial mediators between French Vital Materialism and \textit{Naturphilosophie} were relatively orthodox Christians. This was especially true of Johann Gottfried Herder, a Protestant clergyman who—strangely enough—saw no conflict between vital materialism and his deeply-held Christian convictions.

**HERDER AND GERMAN VITAL MATERIALISM**

Herder’s role in the introduction of French thought to Germany cannot be underestimated. Although Herder himself was a firm opponent of many aspects of French intellectual life—he despised Salon culture, polemicized against French neo-classicism, and ultimately concluded that he was fundamentally a "Nordic being"—Herder’s confrontation with Diderot was significant for his philosophy of nature, and he engaged with French sensationalist philosophy in his writings on the origin of language. Herder’s vital materialism manifested itself in a dizzying variety of works. It even pervades his treatise on the origins of Hebrew poetry. But it is most evident in his masterpiece, the \textit{Ideas for a Philosophy of the History of Mankind}, the reception of which was harmed by his former mentor Immanuel Kant, who saw it as pseudophilosophy.\footnote{ALZ review quotation}

In spite of this, Herder’s scientific thought played an enormous role in the development of German \textit{Naturphilosophie}, from Goethe all the way up to Schelling and Oken.
Herder’s *Ideas* is a diverse and sweeping text, tracing out the history of mankind, which itself was inseparable from the history of nature. The early chapters are thus reminiscent of Buffon’s *Histoire Naturelle*. Herder examines the Earth’s place in the solar system and lays out its geographical history before describing the ways in which the Earth serves as “a grand manufactory, for the organization of very different beings.” Like Buffon, Herder asserts that life is not an aberration, but the primary purpose of nature, and his commitment to vital materialism shines through in the sections which explain the transition from inorganic to organic. Like Diderot, he has little trouble believing in what modern scientists call abiogenesis. All the necessities for life are latent in the “bowels of the earth,” and Herder hypothesizes that “the first living creatures of the sea, shellfish,” probably arose out of “calcerous earth,” for “throughout all nature the materials appear before the organized animated structure.” The laws of chemistry, “so zealously pursued in recent years,” provide the foundation for an explanation of organized life, and like any good Leibnizian, Herder asserts that the most varied and complex phenomena can be traced ultimately back to simple laws. “Dead” matter actually contains the principles of life.

If Herder saw no problem in the transition from inorganic to organic, he was similarly comfortable with porous boundaries between plants, animals, and humans. He compares the growing human to a plant and argues that animals are “the elder brethren of

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men." For Herder, humans are simply the highest and most complex manifestation of the forces of nature, which are uniquely combined at every stage of development. The one true "principle of life," which manifests itself in the "tubes of plants, in the arteries and muscles of animals," and finally in the "mental faculties" of man himself, is electricity. This basic force reveals itself to us in a number of forms. It is here that Herder introduces the famous triad of reproduction, irritability, and sensibility, all of which arise from this common source but are "differently modified and distributed" in every type of living creature. In plants, the power of reproduction is so dominant that irritability and sensibility are all but completely extinguished. Plants seem to exist solely for the purpose of creating new plants, a purpose they "completely fulfill." In cold-blooded animals, it is irritability which predominates. The powers of their muscles are so great that lizards can regenerate body parts, and tortoises continue to walk even after losing their heads. Finally, in the "higher" animals which possess more sophisticated brains, irritability is "subdued to the purposes of perception." But humans are not completely dissimilar from animals. Despite our incredibly complex organization and preponderance of sensibility, which allows us to create language and art, we retain aspects of our vegetable and animal forbearers. We do not reproduce as quickly and effectively as plants, nor do we have the ability to regenerate limbs. Yet we still possess reproductive capabilities, and our muscle fibers retain lower levels of irritability.

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435 Herder, Ideas, 29, 35.
436 Ibid., 45.
437 Ibid, 53.
438 Ibid., 51.
439 Ibid, 53.
according to Herder, has given each plant, animal, and human a perfect balance of powers, powers which could be traced back to the electricity present in matter.

It should be clear from the preceding statement that, in one important sense, Herder's vital materialism diverges drastically from Diderot's. Diderot's Lucretian history of nature imagined new species arising, dying out, and being replaced in turn by completely new species. In *D'Alembert's Dream*, nature is certainly creative and active, but it has no goal whatsoever. Herder’s *Ideas*, on the other hand, advances the notion that Nature moves *towards* an endpoint: the development of mankind. Herder's personified "Nature" seems always to have the creation of man in mind. "Nature" put the earth in a perfect position in the solar system. "Nature" created an earth whose geology was conducive to the creation of life. "Nature" saw to it that the basic electrical force manifested itself in different ways and created an ever more complex series of organisms, leading up to human beings. Herder’s faith in a providential God, combined with a Spinozism which envisioned God as immanent, made this standpoint possible, and if the *Naturphilosophen* were less theological than Herder, they were certainly no less *teleological*. Schelling's early *Naturphilosophie* thus stands at the midpoint between Diderot and Herder, for he maintains both the religious unorthodoxy of the former and the goal-driven Nature of the latter.

**KANT, BLUMENBACH, AND KIELMEYER: REGULATIVE OR CONSTITUTIVE TELEOLOGY?**

If most scholars can agree that Herder's own *Naturphilosophie* was deeply teleological in the truest sense, the issue is more contentious in the cases of two famous German life scientists who contributed greatly to the disciplinization of German biology: Johann
Friedrich Blumenbach and Carl Friedrich Kielmeyer. The debate over whether their scientific doctrines were teleological in nature thrusts one into a different, even thornier controversy involving the relationship between Kant, Naturphilosophie, and German biology. Some scholars argue that it was Immanuel Kant who set the methodological agenda for German biology, and they inevitably read Blumenbach and Kielmeyer as careful, sober scientists who used teleological concepts only in the safe, “regulative” way countenanced by Kant’s *Critique of Judgment*. Other scholars, including the present author, contend that German biologists merely paid lip service to Kant while simultaneously going far beyond anything his system supported. A closer examination of Blumenbach and Kielmeyer will not only shed light on the issue, but thrust us—at last—directly into Schelling’s immediate context. But the starting point needs to be the biological standpoint of Kant’s *Critique of Judgment*, the problems of which loomed large for almost all German life scientists at the end of the nineteenth century.

Kant’s “Critique of Teleological Judgment” is so complex that any short summary fails to do it justice. Nevertheless, for the purposes of explaining his relationship to German biology, the important aspect of it is Kant’s answer to the following question: given that

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40 Timothy Lenoir is the best example. In *The Strategy of Life: Teleology and Mechanics in Nineteenth Century German Biology* (Chicago: University of Chicago Press, 1982), he argues that, among those who created German biology as a discipline, “a common core of natural philosophy does run through the works of these individuals; it is a philosophy of biology proposed by Immanuel Kant” (6). See also Lenoir, “The Göttingen School and the Development of Transcendental Naturphilosophie in the Romantic Era,” *Studies in the History of Biology* 5 (1981): 111-205. Throughout Lenoir’s works he violently opposes the idea that Romantic Naturphilosophie contributed to the foundations of German biology in any significant way.

41 Or, in the case of Blumenbach, he almost willfully ignored his many differences with Kant. On this, see Robert Richards, “Kant and Blumenbach on the Bildungstrieb: a Historical Misunderstanding,” *Studies in History and Philosophy of Biological and Biomedical Sciences* 31 (2000): 11-32.

42 Obviously, I am playing loose with chronology by beginning this section with the *Critique of Judgment*, which is significantly predated by Blumenbach’s *Über den Bildungstrieb*. Nevertheless, since Blumenbach would later bring his own argumentation as much in line with Kant’s as possible, beginning with the theoretical underpinnings makes the most sense.
reason is incapable of knowing “Nature” as a whole, and that any attempt to do so involves overstepping the bounds of possible experience, how can we account for organisms, which seem to follow a new set of natural laws? Kant argued that the natural researcher is permitted to assume that nature is goal-driven for the sake of scientific research. However, if we go any further than this hypothetical standpoint, we violate Kant’s cautious epistemological boundaries.

Johann Friedrich Blumenbach made two major contributions to the formation of the German biological community. First, he wrote a definitive biological textbook which would be used for more than a quarter century in German universities.\(^443\) Second, he nailed shut the coffin of preformationism, offering the most extensive and widely accepted refutation of that doctrine in German history. In doing so, he introduced his own version of Buffon’s *moule interieur*, the *Bildungstrieb* or formative force (*nisus formativus*), which guided embryological development and nutrition. In *On the Bildungstrieb* (1781), Blumenbach describes embryology as “the greatest of all physiological riddles,” and gently mocks the extent to which past thinkers have struggled with the question. “Boerhaave’s teacher, Drelincourt, alone collected 262 groundless hypotheses about generation from his predecessors, and nothing is more certain, than that his own system is the 263rd.”\(^444\) Blumenbach rejects the idea of preexistent germs, collecting all the well known eighteenth century counterarguments and adding a few of

\(^{443}\) The textbook itself is inseparable from Blumenbach’s biological innovations. The opening sections recapitulate his arguments against epigenesis and portray the *Bildungstrieb* as established scientific fact. See Johann Friedrich Blumenbach, *Handbuch der Naturgeschichte*, 9th edition, (Göttingen: Heinrich Dietrich, 1814), 16-20.

his own.\textsuperscript{445} He then concludes that there must be some general force, present in all organized matter, which not only drives development but governs the maintenance and nutrition of organized bodies as well. It must be:

A force, which consequently belongs to the life forces \textit{(Lebenskräfte)}, but which is clearly different not only from the other forms of the life force of organized bodies (contractility, irritability, sensibility, etc...) but from the general physical forces of bodies as a whole. [This force] appears to be the first and most important force of all generation, nutrition, and reproduction...and can be called the \textit{Bildungstrieb (nisus formativus)}.\textsuperscript{446}

Like Haller and Buffon before him, Blumenbach \textit{instantly} makes a comparison between the \textit{Bildungstrieb} and Newtonian gravitation. We have no direct access to the \textit{Bildungstrieb}, but based on our observations, we can see it working. The third section of the book is ostensibly supposed to be a closer examination of exactly how the \textit{Bildungstrieb} operates, but we need not be detained with it here. It suffices to note that the \textit{Bildungstrieb} was the most successful of the various organizing forces proposed during the eighteenth century.

The story of the \textit{Bildungstrieb} becomes more interesting because of the intense interest Immanuel Kant took in Blumenbach’s work. Kant believed that Blumenbach’s \textit{Bildungstrieb}—as opposed to the strongly constitutive-teleological organic forces of

\textsuperscript{445} One example is Blumenbach’s discussion of a woman with a mummified fetus in her fallopian tubes. A preformationist would have to assent to the ridiculous statement that the encasing of the fetus was actually pre-existent as well. (Blumenbach, \textit{Über den Bildungstrieb}, 70).

\textsuperscript{446} Blumenbach, \textit{Über den Bildungstrieb}, 32.
Herder—was a model of his own “regulative” method. Kant wrote to Blumenbach in 1790, praising him for “[uniting] the physical-mechanistic and the sheerly teleological mode of explanation of organized nature.”\textsuperscript{447} Blumenbach was naturally pleased to hear Kant sing his praises, and thus disinclined to explore any possible differences of opinion. This has led to a great deal of historical confusion, and many scholars simply take the Kant-Blumenbach alliance at face value, insisting that their methodology was one and the same. However, it would be a mistake to say that Blumenbach believed his cherished Bildungstrieb was merely a regulative construct. For Blumenbach it was a real force in nature, not just a useful hypothesis. Furthermore, it is hard to square Kant’s philosophy of science, which explicitly stated that there could never be a true science of biology, with practicing biologists! Thus, it is more likely that Kant and Blumenbach were engaged in a game of mutual flattery, constantly trying to convince themselves that their beliefs were identical.\textsuperscript{448}

Similar arguments have broken out over Carl Friedrich Kielmeyer. Besides being the mentor of the French naturalist Georges Cuvier, Kielmeyer’s most important contribution to biology was a lecture—eventually published—given at Karl Eugen’s Karlsschule in Stuttgart. The lecture, entitled “On the relationships of the organic forces,” fleshes out Herder’s ideas about the balance of organic forces in different spheres of life. However, it also contains Kantian undertones which, just as in the case of Blumenbach, leave the text open to multiple interpretations. In Kielmeyer’s text, he presents the familiar three organic powers (sensibility, irritability, and reproduction) but


\textsuperscript{448} See once again Richards, “Kant and Blumenbach on the Bildungstrieb.”
also introduces two others (secretion, propulsion) which he unfortunately fails to discuss.

Kielmeyer advances the same thesis as Herder, proposing as a general law that when one organic power increases (i.e. reproduction in plants), the other organic powers decrease in importance.

What was important about this lecture was that Kielmeyer was proposing "laws" in a discipline which many—including Kant—believed to be simply an organized body of knowledge, not a true science. And although Kielmeyer implies a quite clear teleological ordering based on sensibility—generally speaking, the more complex the organism, the more sensibility is has—he also paid lip service to Kant:

Let us grant that nature had no intention in establishing this artful juxtapositioning of appearance in time, that effects and their consequences were to form no goals that she had wished to achieve, let us grant, it were an empty dream [Träumerei] for us to to wish to detect some higher goal yet unbeknownst to us; nonetheless, we still must confess that the chain of effects and causes in most cases seems like a chain of means and ends to us and that we would find it advantageous for our reason to assume such a chain; and so we will at least be in a position finally to confirm that nature in these instances, no less than in the case of the heavens, is able to convince us of the truth of those observations with which I begin.449

449 Carl Friedrich Kielmeyer, "Ueber die Verhältnisse der organischen Kräfte unter einander in der Reihe der verschiedenen Organisationen, die Gesetze und Folgen dieser Verhältnisse," in Sudhoffs Archiv für
How should we read this passage? Is Kielmeyer literally invoking Kant, or is he merely paying lip service to the most famous philosopher in Germany? An ironic reading is the most plausible, given some of Kielmeyer’s unpublished writings in which he engages is some fanciful Träumerei of his own. Regardless of what Kielmeyer himself believed, it is clear from Schelling’s works, especially On the World-Soul, that he read Kielmeyer (and Blumenbach) as true constitutive teleologists.

SCHELLINGIAN BEGINNINGS

This chapter is by no means intended as a comprehensive description of the eighteenth century life sciences. Such a task is beyond the scope of this dissertation, and has already been admirably executed by Reill. What this chapter has done is to establish the broader natural-scientific context in which the young Schelling intervened. Far too many Schelling scholars examine the Naturphilosophie in a vacuum, and this only strengthens the misconception that Schelling was a mystic or a hapless dilettante, trying to write about a subject he didn’t truly understand. In fact, when we look at into the murky waters of the eighteenth century life sciences, we see a world in which the “real scientists” sometimes embraced doctrines— in particular, preformationism—that make Schelling’s most extravagant beliefs seem tame. Now that I have established broad natural-scientific context, I will examine the more localized context in which Schelling’s Naturphilosophie arose.


Finding this!
Chapter 5: The Leipzig Naturphilosophie

THE TURN TO NATURE

By January 1797, Schelling had already spent two semesters with the Riedesel brothers in Leipzig, assisting them in their study of law and somehow finding time for his own studies as well. During this time, he sharpened his understanding of Fichte, finally studying those parts of the Grundlage of which he was still ignorant when he penned On the I as Principle of Philosophy. By finally mastering what was then his mentor's most comprehensive exposition of the Wissenschaftslehre, Schelling finally brought himself up to speed with the entire post-Kantian tradition sketched out in Chapter 2 of this dissertation. Meanwhile, he was also devouring the natural scientific coursework offered in Leipzig, coming to terms with the intellectual tradition outlined in Chapter 3. The task which now stood before Schelling was a daunting one: the fusion of these two traditions. As early as February of 1797—and certainly no later than June, when he completed his Ideas for a Philosophy of Nature—Schelling had already assembled the tools necessary to undertake such a project. It would take him five years—and five books—to arrive at his mature system of Nature. But there can be no mistake that the central thrust of his Naturphilosophie was already apparent in early 1797: the fusion of German Idealism with the vitalism of the eighteenth-century life sciences. Unfortunately,

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451 One of Schelling’s main reasons for closely reading the Grundlage was that he planned on writing a review of that work. The details of this plan will be discussed later in this chapter.
most accounts of Schelling's development focus disproportionately on the philosophical roots of his Naturphilosophie. But that is still only half the story. Only by situating Schelling within the context of Enlightenment vitalism can we arrive at a full understanding of his philosophy of nature. And in doing so, we can finally recognize Schelling's achievement: a complex fusion of abstract philosophy and empirical science never seen since.

I must stress, however, that we are not abandoning philosophy for natural science at this point. Despite his exhaustive examination of the latest empirical scientific literature, Schelling still, as he said in his letter to Hegel from the beginning of 1795, “lived and breathed philosophy.” As much as his position seems untenable today, Schelling did grant primacy to philosophy over empirical science, but neither did he think it could replace it. Schelling’s work between 1797 and 1802 must still be understood

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452 Even some of the best recent work on Schelling’s Naturphilosophie tends towards this privileging of the philosophical tradition, such as Wolfgang Bonsiepen’s otherwise outstanding Die Begründung einer Naturphilosophie bei Kant, Schelling, Fries und Hegel: Mathematische versus spekulative Naturphilosophie, (Frankfurt a.M.: Vittorio Klostermann, 1997). Bonsiepen correctly argues that Schelling’s Naturphilosophie was an attempt to reconcile the “dualisms” present in Kant’s system (94), and to expand on the small role Fichte accorded nature in the Wissenschaftslehre (142). But Bonsiepen’s focus, despite his knowledge of the large scale trajectory of eighteenth century science, remains mostly on philosophy, not on natural science. “Schelling’s philosophy, and in particular his Naturphilosophie, should be interpreted as the logical continuation of the epistemological question posed by Reinhold and Fichte towards the Kantian philosophy. Schelling decidedly modified Kant’s critical philosophy through his examination of the Platonic, Leibnizian, and Spinozist philosophies....” (147) Bonsiepen is technically right, but he misses half the story.

453 Reill, in fact, disagrees that Romantic Naturphilosophen like Schelling and Lorenz Oken belong to the tradition of "Enlightenment vitalism." In fact, he argues that there is a complete break between their traditions. This dissertation will attempt to prove the opposite, and thus I will be somewhat selfishly appropriating Reill’s categories in my own argument. Nonetheless, the reader should be aware of the differences in interpretation.

454 This important point is made by Wolfdietrich Schmied-Kowarzik in “Thesen zur Entstehung und Begründung der Naturphilosophie Schellings,” in Die Naturphilosophie im Deutschen Idealismus, ed. Karen Glody, Paul Burger, (Stuttgart-Bad Cannstatt: Frommann Holzboog, 1993), 67-100. See 70-71 specifically. This chapter will make clear that Schelling’s Naturphilosophie in no way rejected empirical scientific inquiry. Beyond that, I would argue that almost every scientific advancement up to Schelling’s time was deeply tinged by metaphysics of one sort or another. The idea that “science” happens in laboratories in a purely empirical fashion is a fiction that should be discarded. For more on this, see J.W.N.
in its philosophical context: it was not the brainchild of a dilettante who suddenly became interested in the natural sciences, nor of a mystic intent on cloaking Swabian theosophy with scientific language, but of a serious philosopher led down this path by the aporias in Kant's and Fichte's Idealist systems—aporias which necessarily impinged on natural scientific debates and problems. In the twenty-first Century, philosophy and natural science occupy different spheres. To be sure, there are a few scholars who have a foot in both worlds, but for the most part, scientists and philosophers are happy to ignore each other. In the eighteenth century, this was utterly impossible. The path of early modern philosophy, from Descartes to Kant, was inextricably linked with the advancement of natural science. Kant's *Critique of Pure Reason* is unthinkable without Newton, whose mechanical philosophy Kant attempted to reconcile with human freedom. His *Critique of Judgment*, especially its treatment of "teleological judgment," cannot be understood apart from the innovations of Blumenbach and his forerunners, although Kant


Jean-François Marquet portrays Schelling's entire *Naturphilosophie* as a "vehicle for a myth" and a "pseudo-physics." Marquet so vehemently rejects the idea that the *Naturphilosophie* bore any relation to science that he always refers to Schelling's "physics" in quotation marks. Despite a laundry list of supposed links between Boehme's theosophy and Schelling's *Naturphilosophie*, Marquet fails to answer an obvious question: what did Schelling himself believe he was accomplishing? Why would a serious philosopher spend five years of his life learning about natural science, just for the sake of dressing up some of his cherished mystical ideas—which he never mentions in the texts—in scientific garb? Is it not more plausible to believe that Schelling actually thought he was a philosopher, and that he was doing a real service to the natural sciences and philosophy? See Marquet's "Schelling et la philosophie de la nature" in *Epochen der Naturmystik*, ed. Antoine Faivre and Rolf Christian Zimmermann, (Berlin: Erich Schmidt, 1979), 426-444. See quotation on 444.

Gerd Buchdahl's *Metaphysics and the Philosophy of Science* (Cambridge, MA: MIT Press, 1969) demonstrates how closely science and philosophy were intertwined in the early modern period. Speaking of the period from Descartes to Kant, Buchdahl comments, "The key position which science occupies for the philosophers of this period is graphically underlined by the very titles of their major works, and the general profession of their aims." (1).
cannot simply be derived from them.\textsuperscript{457} Ironically, the only major thinker who seemed content to ignore science was Schelling’s own mentor, Johann Gottlieb Fichte.\textsuperscript{458} Oddly, this makes Schelling’s \textit{Naturphilosophie} seem less like an advance \textit{away} from Kant, but rather a move \textit{back towards} him.\textsuperscript{459} Given how much importance most early modern philosophers placed on natural science and Fichte’s neglect of it, perhaps we should not be asking “Why did Schelling turn to natural science?” Rather, we might ask, “How could Schelling \textit{not} have turned to natural science?”\textsuperscript{460}

Still, I do not wish to portray the Leipzig \textit{Naturphilosophie} as an abandonment of Fichte.\textsuperscript{461} Surely, it was a move in that direction, but Schelling—often subtly—imported much of Fichte’s philosophical framework into the \textit{Naturphilosophie} itself. For example,

\textsuperscript{457} Erich Adickes’s \textit{Kant als Naturforscher}, 2 vols. (Berlin: de Gruyter, 1924-1925) still stands as an impressive testament to the deep connection between Kant’s philosophy and natural science, although not surprisingly, given the date of its publication, it focuses disproportionately on physics and largely ignores the biological issues so prevalent in the \textit{Critique of Judgment}. Still, it is interesting that even Adickes admits that Kant carried out very few, if any, experiments. Rather, Kant’s talents lay in methodology because of his “deductive and architectonic-constructive spirit.” (I: 40). It is somewhat surprising that scholars like Lenoir so adamantly credit Kant with helping along biological progress while denigrating Schelling, who actually \textit{did} spend time in the laboratory. Schelling’s experiments with Goethe, which will be discussed in the next chapter, are proof of this.

\textsuperscript{458} Reinhard Lauth, as perhaps Fichte’s greatest modern defender, goes to great lengths to show that Fichte actually \textit{did} have a sort of \textit{Naturphilosophie} of his own. See his \textit{Die transzendentale Naturlehre Fichtes nach den Prinzipien der Wissenschaftslehre}, (Hamburg: Felix Meiner, 1984). However, Lauth is almost always in the minority regarding his (negative) appraisal of Schelling’s \textit{Naturphilosophie}. For an example of this, see his confrontation with German Schelling scholars in \textit{Natur und Subjektivität: Zur Auseinandersetzung mit der Naturphilosophie des jungen Schelling}, (Stuttgart—Bad Cannstatt: Frommann-Holzboog, 1985).

\textsuperscript{459} George di Giovanni makes exactly this point in “Kant’s Metaphysics of Nature and Schelling’s Ideas for a Philosophy of Nature,” \textit{Journal of the History of Philosophy} 17 (1979): 197-215. It has a long tradition behind it. Karl Rosenkranz noted that, in his \textit{Naturphilosophie}, Schelling steered away from Fichte and towards “the side of Kant’s system which made possible a new formation (Gestaltung) of natural science.” \textit{Schelling}, 42.

\textsuperscript{460} Xavier Tilliette, in introducing Schelling’s \textit{Naturphilosophie}, points out that an interest in natural science was not unique to Schelling. Rather it was characteristic of a whole generation of German thinkers, including Goethe, Novalis, Hölderlin, Tieck, and even Rousseau. \textit{Schelling}, I: 127.

\textsuperscript{461} In fact, if we accept that the \textit{Naturphilosophie} was an attempt to \textit{combine} two late eighteenth century traditions, the question of exactly when Schelling “broke” with Fichte loses much of its importance. Schelling never really “broke” with Fichte’s methods, but rather transferred them over onto nature itself.
at first glance, *On the I as Principle of Philosophy* seems to contain nothing of interest for the student of *Naturphilosophie*. But if we look closer, we can see the subtle evolution of his thought. In that text, Schelling refused to treat the *I* as a “thing” or as something conditioned, just as Fichte refused to do so in his review of *Aenesidemus*. Rather, Schelling argued that we must understand it as absolute or unconditioned. By 1799, Schelling has fully transferred this argument over onto Nature itself: in the *First Outline*, he identifies the purpose of all *Naturphilosophie* as the knowledge of Nature as “unconditioned,” in opposition to the mechanical tradition which opened the 18th century by treating nature merely as a “thing.” This is but one example of why Schelling’s early philosophical texts are—despite superficial appearances to the contrary—indispensable for an understanding of his *Naturphilosophie*, which began not with the *Ideas for a Philosophy of Nature* but in a lesser known review article he wrote in installments for Niethammer.

**THE GENERAL OVERVIEW AS TURNING POINT**

The *General Overview of the Newest Philosophical Literature* is an extremely eclectic text. The serial nature of its publication—which stretched from early 1797 all the way into 1798—allowed Schelling to jump from one subject to another, often without any explicit transition. He used it as an avenue to explore his rapidly changing philosophical viewpoints and as a vessel into which he could pour his divided energies. The *General Overview* contains reviews of what we would now call “minor” authors, as well as sections on Kant, Reinhold, Fichte, and even Leibniz; these sections were often the remnants of unfinished or unpublished texts. Thus, perhaps more than any other text, the
General Overview warrants Hegel’s condescending quip that “Schelling carried out his philosophical education in public.”

Perhaps in an attempt to unify its disparate threads, Schelling modified and renamed this text in the 1809 edition of his works, and for the most part, scholars have followed his lead and referred to it as the Philosophical Discourses on the Explication of the Idealism of the Wissenschaftslehre. However, since this dissertation breaks off well before 1809, and since we are focusing not on the older Schelling but the young one, I will continue to refer to this text as the General Overview. Additionally, his elaboration of the Wissenschaftslehre is less interesting in the context of this dissertation than the sections in which he sketches out ideas that will reappear in his writings on natural science. Another benefit of reading this text is that it gives historians a clue as to Schelling’s development in Leipzig. Horst Führmans laments that we have very few sources for Schelling’s Leipzig years, but we do know when Schelling completed each piece of the General Overview, since he always sent them to Niethammer along with a letter. Thus, for example, we can locate Schelling’s turn to the topic of Naturphilosophie as somewhere between December 1796 and February 1797, since those mark the completion of the first and second installments of the General Overview, respectively. Of course, this method is not bulletproof, but in light of the paucity of sources during his stay in Leipzig, any clues are welcome.


463 As we will see, much of this work has absolutely nothing to do with the “explication of the Wissenschaftslehre.” Hartmut Kuhlmann is one of a few scholars who question the blatant self-interpretation of 1809 and continue to call it the Allgemeine Übersicht. Kuhlmann believes that Schelling’s gloss on the text should “raise doubt” because by 1809, Schelling’s view of the Wissenschaftslehre was almost totally negative. Kühlmann, Schellings früher Idealismus: ein kritischer Versuch, (Stuttgart: Metzler, 1993), 193-94.
The General Overview marks the beginning of a new phase in Schelling’s thought.\textsuperscript{464} For the first time, he devotes serious attention to the real, objective world. Not only does he begin to explore the relationship between the ideal and the real, but he goes so far as to give us a cursory construction of matter and a deduction of organism. He relentlessly deploys the anti-mechanical language of Enlightenment vitalism, continually associating the “mechanical” with the “lifeless” thoughts of philosophers whose heads are too caught up in abstract speculation. And he grants nature a dignity not found in Fichte’s system, where it is simply the playground for moral action: in Schelling’s General Overview, the objective world is actually brought forth by the “original activities of spirit.” It is born of the same dynamism that animates the human mind.

\textsuperscript{464} Many Schelling scholars agree with this. Wilhelm Metzger makes the General Overview the first step in a new “epoch” of Schelling’s philosophy, claiming that in this text, Schelling finally makes the explanation of experience (Erfahrung) a “serious task,” one which involved both a turn towards reality (Wirklichkeit) and the unification of philosophy and physics. (\textit{Die Epochen der Schellingschen Philosophie}, 46). Joseph Esposito sees the General Overview as “Schelling’s earliest formulation of the ‘better system’ toward which his thought had been pointing for the past three years,” going so far as to say that “From this point on, Schelling has moved completely beyond the limitations of the Fichtean self.” (\textit{Schelling’s Idealism and Philosophy of Nature}, 44-45). Esposito thus makes the text into a breaking point which convinced Schelling that “nothing less than a complete overturning of the Fichtean starting-point was necessary.” (47) More recently, Motokiyo Fukaya lists no fewer than thirteen instances in which the General Overview was a “turning point” in which “Schelling opened the path to his Naturphilosophie and Tranzendentphilosophie.” (\textit{Anschauung des Absoluten} 86-88. Quotation from 88). One notable exception to this dominant interpretation is Frederick Beiser. In his \textit{German Idealism: The Struggle Against Subjectivism 1781-1801}, he argues that the General Overview is “the most Fichtean of all his early writings and the furthest removed from his later position,” noting the “distance of the Abhandlungen from the later Naturphilosophie.” In fact, Beiser claims that this text “virtually forbade the possibility of Naturphilosophie” (484). While this interpretation fits neatly into Beiser’s narrative of a gradual movement away from “subjectivism,” it misses a critical point. Indeed, the Naturphilosophie of 1801-02 is far removed from that of the Leipzig period, because it grants primacy to Naturphilosophie over Transzendentalphilosophie. But why is the Naturphilosophie of 1802 the only authentic version of Schelling’s thought? The insights of the General Overview and the Ideas might not be wholly in line with that of the \textit{On the True Concept of Naturphilosophie} (1802), but they are still Naturphilosophie, if a more subjective and Fichtean version of it.
THE GENESIS OF THE GENERAL OVERVIEW

Like the Philosophical Letters, Schelling’s General Overview was published by Niethammer in separate issues of his Philosophical Journal, for which he had found a new publisher late in 1796. The revamped journal also featured a new co-editor: none other than Fichte himself. Niethammer announced in the Allgemeine Literatur Zeitung that the journal would still contain philosophical discourses (philosophische Abhandlungen) and reviews. But it would also feature something new: “An overview of the present situation of philosophical literature, which, running continuously in the individual issues, will communicate news from that area.”\(^{465}\) Schelling formally took on this project in November of 1796, writing to Niethammer that “With great pleasure I’m taking on the continuing article on the newest philosophical literature.”\(^{466}\) Not surprisingly, the precocious young Swabian would quickly deviate from the stated purpose of the article, using it not only to develop his own philosophical positions, but to publish fragments of various incomplete or unpublished projects.\(^{467}\) One of these was the polemic against Nicolai, which I discussed in the previous chapter and with which Schelling was obsessed for much of his stay in Leipzig. The General Overview indeed contains a few barbs aimed at the famous Berlin publisher. But it also united four other, more philosophically interesting projects.

Schelling had announced the first of these projects to Niethammer in the very letter where he accepted the task of the General Overview. “Bit by bit I will give a short

\(^{465}\) ALZ 177 (31 December 1796), 1506-1507.

\(^{466}\) Schelling to Niethammer (8 November 1796), BuD, I: 95.

\(^{467}\) Richards sees the General Overview as the “elliptical” sketch of “an alternative to unregenerate Kantianism.” The Romantic Conception of Life, 127.
overview of the history of philosophy from Kant to the present. But I can’t promise you the beginning of it for the first issue. However, I will give news of the products of the latest book fair, and at the same time introduce the whole project." A month later, Schelling updated Niethammer on the intended structure of this work but apologized for not having enough time to begin it. By January of 1797, Schelling began referring to the project as a “pragmatic history of the Kantian philosophy,” which he intended to follow up through Reinhold. Schelling’s inability to follow through on all these plans perhaps shows us something about his personality, although one must remember that he was still serving as Hofmeister for his students in Leipzig, a task which occupied an enormous chunk of his time.

Ultimately, Schelling seemed more concerned with an even older project: a formal review of Fichte’s Wissenschaftslehre which he had promised Niethammer all the way back at the beginning of 1796. At that time, he was familiar only with the theoretical portions of Fichte’s Foundations of the Entire Wissenschaftslehre. Thus, his intended review was partly motivation to study Fichte more closely. As in the case of the “History of the Kantian philosophy,” Schelling repeatedly delayed work on the Fichte review. Between March and August of 1796, no less than three letters to Niethammer contain explanations of why the Fichte review wasn’t progressing as fast as Schelling had

468 Schelling to Niethammer (8 November 1796), BuD I: 95. Schelling fulfilled this promise, as the first installment of the review article follows this outline to the letter.

469 Schelling to Niethammer (16 December 1796), BuD, I:97.

470 Schelling to Niethammer (16 January 1797), BuD: I, 99.

471 “I take on the task of reviewing Fichte’s Wissenschaftslehre with great pleasure, because so far I have not had enough to time to actually study this book.” Schelling to Niethammer (22 January 1796), BuD, I: 60.

472 Ibid.
hoped. Finally, at the outset of 1797, he seemed to abandon the format of a review and instead promised his own reworking of the *Wissenschaftslehre*.

I ask you to assure Fichte that I will never undertake a presentation of his system, unless I am certain of finding the meaning of it and, through my own reworking (*Bearbeitung*) of it, giving it a unique form. A mere restatement of his writings would do a service to no one, and the constant repetition of the same things with the same words under the same recurring form won't bring anything new into fashion.\(^{473}\)

The fact that Schelling later changed the title of the *General Overview* to *Philosophical Discourses on the Clarification of the Idealism of the Wissenschaftslehre* indicates that he believed—or at least wanted to believe—that he had accomplished this original “reworking” of Fichte’s system.

Two more projects appear much less often in Schelling’s correspondence with Niethammer, but traces of both appear in the *General Overview*. The first of these projects reveals that, at some point in 1797, Schelling developed a newfound appreciation for the philosophy of Leibniz, whose ideas he believed could be used to solve some of the most pressing contemporary philosophical problems. In August of 1797 he indicated to Niethammer that he planned to publish a book called “Philosophical Parallels,” the first part of which would deal with Leibniz and which he hoped “would be insightful for the

\(^{473}\) Schelling to Niethammer (16 January 1797) *BuD*, I: 99.
present situation of philosophy."\textsuperscript{474} In both the \textit{General Overview} and the \textit{Ideas for a Philosophy of Nature}, Schelling argued passionately for a revival of the Leibnizian philosophy, albeit one which separated the "spirit" of Leibniz from the "letter." The role of Leibniz in Schelling's \textit{Naturphilosophie} will be a major theme of the remainder of this dissertation, and I will therefore examine these passages in detail. Besides his book on Leibniz, Schelling also planned to write a "Philosophy of the History of Mankind," a project he announced to Niethammer when Schelling was still in Stuttgart.\textsuperscript{475} In that letter from January of 1796, he claimed that the introduction was already written, and perhaps he transplanted it into the \textit{General Overview}, the final section of which discussed the possibility of a philosophy of history, which he presented as a necessary companion to a philosophy of nature.

Now that we understand the genesis of the \textit{General Overview}, we can proceed to a close reading of some of its most important points, especially those that seem to be seeds of Schelling's \textit{Naturphilosophie}. Although it would be a mistake to overemphasize this minor text, especially in relation to the other products of the Leipzig period, the \textit{Ideas} and \textit{On the World-Soul}, I intend to give the reader at least a general sense of its \textit{naturphilosophische} underpinnings. Since it has never been translated, and since even the best English books on Schelling devote only a few paragraphs to it, such a sketch is long overdue.\textsuperscript{476} However, I will apologize at the outset for my cursory remarks about

\textsuperscript{474} Schelling to Niethammer (4 August 1797), \textit{BuD} I: 108.

\textsuperscript{475} Schelling to Niethammer (22 January 1796), \textit{BuD} I: 61.

\textsuperscript{476} The only English book which contains more than a few paragraphs on the \textit{General Overview} is Leonardo V. Distaso's \textit{Paradox of Existence: Philosophy and Aesthetics in the Young Schelling}. Distaso's work is the product of an Italian scholar attempting to write in English, with which he is not fully comfortable. Thus, the text is at times awkward, but its discussion of the \textit{General Overview} is solid and especially clear on its relation to Schelling's aesthetics.
some sections, particularly those which contain lengthy discussions of Kant and Reinhold's respective definitions of human free will. Those sections, while important, are nonetheless of secondary interest in a dissertation focusing on the Naturphilosophie.

THE GENERAL OVERVIEW AND THE REJECTION OF THE MECHANISTIC PARADIGM

As I have already mentioned, the actual text of the General Overview is not always consistent with its stated purposes, which Schelling sketches out in the first installment. He directs his opening salvos at the German philosophical public, with which his frustration is obvious. The General Overview, he asserts, is not intended for the "petty men" who do philosophy only for the sake of "praise and nourishment," men who are easily "bribed with sweet words" and for whom "the truth itself is a lie, because light itself is darkened in them, and forward becomes backward (das Gerade verkehrt wird), like their souls."\(^{477}\) Rather, the General Overview is for those "who want truth above all," those who will neither succumb to error nor misuse the truth.\(^{478}\) Schelling makes it clear that his project will be more than just an assembly of reviews, or a mere excerpting of current philosophical literature. His project "will be occupied much more with characterizing the dominant Spirit of philosophy and its related sciences."\(^{479}\) For that reason, he promises to include a "short history of the whole Kantian epoch," an unfulfilled promise also found in his correspondence with Niethammer.\(^{480}\) Shortly after,

\(^{477}\) I, 4: 59. All translations from the General Overview are my own, unless otherwise noted.

\(^{478}\) I, 4: 59-60.

\(^{479}\) I, 4: 62.

\(^{480}\) I, 4: 63.
Schelling begins reviewing recent books, skewering Karl Heinrich Heydenreich, a professor of philosophy at Leipzig, and then gleefully reviewing a satirical attack piece on none other than Nicolai.  

However, as he sent the installments along to Niethammer during 1797, the book reviews became ever scarcer, and the *General Overview* gradually morphed into a companion-piece to the *Ideas for a Philosophy of Nature*. The similarities are numerous: the *General Overview* is indeed his first philosophical text which emphasizes the importance of the empirical knowledge. He attempts to explain the creation of the objective world through "original activities" of spirit. The scientific training he received in Leipzig rears its head when he begins to deploy a sharply anti-mechanical vocabulary. Finally, just as he will later do in the Introduction to the *Ideas*, Schelling met Heydenreich and was unimpressed, telling Niethammer that Heydenreich was "as they say, an imbecile." (Schelling to Niethammer (10 August 1796), *BuD* I: 86.) Later in the *Allgemeine Literatur Zeitung*, Heydenreich complained that Schelling's review was "shallow babble." (*ALZ* Nr. 45 (12 April 1797), 383). Schelling later responded in the *Philosophical Journal*: "That your letters on atheism are in the hands of many readers proves nothing except that there are still many people who read bad books." (*AA* I, 4: 199) The attack piece on Nicolai was Johann Berger's *Letters on the Newest Prophetic Peepshow-Philosophy of the Wandering Jew*. Not surprisingly, Schelling praises the author, but he says little beyond that.

481 Schelling met Heydenreich and was unimpressed, telling Niethammer than Heydenreich was "as they say, an imbecile." (Schelling to Niethammer (10 August 1796), *BuD* I: 86.) Later in the *Allgemeine Literatur Zeitung*, Heydenreich complained that Schelling's review was "shallow babble." (*ALZ* Nr. 45 (12 April 1797), 383). Schelling later responded in the *Philosophical Journal*: "That your letters on atheism are in the hands of many readers proves nothing except that there are still many people who read bad books." (*AA* I, 4: 199) The attack piece on Nicolai was Johann Berger's *Letters on the Newest Prophetic Peepshow-Philosophy of the Wandering Jew*. Not surprisingly, Schelling praises the author, but he says little beyond that.

482 "Geist" in Schelling could be translated as "mind" or "spirit," although neither of those terms is a perfect match. In Harris and Heath’s recent translation of the *Ideas*, the famous statement "Die Natur soll der sichtbare Geist, der Geist die unsichtbare Nature sein" is translated as "Nature should be mind made visible, Mind the invisible Nature." (Schelling, *Ideas for a Philosophy of Nature* (New York: Cambridge University Press, 1988), 42). But a quick look at the secondary literature in English reveals no consensus on how to translate "Geist." Joseph Esposito and Dale Snow prefer "spirit," while Beiser and Richards usually opt for "mind." The lack of agreement is odd in light of how dominant "spirit" has become in Hegel translations. Indeed, the 1991 translation of Hegel’s *Encyclopaedia Logic* contains an exhaustive introduction on translation, but "spirit" is apparently so obviously the best translation of "Geist" that the authors don’t even bother to justify it. (Hegel, *The Encyclopaedia Logic (with the Zusätze)*, trans. T.F. Geraets, W.A. Suchting, H.S. Harris,(Indianapolis: Hackett, 1991)). Robert R. Williams, in his *Recognition: Fichte and Hegel on the Other* (Albany: SUNY Press, 1992), points out that "mind" “calls up the very Cartesian foundationalist metaphysical connotations that Hegel seeks to overcome—namely abstract, formal, disembodied, worldless subjectivity” (2). I would argue something similar for Schelling: translating Geist as "mind" unwittingly reinforces the very view of the "mind" that Fichte and Schelling were trying to overcome, that view (which can indeed be traced back to Descartes and crude empiricism) which treated the mind as a “thing” and not as an activity. The German *Geist* carries a connotation of a drive, and thus I believe "spirit" more closely captures the active aspect of *Geist*. Furthermore, despite the hints of atheism we saw in the *Philosophical Letters*, *Geist* carries along with it religious connotation, and Schelling was no doubt conscious of this.
heaps praise on the philosophy of Leibniz, identifying the great rationalist as a crucial resource for those grappling with contemporary philosophical problems. Considering that in *On the I*, Schelling praised Leibniz only as a “consistent dogmatist,” this is an important change in perspective.

In the first installment of the *General Overview*, Schelling hints at a turn to Nature. In fact, he goes as far as to say that, since reason has renounced any further inquiries into the supernatural, the “areas of nature and humanity (Menschheit)” are “the only [areas] in which our investigations can still proceed with success.”483 This statement seems remarkably similar to his comment at the end of the *Philosophical Letters*, wherein he declared that the resolution of idealistic problems makes a turn to Nature possible. It is in this spirit that he breaks new ground in the second installment of the *General Overview*, which he sent to Niethammer in February of 1797. Here, he begins by examining the terminology of Kantianism but veers quickly towards a discussion of the relationship between the real and ideal in human knowledge. Schelling argues strongly that true philosophy must incorporate both empirical knowledge and abstract speculation. What exactly is the relationship between the two? Naturally, anyone who looks at this question with “sense and understanding” must perceive within himself two opposed tendencies: one which gravitates towards reality, and another which tends to raises itself “above” reality (über das Wirkliche sich zu erheben). The first lacks the capability for speculation, while the second lacks receptivity for reality. Unfortunately, most philosophers are overwhelmed by the second tendency, and thus they don’t ask this question at all. They are so busy analyzing “dead and abstract concepts” that for them,

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483 1, 4:60.
“there is nothing real.” According to Schelling, true philosophy requires a twin receptivity for speculation and reality. In fact, this combination of empirical research and abstract thought is at the center of Schelling’s entire Naturphilosophie and should be noted by those who mistakenly assert that Schelling wished to discard empirical science. If Schelling really believed that abstract reason could replace natural science, then his attack on these orthodox philosophers would make little sense.

At first glance, Schelling’s comment about the “opposed tendencies” in all of us seems non-controversial. Few would deny that most thinkers gravitate towards one pole or the other: some people become scientists and others become philosophers, but only a few of rare talent—such as Schelling himself—dare to attempt both. However, Schelling’s explanation of the interconnection of the real and ideal is much more interesting. What exactly are objects, and how are they related to us? He argues that the real, objective world is not “out there” beyond our reach, but rather intimately related to and created by activities of our spirit. It is at this point that he attempts a construction of matter, much like the one Kant had offered in his Metaphysical First Principles of Natural Science. But whereas Kant had constructed matter out of the opposed forces

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484 I, 4: 71
485 I, 4: 72.
486 Once again, in an important sense, the Naturphilosophie is not a movement away from Kant, but back towards him. But it is a move towards a Kant with certain “pre-critical” residues. Certainly Kant’s deduction of matter out of opposing forces is one of the most Leibnizian aspects of his mature system. It is no accident that Schelling was rediscovering Leibniz at the same time as he embraced Kant’s dynamical construction of matter. For the relationship between Leibniz, Kant, and Schelling in this respect, see Bonsiepen, “Die Ausbildung einer dynamischen Atomistik bei Leibniz, Kant und Schelling und ihre aktuelle Bedeutung,” Allgemeine Zeitschrift für Philosophie 13 (1988): 1-20.
of attraction and repulsion, Schelling instead uses space and time. Space and time, which Kant had called "pure forms of intuition," are for Schelling original "activities of the mind in the state of intuition" (die Handlungsweise des Gemüths im Zustand der Anschauung). Space and time, which even Kant had admitted were aspects of the mind and not of external reality, give the world extension and limitation. The consequences of this are enormous: not only is the thing-in-itself banished, since objects are actually created by "inner spiritual activity (geistigen Selbsttätigkeit)," but Nature or the objective world is now infused with activity—the same type of activity that Fichte had identified in the mind—making mechanical explanations nonsensical. If objects are not really "things," but rather the products of inner activities, then a drastically new scientific worldview is needed, one divorced from the mechanical philosophy of Isaac Newton.

Schelling violated Newtonian principles by infusing the objective world with its own inherent powers and activities. If the external world, or Nature, is created by spiritual activities, then it is not dead and powerless but in fact vibrantly alive. Schelling's definition of Nature in the General Overview could not be further removed from Newton's:

Kant clearly emphasized that the laws of nature are activities of our spirit, conditions under which our intuition first becomes possible: but he added, Nature is not different

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487 By June of 1797, when Schelling completed the Ideas, he will have opted for attraction and repulsion as well.

488 Critique of Pure Reason A22/B36.

489 I, 4: 74. "Gemüt" was Kant's general term for the empirically oriented mind. I therefore translate it as "mind," in order to contrast it with the more metaphysical Geist.
from these laws, [nature] is itself only an ongoing action (Handlung) of the infinite spirit, in which it comes to self-consciousness for the first time, and through which it gives that self-consciousness extension, duration, continuity and necessity.\(^{490}\)

This stunning passage, which infuses all of nature with the properties of spirit, is obviously yet another “creative misreading” of Kant, but it accurately displays how, for Schelling, nature is not a realm of lifeless objects but rather teeming with activity. Given this, and given the political uses to which mechanism had been put, it should come as no surprise that Schelling, still an ardent supporter of the ideals of the French Revolution, would reject the mechanistic outlook,\(^{491}\) and that the *General Overview* would be full of derogatory references to mechanism as resulting only in “dead concepts” and philosophical bankruptcy. For the duration of his philosophical career, Schelling would reject mechanistic explanations of both nature and the mind, and thus the *General Overview* is the starting point of that tendency.

Besides leading to an outright rejection of mechanism, Schelling’s belief that the objective world is generated at the level of intuition has another important consequence: the imagination (*Einbildungskraft*) becomes more important than the understanding.

Schelling’s construction of matter does not end with space and time. Rather, he argues

\(^{490}\) I: 4, 79. The import of this statement is enormous. Not only does smack of Hegel’s mature thought, in which an infinite spirit gradually comes to self-consciousness, it also hints at Schelling’s mature *Naturphilosophie*, in which the mind is actually developed out of the powers of nature. Furthermore, this statement flatly contradicts Fichte’s own views about the relationship between nature and the I. Fichte believed that it was absolutely impossible for Nature to bring forth reason. See Bonsiepen, *Die Begründung einer Naturphilosophie*, 142.

that “inner spiritual activity” creates, out of two opposed activities (space and time) a third activity, namely, the imagination. This is another example of how the General Overview points towards Schelling’s mature system, since aesthetics are brought directly into the most fundamental questions of human experience. Meanwhile, the faculty which Kant had so exhaustively examined in the Critique of Pure Reason, now takes on a secondary position. Schelling describes it at best as a merely “useful” faculty, because it can only imitate the original activities of intuition, which alone have access to reality. It is a faculty of recapitulation, not of creation. This would unproblematic if some of Kant’s followers hadn’t insisted on an absolute division between sensibility on the one hand, and the understanding on the other. According to Schelling, these misguided followers devoted themselves solely to concepts, and in doing so they mentally divided that which, in nature, is never divided. These are the men Schelling condemned at the outset for being detached from reality: they fail to realize that “A concept without Versinnlichung through the imagination is a word without meaning, a sound without meaning.” They have a talent for dividing, and they “segregate in thought what in Nature is everywhere connected.” In the end, Schelling associates imagination with unity and life, and reflection with division and death. All this will be repeated in the introduction to the Ideas, and for good reason. By then, he had developed a brief history

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492 This passage of the General Overview is obviously central to those concerned both with Schelling’s aesthetic philosophy and his relationship to the romantic school. Leonardo Distazo makes it central to his interpretation of the General Overview (The Paradox of Existence, see especiall 117-131). So too does Heinrich Knittermeyer. “[For Schelling] the imagination is the guarantor of the original identity of nature and spirit, of the I and not-I,...The imagination here possesses the magical power to solve the riddle of the thing-in-itself.” As such, this passage shows that Schelling already embraced “romantic life-certainty.” (Schelling und die Romantische Schule, 73.

493 I, 4: 77. This is obvious another version of Kant’s “Thoughts without concepts are empty, intuitions without concepts are blind” (CPuR A51/B75).

494 I, 4: 77.
of philosophy, one whose endpoint would be the overthrow of the philosophy of reflection and division.

It is highly probably that Schelling's rejection of mechanism was deeply connected to his newfound appreciation for Leibniz. Leibniz, after all, was Newton's greatest philosophical opponent. Not only did he became embroiled in a bitter controversy with Newton's handlers over the discovery of the Calculus, but his metaphysics emphatically rejected the notion that matter and motion can fully account for the operations of the physical world, instead arguing that "in corporeal things there is something over and above extension, in fact, something prior to extension, namely, that force of nature implanted everywhere by the Creator." Leibniz forcefully rejected Newton's contention that nature had to be moved from without by God. Rather, he located movement within matter itself. Leibniz was a deeply Christian thinker, but eighteenth century materialism could easily exploit this doctrine for its own purposes. Schelling, standing at the end of this tradition, found in Leibniz a useful resource in the construction of his own deeply unorthodox Naturphilosophie.

In the second installment of the General Overview, Schelling mentions Leibniz immediately after launching an attack on the thing-in-itself. According to Schelling, there were also things-in-themselves in Leibniz's system, but they were drastically different from the phantasms of Kant's followers. Leibniz's "things-in-themselves" were the monads, which were unknowable only insofar as they were themselves mirrors of the


universe, endowed with the powers of perception and knowing. In other words, Leibniz’s things-in-themselves were not dead, but infused with life and activity. Schelling laments: “Immortal mind, what has become of your teaching under us?....

Giving the power of representation to things-in-themselves? No, our halfwits were too enlightened for that!” Kant’s followers are “too smart to read Leibniz” and prefer to hear from Kant what Leibniz supposedly said. Unfortunately, Schelling never explicitly says exactly how Leibniz ties into his own project here. We can only infer that he honors the great rationalist as one who did not subscribe to the “philosophy of division,” and who granted everything in nature its own power. Later on, in the fourth installment, he praises Leibniz again, but this passage is less illuminating than the introduction to the Ideas, which had already been completed and which we will discuss shortly.

There is much more Naturphilosophie to be found in the General Overview, but none of it predates the Ideas for a Philosophy of Nature, as installment two does. Therefore, the remaining parts of the General Overview are more useful as an explication of the Ideas than as clues to Schelling’s development in Leipzig. We will come back to this text during the examination of the Ideas, but there can be no doubt that the Naturphilosophie presented there is infinitely more robust than the sketches offered by Schelling early in the General Overview. For one, he will greatly refine his construction of matter. But he will also unleash a barrage of empirical scientific references completely absent from the General Overview. Chapter 3 already presented much of the

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497 I, 4: 76.
498 I: 4, 76.
499 I, 4: 76.
scientific context for those references, but we must also familiarize ourselves with the scientific training he received from the faculty at the University of Leipzig, some of whom were intimately familiar with the anti-mechanical traditions of the late eighteenth-century.

IDEAS FOR A PHILOSOPHY OF NATURE

The *General Overview* was a turning point in Schelling’s intellectual development: for the first time, he attempted to give balance to idealism by turning his attention to empirical reality. In the *Ideas for a Philosophy of Nature*, Schelling continues along this path, this time intertwining his philosophical arguments with a mountain of empirical scientific evidence. Of all Schelling’s writings on *Naturphilosophie*, the *Ideas* is certainly the most empirical: at times, he spends more time summarizing the experiments of others than putting forward his own philosophy. But it would be a mistake to dismiss the “empirical” parts of the *Ideas* as unphilosophical. Unfortunately, the vast majority of commentators do exactly this, devoting most, if not all, of their attention to the book’s lengthy introduction. Furthermore, they compare the *Ideas* unfavorably to his more systematic works of *Naturphilosophie*. Both of these tendencies in Schelling

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500 Thomas Bach sums up Schelling’s approach marvelously. “[Schelling’s] *Naturphilosophie* is therefore, in the truest sense of the word, the product of an interaction (*Wechselwirkung*) between philosophy and science.” Thomas Bach, *Biologie und Philosophie bei C.F. Kielmeyer und F.W.J. Schelling* (Stuttgart-Bad Cannstatt: Frommann-Holzboog, 2001), 248.

501 It is significant, and perhaps astounding, that in the 1927 edition of Schelling’s *Werke*, Manfred Schröter only includes the introduction to the *Ideas* in the main volumes, putting the majority of the text in the “supplemental” volumes at the end of the series. Dale Snow’s *Schelling and the End of Idealism* puts forward the most extreme overemphasis on the “Introduction.” Snow essentially portrays the introduction as a summary of Schelling’s entire *Naturphilosophie*, which, of course, it is not.

502 Bonsiepen, in introducing the *World Soul*, reminds the reader that the *Ideas* was just a fragment. *Die Begründung*, 211.
scholarship are short sighted, because they blind the reader to the systematic vision of the other sections, some of which hint at the "objective" Idealism he will develop in his mature Naturphilosophie.\textsuperscript{503} Schelling grants autonomy to nature, allowing the possibility that spirit or mind is simply the highest manifestation of the opposed forces out of which the entire natural world is constructed. This is the beginning of Schelling's "system," albeit not explicitly stated until his later works. Since I want to stress the systematic aspects of the Ideas, my reading of this book will mirror its order of composition: I will begin with a discussion of the main body of the text, and then proceed to a treatment of the introduction.

IDEAS, BOOK I

Any exposition of Book I is fraught with peril: a straightforward reading could leave the reader bogged down in scientific debates long since resolved, or even worse, in Schelling's sometimes incorrect speculation about topics as diverse as the origin of the sun and the true nature of light. At the same time, one should not follow the path of most philosophical commentators and ignore the empirical content altogether. Book I—if one knows where to look—contains its own philosophical insights.\textsuperscript{504} It is not simply a preparation for the "real" philosophy which comes in Book II. Schelling makes this clear

\textsuperscript{503} Although this dissertation has criticized Richard Kroner's ahistorical approach to German Idealism, he is partly correct when he states that "The apparent 'empiricism' of the early writings thus contains the seeds of his later speculative idealism. The former is preparation for the latter; it gathers material for the system." (\textit{Von Kant bis Hegel}, II: 7). To some extent, Kroner incorrectly downplays the seriousness with which Schelling approached his empirical research, but it is nonetheless true that his "empiricism" was informed by a definite philosophical outlook. However, after Kuhn, most philosophers of science would argue that every scientist carries out her empirical work with a particular philosophical outlook.

\textsuperscript{504} Kurt Schilling typifies this approach. "The 'first book' deals more or less exclusively with experiments and particular processes which are unimportant for our subject, and which in general are of only a very limited interest, because they are explicitly based on contemporary theories and explanations in chemistry and physics." Kurt Schilling, \textit{Natur und Wahrheit}, 94.
in his preface, where he abjures any attempt to "apply philosophy to natural science," instead preferring "to allow natural science to arise philosophically." What unites the disparate threads of Book I—which contains sections on combustion, light, air, electricity, and magnetism—is Schelling's relentless search for unity in multiplicity, a drive which stretches at least back to the Renaissance, and which arises again in the philosophy of Leibniz, not to mention in the German Romantic tradition. Schelling wants to explain a variety of phenomena as parsimoniously as possible, and for that reason he swiftly disposes of the countless imponderable fluids introduced as explanatory grounds for forces in the late eighteenth century, instead linking everything to the dynamic polarity of nature. The other striking feature of Book I is its emphasis on the organicity of the physical world. At several junctures in the text, Schelling revels in the harmonious interaction of different inorganic forces. Clearly, the fundamental idea of On the World-Soul—the primacy of the organic even in the inorganic world—is already nascent in the Ideas.

In most of the chapters of Book I, Schelling constantly repeats one complaint: empirical science often succeeds only in discovering the laws of the phenomenal world, while simultaneously failing to penetrate to the "true nature" of the forces under investigation. In his chapter on light, he notes that "natural science seems as yet to have been more fortunate in investigating the laws according to which this wonderful element

505 AA, I, 5: 64. All translations from the Ideas, unless otherwise noted, come from Schelling, Ideas for a Philosophy of Nature, trans. Errol E. Harris and Peter Heath (New York: Cambridge University Press, 1988)

506 "The Schellingian conception [of matter] touches on that [tradition] which Leibniz had begun to appropriate: namely the logical unification of the standpoint of Aristotelian physics and the pre-socratic problem of unity in multiplicity as a whole; in other words, world as world." Rainer E. Zimmermann, Die Rekonstruktion von Raum, Zeit, und Materie: Moderne Implikationen Schellinger Naturphilosophie, 42-43.
moves than in discovering its nature,” a discovery which would no doubt “widen the horizon of mankind.”\(^{507}\) He makes a similar comment about electricity. Perhaps no other phenomenon, Schelling says, “has been observed with such precision,” and yet scientists still cannot say exactly what the “true nature and constitution” of electricity is.\(^{508}\) What made existing attempts to reach the “true nature” of heat, light, electricity, and magnetism so utterly unsatisfying was the introduction of so-called “imponderable fluids” as a fix-all solution.

This approach was extremely popular in the cases of heat and electricity. In 1783 Lavoisier not only launched his attack on phlogiston, but also attempted to explain heat itself by postulating a “subtle fluid” known as “caloric.”\(^{509}\) This fluid, which Lavoisier presumed to be weightless and invisible, and which could squeeze in and out of solids and liquids, naturally flowed from hot to cold bodies. Schelling rejects this theory for two reasons. On the one hand, it raises as many questions as it answers: exactly how, Schelling asks, can a weightless, invisible fluid communicate heat to real, tangible matter? Furthermore, Lavoisier’s theory simply begs the question: “to postulate a heat-matter as the cause of heat is not to explain the situation, but to pay oneself with words.”\(^{510}\) Ironically, in his caloric theory, Lavoisier commits the same error that Stahl had when he developed phlogiston theory: he “explained” something by postulating a special kind of matter or stuff, and in doing so got no closer to a real explanation of the

\(^{507}\) AA, I, 5: 118-119.

\(^{508}\) AA, I, 5: 145.


\(^{510}\) AA, I, 5: 259.
phenomenon. Benjamin Franklin had postulated a similar fluid to account for electricity. This electrical fluid, made up of tiny particles, permeated all bodies, because these particles were naturally attracted to matter (although they repelled each other). Positive and negative charges were explained by a surplus or a deficit of these particles, respectively, and electrical conduction was simply the result of their movement from one body to another. For Schelling, this is yet another example of:

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a \text{a lazy Philosophy of Nature, which believes it has explained everything if it postulates the causes of phenomena as basic materials in bodies, from which they then emerge (tamquam Deus ex machina) only when needed to explain some phenomenon in the shortest and most convenient way.}^{512}
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Schelling’s criticism of imponderable fluids reveals an ingenious critique of eighteenth century mechanism, which will also appear in Book II. Both Franklin’s theory of electrical fluid and Lavoisier’s caloric theory responded to the very real demands of eighteenth century physics, where mechanical causes were de rigeur for any respectable scientist. Both Franklin and Lavoisier were therefore forced to literally “invent” tiny, weightless, invisible particles to explain forces which were seemingly incompatible with the mechanistic paradigm. It is understandable, though ironic, that Schelling—a speculative thinker par excellence—repeatedly accuses mechanistic physics of being too “speculative!” Instead of discarding the assumptions of mechanistic physics, scientists

\[\text{511 Schelling summed up the futility of phlogiston theory thus: “What makes substances combustible? was the question. That which makes them combustible, was the answer.” (AA, I, 5: 117).}\]

\[\text{512 AA, I, 5: 150.}\]
like Franklin and Lavoisier "hamper" themselves with "unknown elements, the makeshift of a defective physics," and literally begin to "conjure up forces...as substances in bodies." Many historians of science smugly dismiss Schelling's "speculative physics" and contrast it with the supposedly sober, empirical work carried out by the "real" scientists of his day. But perhaps Schelling has a point: eighteenth century mechanical physics, despite its pretensions to the contrary, relied on an elaborate metaphysics which necessitated questionable assumptions about the nature of matter and force.

Schelling clearly believes that his own dynamic construction of matter, which posits an original duality of attraction and repulsion in nature, helps him achieve the parsimony so lacking in mechanical theories of force. Because he can trace everything back to active forces instead of to inert matter, he has no need to invoke such fictions as heat-matter, light-matter, or an electrical fluid. Instead, he can boldly assert that "Nature is able to achieve the entire manifold of her phenomena, on the small scale as well as on the large, by means of opposing forces of attraction and repulsion." The forces which had perplexed eighteenth century scientists are simply different manifestations of that original duality. Schelling continuously tries to link the different phenomena together as closely as possible, and thus he asserts, for example, that heat is a modification of light, which in turn is a modification of matter itself. He easily likens the polarity inherent in both electricity and magnetism to the fundamental attractive and repulsive

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513 AA, I, 5: 117.
514 See my discussion of Kant's *Metaphysical Foundations of Natural Science* in the next section.
515 AA, I, 5: 179.
516 AA, I, 5: 121
517 Ibid., 130
forces that give rise to nature. To be sure, he sometimes stumbles in his desperate attempts to connect everything: when he asserts that oxygen is an integral part of electricity, it seems downright bizarre. But it is perfectly consistent with his search for unity in multiplicity, and it should come as no surprise that he begins echoing Leibniz in his chapter on electricity: “[Our mind] believes that it sees Nature only where it discovers the greatest simplicity of laws amid the greatest variety of phenomena, and the most stringent parsimony of means in the highest prodigality of effects.” But Schelling has another, perhaps equally Leibnizian aim in mind in Book I: at several points in the text, he describes the harmonious—dare we say organic—interaction between seemingly inorganic forces.

Nowhere is Schelling’s belief in the organicity of the natural world more evident than in his chapter on air, where “nature” is almost always personified. According to Schelling, nature sustains life on earth by continually recycling the atmosphere, keeping the composition of the air constant, and fueling the processes of life and death. Plants “enrich” the “raw material” from the atmosphere and “exhale vital air.” And when they wither, they “give back to their great provider what they once derived from her.” Thus there arises a continual cycle, one evident even in the seasons, in which “one side of the earth is robbed of all its beauty, the other displays all the glory of spring.” Like any organism, the earth is both cause and effect of itself, simultaneously being and becoming:

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518 Ibid., 164.
519 Ibid., 162-163.
520 Ibid., I, 5: 139.
521 Ibid., 139.
This is the great artifice of Nature, by which alone she ensures the perpetual cycle in which she endures, and therewith her own eternity. Nothing that is or becomes can be or become unless another concurrently is and becomes, and even the perishing of a natural product is nothing but the payment of a debt it has incurred to the whole of the rest of Nature; hence there is nothing original, nothing absolute, nothing self-subsistent within Nature.\textsuperscript{522}

Schelling returns to this imagery in the concluding chapter of Book I, again stressing the interconnection between all parts of nature. "Nature, in order to make possible the greatest multiplicity of phenomena," has set up duality, polarity, conflict.\textsuperscript{523} It is this strife that drives the natural world. "But in order that unity should prevail in that multiplicity, and harmony in this conflict," nature dictates that its heterogeneous parts combine with one another, "and only in this combination become a whole."\textsuperscript{524}

Ultimately, Schelling's search for unity in multiplicity—a search which leads him to the polarity at the heart of all nature—goes hand in hand with his concept of organism. Although he articulates these ideas elsewhere in much greater detail, this short exposition of Book I of the \textit{Ideas} should have demonstrated that even Schelling's most empirically-oriented work contains philosophical insights of its own. Book I reveals that by early 1797, Schelling had already developed a sophisticated and relatively consistent methodology for investigating natural phenomena. He will deploy that methodology

\textsuperscript{522} \textit{Ibid.}, 138.
\textsuperscript{523} \textit{Ibid.}, 176.
\textsuperscript{524} \textit{Ibid.}
again in *On the World-Soul*, although in an even more systematic form. At this point, however, we must turn to the more philosophically-oriented sections of the *Ideas*: first, Book II, and finally the Introduction, which he wrote after he had completed the main text.

**IDEAS, BOOK II**

Schelling pursues two projects in the second book of the *Ideas*. First, he develops a more sophisticated construction of matter than the one found in the *General Overview*, using the mechanical physics of Georges-Louis Le Sage as a foil for his own ideas. Throughout Book II, Schelling repeats a criticism already introduced in Book I: that mechanical physics, despite its pretensions to cold objectivity, is rife with hidden metaphysical assumptions. Even worse, just like Lavoisier’s “caloric” and Franklin’s electrical fluid, it often assumes what it purports to explain. After laying out his own dynamic construction of matter, Schelling concludes Book II by returning to the subject of chemistry, attempting to show—contra Kant—that chemistry can exist not merely as a collection of empirical facts, but as a true science, and that his dynamic physics offers the most plausible foundation of such a chemistry.

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525 Kant had made a similar point. “Hence all natural philosophers who have wished to proceed mathematically in their occupation have always, and must have always, made use of metaphysical principles (albeit unconsciously), even if they themselves solemnly guarded against all claims of metaphysics upon their science.” *AA* 4: 472. All translations from this text are from “Metaphysical Foundations of Natural Science,” in Kant, *Theoretical Philosophy after 1781*, ed. Henry Allison, Peter Heath, et. al., trans. (New York: Cambridge University Press, 2002).

526 By 1797, Kant himself had changed his mind about the status of chemistry. Lavoisier’s revolution and its reception in Germany had, in Kant’s view, given chemistry the mathematical basis necessarily to qualify it as a true science. However, for Schelling’s generation, Kant’s change of heart remained hidden in the *Opus Posthumum*. 
Throughout Book II, Schelling relies heavily on Kant’s *Metaphysical Foundations of Natural Science* (1786). That work had many aims, but the one most relevant here is contained in the second chapter, the “Metaphysical foundations of dynamics.” Here, Kant identifies two “essential fundamental force[s] of matter,” repulsive force and attractive force.\(^{527}\) For Kant, it makes no sense for philosophy to begin with the presupposition of indivisible, impenetrable atoms of matter, and then to explain forces afterwards. Rather, he argues the opposite: it is *forces* that must be presupposed in order to make sense of matter. Kant begins with repulsive force, showing that impenetrability is not an accidental property but rather a manifestation of “the expansive power of matter.”\(^{528}\) Thus, what we experience as “hardness” or impenetrability is actually a second-order product of an original force. Once Kant establishes the repulsive force, he sees attraction as a consequence, using an argument Schelling will later appropriate. Without attractive force, there would be no matter whatsoever, because:

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\text{…matter, by its repulsive force (containing the ground of impenetrability), would, [through itself] alone and if no other moving force counteracted it, be confined within no limit of extension; that is, it would disperse itself to infinity, and no specified quantity of matter would be found in any specified space.}^{529}\]

\(^{527}\) Kant, *AA*, 4:508

\(^{528}\) *Ibid.*

\(^{529}\) *Ibid.*
Kant reminds us that the converse is also true: if attraction existed without repulsion, all matter would “coalesce into a mathematical point” or singularity, “and space would be empty, and thus without any matter.” In the end, repulsive and attractive forces are twin conditions for the possibility of matter. Neither is sufficient by itself.

Kant’s construction of matter in the *Metaphysical Foundations of Natural Science* has important epistemological implications. Although we can deduce them from evidence of the senses, the “fundamental forces” of attraction and repulsion are ultimately inaccessible to human understanding. Indeed, we cannot even be certain that such forces are possible, even though we do have a right to assume them based on the “fundamental” concept of matter: namely that which fills up space and whose repulsive force must be balanced by an attractive force. Natural philosophers thus arrive at original forces only through “the reduction of given, apparently different forces to a smaller number of forces and powers that explain the actions of the former, although this reduction proceeds only up to fundamental forces, beyond which reason cannot go.”

The very fact that, in Kant’s “metaphysical-dynamical” explanation of matter, we cannot truly comprehend the most fundamental forces of nature makes the opposing “mathematical-mechanical mode of explanation” much more attractive, at least on the surface. Physicists who explain the variety of matter by postulating differently shaped atoms—which, of course, reside in a void—appeal to the common understanding, since “both the shapes and empty interstices can be verified with mathematical evidence.”

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is not surprising, then, that "atomism or the corpuscular philosophy [has] always retained its authority and influence on the principles of natural science, with few changes from Democritus of old, up to Descartes, and even to our time." However, Kant refuses to take the easy road, claiming that "a merely mathematical physics pays double for this advantage." Not only must it set out from the "empty concept" of absolute impenetrability, it must also strip matter of its inherent forces and find new, fantastic ways of explaining them. Ironically, the "mathematical-mechanical" physicists—those who supposedly reject metaphysical explanations—must use too much "imagination" in constructing their system, and in Kant's view, this is inconsistent with the epistemological "caution" of the critical philosophy.

Although Schelling will closely follow Kant's argument, he will proceed in a slightly different way. In addition, Schelling is willing—as always—to push beyond Kant's cautious epistemology. Schelling's own construction of matter begins—like Kant's—with a criticism of mechanical physics. Any system of physics which views matter as impenetrable and inert starts to break down as soon as philosophers and scientists demand an explanation of force. Clearly, Schelling says, there are two basic forces at play in the world: attraction and repulsion. These forces manifest themselves to any observer: in gravitation, chemical affinities, magnetism, electricity, and even mechanical impact, and therefore they must be explained. According to Schelling, only two explanations of force are possible for those who believe in the inertness of matter.

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534 Ibid., 533.
535 Ibid., 525.
536 Ibid., 524.
First, they can simply superimpose force onto matter.\textsuperscript{537} But how can we explain this? How can a non-corporeal force be "implanted into" a hard and powerless piece of matter? The forces must be simply postulated as "hidden qualities, which are not allowed to figure in any reputable natural science."\textsuperscript{538} The second option is to assert that attraction is an illusion, and that it is actually the action of a "more rarified matter" that drives things towards each other.\textsuperscript{539} This approach ends in a thoroughly atomistic physics, one in which atoms with special properties explain the "forces" operative on "normal atoms." According to Schelling, the latter explanation is simply "the expedient of a lazy philosophy," which escapes its predicament by "cut[ting] off all inquiry in advance, by a dictatorial fiat."\textsuperscript{540}

Here, Schelling has in mind the system of Georges-Louis Le Sage, a Genevan physicist whose most important contribution to eighteenth century physics was a completely mechanistic account of universal gravitation. In 1748, Le Sage first proposed his theory of gravitation to the Paris Académie des Sciences in an unpublished Essay on the Origin of Dead Forces. He continued to write, finally gaining acclaim through the popular exposition in his Luhrêce Newtonien (1784). As the title aptly demonstrates, Le

\textsuperscript{537} One must remember that an important strain of eighteenth century thought focused on the problem of something else being "superimposed" onto matter: namely, thought. John Locke famously left open the possibility that God himself could in fact do so. "Or, who on the other side, finding not Cognition within the natural powers of Matter, examined over and over again, by the utmost Intention of Mind, have the confidence to conclude, that Omnipotence itself, cannot give Perception and Thought to a Substance, which has the Modification of Solidity." (Locke, \textit{An Essay Concerning Human Understanding}, (New York: Oxford University Press, 1975), Book IV, Chapter 3, §6, 542. Although Locke's statement had "dangerous" implications and was picked up by the radical Enlightenment, the mechanical physicists who suggested that God must implant matter with force had the most orthodox intentions, retaining a prominent place for His Divine Majesty.

\textsuperscript{538} \textit{AA}, I: 5, 196.

\textsuperscript{539} \textit{Ibid.}

\textsuperscript{540} \textit{Ibid.}
Sage attempts to trace his ideas back to “the first Epicureans...[who] very likely discovered, without effort, the laws of universal gravitation and its mechanical cause.”

Le Sage presents his ideas as though he were “teaching” the Epicureans the true implications of their doctrines, finally arriving at his unique contribution, the “gravific particles” which supposedly cause gravitation. Le Sage is the perfect example of a physicist who suggests that attraction is illusory. To illustrate Le Sage’s theory, let us picture two large, spherical bodies. Around them is a sea of “supramundane” gravific particles, which exist everywhere in the universe. “These tiny bodies, moving (randomly) in every direction,” get “intercepted” or shielded off by large bodies. This results in a deficit of particles between bodies, which are unable to “counterbalance” the particles on the opposite sides. Because the density of particles is greater on the opposite sides, the tiny particles push the large bodies towards one another, just like a sandblaster would push even a very heavy ball: not through attraction, but through impact. Attraction is nothing more than an illusion.

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542 See especially §6 of the “Lucrèce Newtonien,” 409-410.
Although Le Sage is largely forgotten today, no less a scientist than Georg Christoph Lichtenberg took his theory seriously. Commenting on LeSage's *Lucreèe Newtonien*, Lichtenberg declared in 1790, "If it is a dream, then it is the greatest and most sublime dream ever dreamt, with which we can fill a great gap in our knowledge (eine Lücke in unseren Büchern ausfüllen können)—a gap which can only be filled by a dream." Lichtenberg would later change his mind and adopt a dynamic, Kantian account of gravitation, but the fact that he temporarily embraced Le Sage's theory is evidence that scientists saw it as a viable option in late eighteenth century Germany. Schelling is even complimentary of its ingenuity and explanatory power, closely echoing Kant, who claimed that mechanical physics was based on "empty concepts" but nonetheless appealed very well to sensory intuition:

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This, then is the greatest advantage of all mechanical physics, that it can render intuitable to the senses that which can never be presented in sensory intuition by a dynamical physics... Thus, considered within its limits, the mechanical physics can itself become a masterpiece of cleverness and mathematical precision, even though it is utterly groundless in its principles.\footnote{AA, I, 5: 200. Although Schelling might never have actually read the "Lucrèce Newtonien," it is interesting to see their agreement on the importance of the a priori. Le Sage argues that "despite the preference owed to a posteriori research, those which are a priori do not deserve to be entirely rejected, because the latter can accelerated quite considerably the success of the former." (405).}

Despite Schelling’s admiration for Le Sage’s ingenuity, he refutes—sometimes even mockingly—three crucial, but in Schelling’s mind, unjustified postulates of Le Sage’s account of gravitation.\footnote{Schelling takes these postulates directly from the writings of Le Sage’s most important expositor and interpreter, Pierre Prevost.} In each case, the main problem is that Le Sage’s atoms are “intuitable to the senses,” and therefore—unlike dynamic forces—demand empirical confirmation. The three unjustified postulates are as follows:

1. “…an infinite number of hard, very small and well-nigh identical particles are uniformly distributed in an empty space.”\footnote{AA, I: 5, 200.}

2. “Now these particles move in a straight, undeviating line, but in the most varied directions; their motion is so much alike in velocity that every point in space can be taken, for a moment at least, as the centre.”\footnote{Ibid., 201.}
3. "at any given point in space in which the atoms are moving, there is a spherical body much larger than the primary particles."\(^{548}\)

Schelling’s criticism of these three points is as follows: first, Le Sage’s greatest advantage—the fact that differently shaped, indivisible atoms can be “presented in sensory intuition”—is at the same time his greatest disadvantage. Rather than leading us to sober empirical inquiry, the idea of an “absolutely small” and “absolutely hard” particle “allows completely free play to the imagination from the very outset.”\(^{549}\) Exactly how small and how hard are they? We can never know, because despite the apparent advantage of Le Sage’s system—that we can picture tiny, differently shaped atoms—he in fact takes us beyond any empirical inquiry. We will never be able to confirm the existence of an “absolutely small” particle.

Schelling’s criticism of the second is more straightforward, and is as old as Aristotle himself. Le Sage and other mechanical physicists desperately try to explain all motion by impact. But Le Sage himself has told us that the universe is full of tiny particles moving quickly in every direction. Exactly how, Schelling asks, did those particles get set into motion? Schelling’s dynamical system would have no such problem, since matter itself is derived from original forces which are the true building blocks of the universe. But Le Sage is at a loss to explain how things got put into motion in the first place. Having dismissed the first two postulates, Schelling turns to the third, which seemingly exasperates him. Le Sage has already—almost out of thin air—presupposed not only matter itself, but an enormous number of invisible, moving

\(^{548}\) Ibid., 202.

\(^{549}\) Ibid., 201.
particles. Now, he presupposes the existence of "large spherical bodies" as well! This is the aspect of Le Sage's system that prompts Schelling to call it a "lazy philosophy of Nature," and he comments bitterly:

If it is permissible simply to presuppose solid bodies, which are furthermore different from one another in mass, and on top of that a fluid which moves itself and strikes upon the larger bodies, there is no understanding how a man of Newton's genius would want to go back to forces in matter itself, in order to explain the possibility of a material world.  

Schelling admits that "these are all metaphysical objections...but they are perfectly in order against a hyperphysical physics." Le Sage's system makes no attempt to give a real explanation of motion or force, and it postulates hard, indivisible bodies "which cannot be realized by any experience, and which it treats nonetheless according to laws of experience." In fact,

The mechanical physics is a purely ratiocinatory system. It does not ask what is, and what can be determined from experience, but makes assumptions of its own, and then asks: if this or that were the case, as I take it to be, what would follow from that?

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550 Ibid., 202.
551 Ibid., 203.
552 Ibid.
553 Ibid., 205.
Schelling closes the book on Le Sage by once again reiterating that mechanism’s greatest advantage is also its undoing: a physics based on primary particles demands empirical confirmation, and Le Sage fails miserably on this count. The dynamic system, however, has no such burden, and Schelling will sketch his own system out in the following two chapters. But he never takes his eye off Le Sage, whose theories “at least serve the purpose of alerting natural science...[that it] must seek its credentials elsewhere, in a higher science.” 554 That “higher science” is, of course, philosophy.

Schelling’s own construction of matter need not detain us for long, because it largely follows Kant’s own argumentation. In fact, at one point Schelling admits that he is simply taking “extracts from Kant,” since the derivation of the basic laws of dynamics “has been performed with such lucidity and completeness, in Kant’s Metaphysical Foundations of Natural Science, that nothing further requires to be done at this point.” 555 But Schelling goes far beyond anything Kant himself would countenance. He argues that there is a profound connection between the repulsive and attractive forces in nature and the activities of spirit, and as such the former can be derived not only empirically, but from a priori from the latter. “The basic forces of matter are thus nothing else but the expression of those original activities for the understanding, for reflection; not the true in-itself, which exists only in intuition.” 556 According to Schelling, the repulsive force can be derived from the original, unlimited activity of the spirit. And just as consciousness is impossible without something to limit that activity, so too is attraction necessary to counteract the repulsive force in matter, which, as Kant already told us,

554 Ibid., 208.
555 Ibid., 220.
556 Ibid., 218.
would otherwise be dispersed out to infinity. It is tempting to read this as a ringing endorsement of some kind of subjective Idealism. If the basic forces of matter are merely derivations of mental activity, then the mind really is "creating" the external world. But this would be a gross oversimplification of Schelling's position, and it contradicts other passages in both the General Overview and the Ideas. In the former, he described both the external world and the finite mind as aspects of the coming-to-consciousness of an infinite spirit. In this sense, the mental and physical are suffused with the same basic activities, which manifest themselves in different ways. Neither comes "before" the other: in fact, consciousness is impossible without an object.

Moreover, Schelling seems to believe that the upward development of nature—which begins with the "basic forces" of matter—culminates in self-consciousness. Thus, the finite mind is not the origin of the natural world but the endpoint of its trajectory, a trajectory propelled by an infinite spirit coming to self-consciousness. This process starts on the ground level. Matter, Schelling says, has a desire to "escape from the equilibrium" in which it is trapped. "Dead matter" can, with the help of "external influences," move to a "higher level," in which the free play of forces leads upwards to a "work of Nature," which finds "continuance in this very conflict itself."

Thus already in the chemical properties of matter there are actually lying the first seeds, albeit still quite undeveloped, of a future system of nature, which in its most diversified forms and structures can evolve up to a point at which

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Iain Hamilton Grant points out that a major stumbling block in Schelling interpretation is the conflation of Schelling's position Fichte's belief that the ego literally creates the world. This is not at all what Schelling means. Philosophies of Nature after Schelling. (New York: Continuum, 2006), 15.
creative Nature seems to return back into herself, [a point at which] the necessary and the contingent, the mechanical and the free, part company.\textsuperscript{558}

There can be little doubt that the mechanical and the free “part company” when consciousness arises; he says so explicitly in Chapter 5. When we grant independence to an object, “subjective and objective worlds divide,” and the object “appears as something that exists quite independently of our freedom.”\textsuperscript{559}

**THE “INTRODUCTION” TO THE IDEAS**

The “Introduction” to the Ideas for a Philosophy of Nature is perhaps the most easily digestible and concise presentation of Schelling’s early Naturphilosophie. Unlike Books I and II, it has been studied in great detail, both in German and in English.\textsuperscript{560} For that reason, I will focus on an underappreciated aspect of the introduction, rather than repeating what has already been said elsewhere. I have already hinted at the fact that Schelling’s appropriation of the philosophy of Leibniz will be a major theme in this dissertation. There is no better place to broach this subject extensively than here. The


\textsuperscript{559} \textit{AA}, I: 5, 217.

\textsuperscript{560} Dale Snow’s \textit{Schelling and the End of Idealism} unpacks the “Introduction” in great detail. Although I disagree with her use of this text as a reliable summary of Schelling’s Naturphilosophie, the exegesis itself is without fault and is recommended. One of the only dismissals of the “Introduction” is given by Kurt Schilling. “The introduction to the Ideas, which formulates Schelling’s general standpoint for the examination of nature, contains nothing that we don’t already know from his previous works.” \textit{Natur und Wahrheit}, 94. However, if this is true, then it serves as a valuable review of previous texts.
introduction contains a glowing appraisal of the great German rationalist. Even Fichte described Schelling’s introduction as an excellent summary of Leibniz’s philosophy.\(^{561}\) Most scholars focus disproportionately on Schelling’s debt to Spinoza, and there is good reason for this.\(^{562}\) As we have seen, his early Idealistic texts reference Spinoza constantly, and he will later call Naturphilosophie the “Spinozism of Physics” and write his Identitätsphilosophie in geometrical format. But in 1797 it was Leibniz who more significantly inspired Schelling’s Philosophy of Nature. Spinoza’s rejection of teleology, his determinism, and his belief in a solely linear causality certainly cannot be reconciled with Schelling’s Naturphilosophie, which emphasized the creativity, dynamism, and even freedom of the natural world. Furthermore, that which most captivated Schelling—the organic, whose causality is circular, not linear—must be coaxed out of Spinoza, if it is present at all.\(^{563}\) On the other hand, Leibniz’s doctrines in these spheres overlap significantly with Schelling’s. Leibniz’s rejection of matter as primary and his simultaneous emphasis on living force made his metaphysics attractive to Schelling, who throughout his Naturphilosophie struggled to understand phenomena (electricity, magnetism, chemical processes, and ultimately life itself) for which mechanical explanations were hopelessly inadequate. Leibniz’s Monadology also seemed to offer a

\(^{561}\) Fichte, Science of Knowledge (Wissenschaftslehre) with the First and Second Introductions, ed. and trans. Peter Heath and John Lachs (New York: Meredith, 1970), 83.

\(^{562}\) Alan White argues, for instance, that Schelling’s entire philosophical career is informed by his desire to create an antithesis to Spinoza’s Ethics, a system equally elegant but one which, unlike Spinoza’s, does not succumb to fatalism but rather preserves and even champions human freedom. See White, Schelling, 5. Robert Richards introduces Schelling’s thought by saying that “He championed and then reformulated Fichtean idealism, infusing it with the realism of Spinoza, to reinstate nature as the ego’s coequal.” Richards, The Romantic Conception of Life: 114.

method of rescuing individuality from the threat of mere identity.\textsuperscript{564} Given this, it should not be surprising that Schelling explicitly called for the revival of the Leibnizian system in 1797. This is not to say that Spinoza was unimportant for Schelling. Rather, it reveals Schelling as an heir of a century-long tradition of reading Spinoza through Leibnizian lenses. Discussions of the two are never far apart in his early works. When he discusses Leibniz, he usually also discusses Spinoza. However, while he probably became acquainted with Leibniz very early in his life, it took him quite a while to develop a positive view of the latter’s contributions to philosophy.

**EVIDENCE FOR SCHELLING’S ACQUAINTANCE WITH LEIBNIZ**

Schelling is notorious for borrowing ideas from other authors without citing them.\textsuperscript{565} Unfortunately, such a tendency makes it easy for scholars to read whatever influences they desire into Schelling, usually on the basis of mere analogies or similarities in doctrine.\textsuperscript{566} In order to avoid such a pitfall, it is necessary to demonstrate that Schelling was more than just vaguely familiar with Leibniz. This is especially important because Leibniz published no comprehensive summary of his philosophy during his lifetime, and his works were largely unknown—even in Germany—until the publication of his *New Essays* in the 1760s. Fortunately, Schelling’s biography and his correspondence reveal

\textsuperscript{564} This may sound shocking to anyone familiar with Schelling’s later *Identitätspolitik*, but Schelling protests in *The World Soul* against all attempts to subsume the individual in an identity. “I hate nothing more than that mindless attempt to destroy the multiplicity of natural causes with a fictitious identity.” *AA*, I, 6: 67. I have already shown how Book I of the *Ideas* aims to preserve multiplicity within unity.

\textsuperscript{565} Ernst Benz, “Schellings schwäbische Geistesahnen,” 76.

\textsuperscript{566} I examined a particularly egregious case of this tendency in Chapter 1, specifically those who try to make Schelling into a Swabian occultist.
that he was not only familiar with but—at least by 1797—enthusiastic about the author of the *Monadology*.

It is very likely that Schelling first learned about Leibniz from his own father, who taught his son in Bebenhausen. Although Joseph Schelling’s most important intellectual work dealt with so-called oriental languages, in his youth, he studied under a famous Leibnizian logician, Gottfried Ploucquet. In fact, he wrote an ontological treatise as his *Magisterarbeit* in 1758 which closely followed Ploucquet’s own doctrines.\(^{567}\) Undoubtedly, the precocious young Schelling would have learned at least something of the Leibnizian philosophy from his father and teacher before he entered the Tübingen Stift at the tender age of 15. In Chapter 1 I showed that his teachers lectured on Leibniz.\(^{568}\) Abel in particular was greatly inspired by his encounter with the Leibnizian philosophy, and though his thought was extremely “eclectic,” he was very popular with the students at the Stift.\(^{569}\)

This evidence is sufficient to show that, by the age of 17, Schelling had already had a good degree of informal and formal schooling on the Leibnizian philosophy. His correspondence also testifies to his interest in Leibniz. In early 1796, he expresses a largely negative view in a letter to J.H. Obereit, in which he faults Leibniz for making God too transcendent: “I believe that with Leibniz the middle ages of philosophy really began (although the scholastics had already paved the way to it), where people made the absolute into a mere being of abstraction, and treated God not as the being of all being,

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\(^{568}\) *BuD*, 1, 20.

\(^{569}\) *BuD*, 1, 10.
but rather (in the popular sense) as the being outside of all being." This cool appraisal of Leibniz (with its implicit argument for Spinoza’s superiority) mirrored the attitude of *On the I* and the *Philosophical Letters*. Nevertheless, Schelling completely reversed his opinion in the following year. As we have already seen, one of the various projects which Schelling planned during his Leipzig period was a book on Leibniz, the *Philosophical Parallels*. Seven months later, he would refer to his Leibniz project again, this time shortly after the completion of *The World Soul*: “I can’t send you a treatise on Leibniz, as I had hoped, because I want to work it out better and I don’t have the time.” Unfortunately, as is the case with a number of Schelling’s intended projects in these early years, no remnants of this text have survived. However, it would almost certainly prove that Schelling’s Naturphilosophie ran parallel to his increasing appreciation of Leibniz’s own philosophy of nature. One can only understand this “philosophical parallel” by contrasting it to Schelling’s earlier dismissive attitudes towards Leibniz.

In addition to the startling letter to Obereit, we have evidence from *On the I*. There, Schelling categorizes him variously as a “consistent dogmatist,” an “empirical idealist,” and a “transcendental realist.” Transcendental realism he defines as a

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570 Schelling to Obereit (12 March 1796), *BuD*, II, 85.

571 Schelling to Niethammer (4 August 1797), *BuD*, I: 108.

572 Schelling to Niethammer (31 March 1798), *BuD*, I: 123.

573 Fritz Meier should be commended as one of the few Schelling scholars to make this connection. *Die Idee der Transzendentalphilosophie*, 57.

574 Readers of Kant will immediately recognize the latter two terms, for they are inversions of the Kantian system. While Kant argued that objects are empirically real and transcendentally ideal, Schelling argues that Leibniz’s system makes them just the opposite: empirically ideal and transcendentally real.
philosophy in which "the not-I is posited as quite independent of the I." Its necessary companion is empirical idealism. I take Schelling to be arguing that the mature Leibniz, insofar as he ascribed all reality, all unity, all being to the monads, was thus a transcendental realist. And insofar as transcendental realism = empirical idealism, he is the latter as well. This is a justified categorization, for Leibniz believed that our experience is made up only of phenomena (though admittedly well-founded phenomena); thus he was most certainly an empirical idealist. What we perceive in the object is explained "as existing only in the sense image of the object." Since this doctrine leads to the familiar contradictions of dogmatism, Schelling dismisses pre-established harmony as only a device by which Leibniz attempts "to save the identity and immutability of things." Curiously, Schelling describes Leibniz in much the same terms as he describes his fellow dogmatist Spinoza: "For Leibniz everything that exists is not-I, even God" and all phenomena are "just so many limitations of the infinite reality of the not-I." This adds some gloss to his comment to Obereit; the fact that Leibniz makes God transcendent is symptomatic of his tendency to make everything transcendent. All this betrays a deferential yet critical attitude towards Leibniz. Schelling praises him insofar as he was consistent in his errors, but nowhere does he advocate a revival of the Leibnizian system.

575 AA, I, 2: 140.
576 Ibid., 141.
577 Ibid., 142.
578 Ibid., 144.
THE IDEAS AND SCHELLING’S REVIVAL OF LEIBNIZ

By the time Schelling writes the introduction to the Ideas, his portrayal of Leibniz is radically different. Schelling’s introduction to the Ideas begins by identifying the task a Philosophy of Nature must undertake, namely “to deduce the possibility of Nature, that is of the all-inclusive world of experience, from first principles.”579 In mankind’s philosophical infancy, such a task was unnecessary, for he “was still at one with himself and the world about him.”580 Philosophy as such began only when this oneness was shattered, leading eventually to the tyranny of “mere speculation,” which, by treating the world as a thing-in-itself, “makes the separation between man and the world permanent.”581 Schelling argues that even the greatest philosophers accepted this division between “spirit and matter” until Spinoza arrived and, “with complete clarity, saw mind and matter as one, thought and extension simply as modifications of the same principle.” However, in doing so, Spinoza made what for Schelling was a mistake: he “conceived the finite immediately in the idea of the infinite.”582 Leibniz did the opposite, and in a stunning conclusion to this line of thought, Schelling claims that “The time has come when [Leibniz’s] philosophy can be re-established.”583

What exactly does Schelling see as Leibniz’s philosophy? For one, he approvingly cites Leibniz’s denial of the ability of external causes to affect the mind,

581 *Ibid.*, 71. In the second edition of the Ideas, Schelling uses the word “reflection” instead of speculation, no doubt because of the positive connotations that Schelling and Hegel had given to “speculation” by 1803. Regardless of the word used, Kant remains the target.
582 *Ibid.*, 76-77.
seeming to agree that “all alterations, all change of perceptions and presentations in a mind, could proceed only from an inner principle.”\textsuperscript{584} And he returns to this point later on in the introduction, again touting the superiority of Leibniz to Spinoza. According to Schelling, what philosophy requires is the derivation of experience (and Nature) from within the mind itself, thus unifying our ideas with things outside us (i.e. making them identical). Spinoza stumbled because, although he indeed united them, he united them in an infinite outside us, thus making man only a thought of God. As such, Spinoza’s system “is the most unintelligible that ever existed.”\textsuperscript{585} Instead of recognizing that the union of the “absolutely active” and the “absolutely passive” exists “within me originally without my cooperation,” Spinoza attributed the unity to “an infinite Substance outside me.”\textsuperscript{586}

Schelling explicitly praises Leibniz for admitting this union of active and passive within us.

\textit{...here is the point where he diverges from Spinoza and connects with him. It is impossible to understand Leibniz without having stationed oneself at this point. Jacobi has shown that his whole system sets out from the concept of individuality and reverts to it. In the concept of individuality alone, there is an original union of what all...}

\textsuperscript{584} Ibid., 77, \textsuperscript{585} Ibid., 90, \textsuperscript{586} Ibid., 91.
other philosophy separates, the positive and the negative,
the active and the passive in our nature.\textsuperscript{587}

The text to which Schelling refers here is Jacobi's On the Doctrine of Spinoza, where he
cites the principium individuationis as the critical "point of difference" between Leibniz
and Spinoza.\textsuperscript{588} However, we must ask: what specifically about Leibniz's concept of
individuality is so attractive to Schelling, and how is it related to the problem of transition
from the infinite to the finite? The answer to this is not clear, although importing an
explanation from his later First Outline may be helpful here. There, Schelling makes it
clear that Naturphilosophie should not sacrifice multiplicity for the sake of unity, and
thus the individual must not be swallowed up in an identity, but preserved and made into
the fundamental building block of Nature. Furthermore, the individual forces of nature
should somehow express Nature's infinite productivity.\textsuperscript{589} The individual is also crucial
because, if it did not limit this infinite productivity, there would be no Nature at all.
Thus, this multiplicity of individuals simultaneously "mirrors the infinite" and negates it,
i.e. makes it into a finite product. Using this framework, we can begin to understand why
Schelling contends that "the finite and infinite are originally united, and this original
union exists nowhere except in the essence of an individual nature."\textsuperscript{590} Schelling's
"individual nature" is thus a virtual equivalent to the monad, which, though only an
"imitation" of God\textsuperscript{591} is yet the product of the "continual fulgurations of the divinity from

\textsuperscript{587} Ibid.

\textsuperscript{588} F.H. Jacobi, Werke, IV,2: 97f.

\textsuperscript{589} See the discussion of the Erster Entwurf later in this paper.

\textsuperscript{590} AA, I, 5: 91.

\textsuperscript{591} G.W. Leibniz, "Monadology" §48, in Philosophical Essays, trans. Roger Ariew and Daniel Garber,
(Indianapolis: Hackett, 1989), 214.
moment to moment.” They are, in some sense, both infinite and finite, and they form the building blocks of Nature.

Although this connection may be tenuous, Schelling’s next appropriation of Leibniz is more straightforward. Philosophy must, especially with an eye to natural science, explain the succession of ideas within us and render them necessary. “That this succession is necessary follows, in Leibniz’s philosophy, from the fact that the things together with the ideas arise by virtue of the mere laws of our nature, according to an inner principle in us, as in a world of its own.” This most likely refers to Monadology §11, which explains that “the monad’s natural changes come from an internal principle, since no external cause can influence it internally.” But then we must explain why “all beings like ourselves” perceive things in the same way.

Leibniz’s answer, of course, is pre-established harmony, but “to explain this agreement of our nature... by a pre-established harmony is not to explain it.” Schelling rejects the version of pre-established harmony handed down by Leibniz’s followers, instead proposing that the logic of Leibniz’s own argumentation leaves us with an immanent pre-established harmony, not one ordained by “a superior hand.” It is “implicit in Leibniz’s system” that the harmony must proceed “from the essence of finite natures,” and therefore Leibniz “could not have associated with the pre-established harmony the

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592 ‘Monadology’ §47.
593 This is, of course, the challenge of David Hume, who doubted the necessity of the connection between our ideas and, in Kant’s opinion, put natural science in jeopardy.
595 Leibniz, “Monadology” §11, 214.
596 AA, I,5: 92.
597 Ibid.
idea that one usually couples with it."\(^{598}\) To prove this Schelling cites the Leibnizian doctrine "that no mind could have come to be; that is, the concepts of cause and effect are altogether inapplicable to mind."\(^{599}\) And though Schelling does not express it in these terms, he has, by reinterpreting harmony as immanent instead of ordained from above, given birth to a new monadology, but a monadology with the head cut off. At this point, the introduction to the Ideas moves on to the concept of the organic, which Schelling never treats in detail until his On the World Soul, but not before denouncing dogmatism in philosophy.

Curiously enough, Leibniz’s name does not appear in this following section on dogmatism. Thus, Schelling’s Ideas has completely recast the “consistent dogmatist” of On the I into a prophet of Schelling’s idealism. Nowhere in the Ideas is Leibniz called a dogmatist. Instead, he is the philosopher who advanced upon Spinoza and united the infinite and the finite within the individual. Not only that, but Schelling’s representation of Leibniz betrays a major shift in his own thinking. In On the I, Schelling adopted Spinoza’s definition of substance and agreed with him that everything is one substance, i.e. the absolute I. "If substance is the same as the unconditional, then the I is the only substance. If there were several substances there would be an I outside the I, which makes no sense....If the I is the only substance, then everything that is, is merely a quality (Accidens) of the I."\(^{600}\) In the Ideas, however, the absolute I seemingly

\(^{598}\) Ibid., 92-93.

\(^{599}\) Ibid., 93. This is obviously a problematic reading of Monadology section 5, wherein Leibniz states that "there is no way a conceivable substance can begin naturally, since it cannot be formed by composition." Leibniz, “Monadology” in Philosophical Essays, 213. Perhaps Schelling is willfully ignoring section 6, which states that monads can begin by creation by God.

\(^{600}\) AA, I, 2: 119.
disappears from Schelling's vocabulary. If we search for any "ultimate principle of reality" in the introduction to the *Ideas*, it is the "individual nature" whose essence unites the active and passive, the infinite and the finite. These "individual natures" are very similar to the perceptual beings of Leibniz's system, the monads, and Schelling has seemingly become a substance pluralist instead of a monist.

Why did Schelling change his opinion in the "Introduction"? The editors of the newest edition of Schelling's works suggest that "It is possible that Schelling, in between the drafting of the two sections, more thoroughly studied Leibniz and revised his judgment of him." Although this may be true, I believe Schelling's newfound attraction to Leibniz has less to do with a fresh reading than with his immersion in the scientific tradition outlined in Chapter 4. The full details of this process will come out in the next section, but we have already seen textual evidence, in both Book I and Book II, that Schelling was beginning to view the entire world—including the inorganic—as containing the seeds of life. It would be difficult to imagine a more attractive forerunner than Leibniz, who declared in §69 of the *Monadology*,

Thus there is nothing fallow, sterile, or dead in the universe, no chaos and no confusion except in appearance, almost as it looks in a pond at a distance, where we might see the confused and, so to speak, teeming motion of the fish in the pond, without discerning the fish themselves.

Let's turn to Schelling's scientific education to understand this shift in his thinking.

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602 *Monadology*, 222.
SCHELLING'S SCIENTIFIC TRAINING IN LEIPZIG

There can be little doubt that Schelling threw himself almost maniacally into an intense study of the natural sciences while in Leipzig. A cursory look at Book I of his Ideas for a Philosophy of Nature, with its detailed discussions of—and proposed solutions to—many of the far-reaching problems in eighteenth century physics, should be proof enough of that. But, as already noted, the Leipzig period is impossible to reconstruct with certainty. This leaves us with a number of unanswered questions about Schelling’s scientific training: which professors were most important in shaping his outlook? Did he follow the normal pattern of medical training in eighteenth century Germany, or did he use his free-roving status—remember, Schelling was not enrolled at the University of Leipzig—to pursue his own interests in whichever order he saw fit? Finally, at what point did he “discover” the concept of organism, which would take on a central position in his mature Naturphilosophie? This last question is extremely important in explaining the transition from the Ideas for a Philosophy of Nature, whose empirical-scientific passages are devoted almost exclusively to physics and chemistry, to On the World-Soul, which advances the concept of organism as the basis for all Naturphilosophie. Using contextual information, it is possible to speculatively—yet reasonably—answer these questions, despite the murkiness of primary sources.603

One near-certainty of Schelling’s scientific training in Leipzig is that it was heavily influenced by Carl Friedrich Hindenburg, a mathematician of the first rank who

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603 During this section, I will rely heavily on Manfred Durner’s article on Schelling’s academic scientific training, “Schellings Begegnung mit den Naturwissenschaften in Leipzig,” Archiv für Geschichte der Philosophie 72 (1990): 220-236. However, Durner almost completely focuses on Schelling’s professors at the University of Leipzig. By taking a somewhat broader view (including the contextual background provided by Chapter 4), I hope to expand on Durner’s contribution to the reconstruction of this period in Schelling’s life.
also took an interest in the “dynamic physics” which every incarnation of Schelling’s *Naturphilosophie* celebrated.\(^{604}\) Schelling became personally acquainted with Hindenburg shortly after his arrival, and his letters display a genuine affection towards the distinguished professor. In April 1796 Schelling told his parents that Hindenburg had “something very boyish in his face, although after further consideration, he is certainly no boy; he is simply an innovator.”\(^{605}\) Only a month later, Schelling would note how much he enjoyed “Professor Hindenburg’s house and the society over which his brilliant wife presides.”\(^{606}\) The young Swabian also had every opportunity to develop a scholarly relationship with this “innovator,” since Hindenburg offered a number of courses during Schelling’s stay in Leipzig. In the Summer semester of 1796, he taught Johann Polykarp Erxleben’s *Anfangsgründe der Naturlehre*, one of the most important physics textbook in late eighteenth century Germany.\(^{607}\) He followed this up with a course based on Jan Henrik Swinden’s *positiones physicae* and a course on theoretical physics.\(^{608}\)

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\(^{604}\) Hindenburg’s importance at the time is obvious: he was the founder of the first mathematical journal in Germany, the *Leipzig Journal of Pure and Applied Mathematics*. (Durner, “Schellings Begegnung,” 224). However, his “combinatorial” mathematical method failed to gain adherents outside of Germany (Dictionary of Scientific Biography, vol. 6 (Detroit: Charles Scribner’s Sons, 2007), 403.

\(^{605}\) Schelling to his parents (29 April 1796), *BuD*, II: 94.

\(^{606}\) Schelling to his parents (27 May 1796), *BuD*, II: 102.

\(^{607}\) Erxleben’s textbook appeared for the first time in 1772, and represented a major achievement in its scope and in its detailed references to other scientific authors. For a brief discussion of the purpose of the textbook, see the introduction to Georg Christoph Lichtenberg, *Vorlesungen der Naturlehre: Lichtenbergsannotiertes Handexemplar der vierten Auflage von Johann Christian Polykarp Erxleben: “Angangsgründe der Naturlehre,”* ed. Wiard Hinrichs, Albert Krayer, Horst Zehe, (Göttingen: Wallstein, 2005), xi-xiv. Book I of Schelling’s *Ideas* corresponds almost exactly to chapters 6-11 of Erxleben’s textbook, a fact I will return to later in this chapter.

\(^{608}\) Although Swinden (1746-1823) studied all aspects of physics, his research was especially important in the areas of electricity and magnetism. He hinted at the connection between the two and even delved into the topic of so-called “animal electricity,” something that would captivate Schelling’s generation in the wake of Luigi Galvani’s famous experiments. (Dictionary of Scientific Biography, vol. 13, 183).
Hindenburg also played a leading role in the *Jablonowskyschen Gesellschaft*, a scientific society founded by a Polish prince. The society solicited answers to prize essays, two of which bear an immediate relation to major issues in Schelling’s *Ideas*. In 1797, the prize essay called for “A comparative presentation of the two systems of natural science, the atomistic and the dynamic; applied towards shedding light on different natural phenomena, with the thereupon derived foundations for and against each of these two points of view.” One would not be taking liberties by reading Book II, Chapter 3 of Schelling’s *Ideas*, in which he compares the mechanical and atomistic physics of LeSage with the dynamical system which Schelling advocates, as a direct response to this prize essay question. As Schelling defined the terms, atomistic physics presupposes individual particles of matter as the building blocks of nature, while his own dynamic system gives primacy to forces, out of which matter itself is constructed. In the *Ideas*, Schelling repeatedly accused atomistic physics of presupposing what it intended to explain, often calling it a “hyperphysical physics” for this exact reason. This should already be evident from a close reading of the *Ideas*, but at this point, one more prize essay topic of the *Jablonowskyschen Gesellschaft* should be mentioned.

The prize essay topic from 1798 is no less relevant to the *Ideas for a Philosophy of Nature*, the closing sections of which deal with the philosophy of chemistry. The prize

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610 Schelling, *Ideas, AA* 197-207. Later, I will discuss this chapter in detail.

611 Hindenburg’s influence can also be seen in Schelling’s references to Abraham Gotthelf Kästner, a mathematician whom Hindenburg befriended and whose words Schelling uses to refute LeSage’s mechanical physics. See *Ideas* 168, 194. On Hindenburg’s friendship with Kästner, see *Dictionary of Scientific Biography*, 6: 403.

612 *Ideas*, 166.
essay question was as follows: "What advantages has the recent application of mathematical knowledge to chemistry given us? And what should be generally expected from the close contact between mathematics and chemistry?" For years, German chemists were forced to grapple with the problematic legacy of Immanuel Kant, who declared that chemistry "can be nothing more than a systematic art or experimental doctrine, but never a proper science, for [its principles] are not receptive to the application of mathematics." One of Kant’s own students, Jeremias Richter—certainly no Naturphilosoph—so desperately wanted to prove Kant wrong that he invented the techniques of stoichiometry. In the Ideas, Schelling refuses to take Kant’s bait and follow the path of Richter. Rather, Schelling rejects Kant’s demand altogether, insisting that chemistry is indeed a science, but a qualitative—not quantitative—science which “teaches us how a free play of dynamic forces may be possible.” Schelling most likely learned about chemistry from other professors in Leipzig, especially Christian Gotthold Eschenbach, who not only lectured on experimental chemistry, but also translated a number of chemical treatises into German. Regardless of the influences, Schelling’s knowledge of chemistry most likely predated the composition of the Ideas: in fact, in the

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616 Ideas, 217.

617 This includes the works of Adair Crawford and Joseph Priestley. See Durner, “Schellings Begegnung,” 228-29.
second installment of the *General Overview*, he obliquely mentions Lavoisier’s innovations in chemistry and his German followers.\textsuperscript{618}

If we can say for certain that Schelling was thoroughly acquainted with physics and chemistry by the end of 1796, his training in the life sciences is a bit more uncertain. In his famous edition of Schelling’s letters, Plitt observed that “if mathematics, physics, and chemistry were his main areas of study during the first year of his stay in Leipzig, in his second it was physiology.”\textsuperscript{619} This is certainly consistent with medical training in the eighteenth century German universities, especially at one of the larger medical faculties like Leipzig. Custom dictated that students learn mathematics and experimental physics before beginning their proper medical training with courses on anatomy and physiology.\textsuperscript{620} This system reflected the prejudices of the eighteenth century—prejudices we have not completely abandoned in the twenty-first—which privileged physics above all other “subordinate” disciplines.\textsuperscript{621} However, Schelling could easily have jumped straight into medical coursework, since he had already learned mathematics and physics from Pfleiderer in Tübingen. Schelling was no ordinary undergraduate, as he already possessed a theological degree and was largely following his own interests whenever he

\textsuperscript{618} “The pride of the new chemistry is its nomenclature. In France, where it arose, an assembly of the greatest chemists came together in order to agree on [its nomenclature]. In Germany, several men, some very celebrated, have sought to do us a great service with their translation [of these terms].” (*AA* I, 4: 70). Schelling is referring not only to the 1787 publication of the *Methode de Nomenclature chimique* by Lavoisier and other French chemists, but to a whole series of attempts to do something similar for Germany in the early 1790s.

\textsuperscript{619} Plitt, I:141. This follows the account of Schelling’s own son, Karl Friedrich August Schelling, whose biography of his father says essentially the same thing. See Durner, “Schellings Begegnung,” 222-223.

\textsuperscript{620} On Leipzig as a “major” medical school, and on the customary order of study, see Thomas Broman, *The Transformation of German Academic Medicine, 1730-1820*, (New York: Cambridge, 1996), 28.

\textsuperscript{621} As we noted in the previous chapter, the foundations of medical practice in the eighteenth century were set by Hermann Boerhaave, who firmly believed that medicine as a discipline was an extension of mechanical physics.
was able to escape from his duties as a tutor. An account of Schelling’s life, found in his estate and dating from 1833, indicates that after Hindenburg, the most important professor in his scientific development was Christian Friedrich Ludwig, who occupied positions in both the medical faculty (where he was *Ordinarius* for Pathology), and in the philosophy department (where he was professor of natural history). Ludwig, who was personally acquainted with some of the most important life scientists of the eighteenth century, including Buffon and Blumenbach, continually taught Blumenbach’s famous *Handbook of Natural History* from the summer of 1796 until the winter semester of 1797-1798, giving Schelling plenty of opportunity to sit in on his course. Schelling most likely supplemented Ludwig’s courses with the lectures of two other professors in the medical faculty: Ernst Platner and Johann Hedwig. But neither of them were as important as Ludwig, at least according to the document from 1833. However, we must ask: is there any reason to believe that Ludwig influenced Schelling prior to the completion of the *Ideas*, which he announced to Niethammer in June of 1797? Schelling certainly mentions Buffon a great deal, and this could be evidence of Ludwig’s influence. But Schelling’s references to Buffon are always in the context of physics,

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622 On the fragment from his *Lebenslauf*, see Durner, “Schellings Begegnung,” 222. On Ludwig’s positions, see 226.


624 Hedwig was a botanist. (Durner, “Schellings Begegnung, 230). He often presented courses in the Leipzig botanical garden, something which any respectable medical school possessed in the second half of the eighteenth century (Broman, *The Transformation of German Academic Medicine 1750-1820*, 30). However, botany would normally be studied after medical students had laid a foundation in anatomy and physiology. Ernst Platner taught physiology and Schelling and his students knew him personally. When Schelling met Platner for the first time in Darmstadt in 1796, he told his parents that he thought very little of Platner’s academic or philosophical ability, but hoped to benefit from his many connections in society. (Schelling to his parents (29 April 1796), *BuD* II: 93-94).

625 “I have—God forgive me the sin—produced a large book.” (Schelling to Niethammer (4 June 1797), *BuD* I: 105).
indicating that he could have gotten this information from Hindenburg. Even more
damning towards the case of Ludwig's influence on the Ideas is the fact that Blumenbach
is never mentioned. Could Schelling have been completely ignorant of the life sciences
when he wrote the Ideas?

Schelling himself contradicts this idea in the preface to On the World-Soul.
There, he warned readers that the World-Soul "is not to be seen as a continuation of my
Ideas. I will not continue [the Ideas] until I am in a position to conclude it with a
scientific physiology, which alone can give it completeness."\footnote{AA, I,6: 70.}
That the Ideas was an
incomplete work is corroborated by a letter to his parents from February of 1797, in
which he indicated that the forthcoming work was only the "first part" of the Ideas.\footnote{Schelling to his parents (4 February 1797), BuD II: 115}
Thus, it seems reasonable to assume that, by February 1797, Schelling was planning to
write about the life sciences, and that he had probably begun his training in those areas of
study. Why, then, did Schelling abandon the project altogether, in favor of a new one
(The World-Soul)? Robert Richards hypothesizes that, at some point during the
composition of the Ideas, Schelling suddenly hit upon a new formulation of his
Naturphilosophie which would make the concept of "organism" its lynchpin. Richards
points to a passage in the General Overview, in which "organism" is suddenly introduced
out of the blue, and argues that this indicates the point at which Schelling broke off work
on the Ideas and turned to the World-Soul instead.\footnote{The passage Richards refers to declares: "Insofar as the soul produces its own representations, insofar as
it is mutually the cause and effect of itself, it therefore intuits itself as an object which is mutually cause
and effect of itself, or, what amounts to the same thing, as a self-organizing Nature....Because there is an
infinite striving in the human spirit towards self-organization, a general tendency towards organization
must also manifest itself in the external world." (AA, I,4: 113).} However, Richards makes a simple
historical error that effectively torpedoes his entire explanation, for this passage was actually completed after the Ideas had already been published.$^629$

Perhaps, then, we must resort to an explanation based on Schelling's own personality. The General Overview is a notoriously eclectic work, and it might be tempting to say that Schelling's sudden change of mindset between the Ideas and On the World-Soul was simply the result of his notoriously protean intellect. But this type of explanation seems almost insulting to such a brilliant thinker. Instead of taking this last resort, I will cut the Gordian knot and suggest that Schelling's sudden interest in organism was not rooted in his scientific education at all, but rather appeared as a result of his dramatic reappraisal of one of the first philosophers to formulate a definition of "organism": none other than Gottfried Wilhelm Leibniz.$^630$ Let us construct a final, yet speculative account of Schelling's scientific study in Leipzig, which incorporates the changes between the Ideas and On the World-Soul.

In our speculative reconstruction, Schelling arrives in Leipzig in March of 1796. He had already hinted at his desire to turn towards empirical research, both in the Oldest System-program and in the Philosophical Letters. In Leipzig, this path becomes even

$^629$ It is often difficult to make heads or tails of the organization of the General Overview, and thus Richards' mistake is understandable. The Historisch-kritische Ausgabe does the scholar no favors, as it gives us no explicit breaks between the individual installments (Hefte) of the book, instead simply identifying the different volumes (Bände) at the top of each page. Richards says that the passage above comes from the third installment of the General Overview, which we know Schelling sent to Niethammer in April of 1797. If this were true, Richards' hypothesis would be excellent: Schelling had probably completed the bulk of the Ideas by the end of April, and it is easy to picture him tying up the loose ends and moving onto his next project, which would give primacy of place to the concept of organism. However, the passage Richards cites is actually from the fifth installment, which Schelling did not send to Niethammer until August 26. The passage was thus probably composed long after the Ideas had gone to press. That I am correct about the dating of these passages can be seen not only from the section on the "Entstehungsgeschichte des Textes" in the Historisch-kritische Ausgabe (I, 4: 26-29) but also by a cursory look at Motokiyo Fukaya's detailed examination of the General Overview (Anschauung des Absoluten in Schellings früher Philosophie (1794-1800), 59-103, especially footnote 129 on page 60).

$^630$ For a recent and detailed account of Leibniz's contributions in this area, see François Duchesneau, "Leibniz's model for analyzing organic phenomena," Perspectives on Science 11 (2003).
more attractive when he meets Hindenburg, to whom he is immediately drawn. Schelling takes his course on Erxleben’s *Anfangsgründe* in the Summer of 1796, and is introduced to the conflict between atomistic and dynamic physics, particularly with reference to the system of George-Louis LeSage. In late 1796, Schelling takes on the project which will become the *General Overview*, the second installment of which (finished in February 1797) mentions Lavoisier, indicating that Schelling might have already heard Eschenbach’s lectures on chemistry. Schelling began work on the *Ideas* in early 1797, but his letter to his parents from February indicates that it will be a two-part work: thus, he was already planning to write a section on the “scientific physiology” he mentions in the preface to the *World-Soul*. Therefore, it is likely that he had already begun taking courses with the medical faculty, most likely Ludwig’s course on Blumenbach, whom Schelling does not mention in the *Ideas* simply because he had no reason to do so until the never-completed part two. During this time, Schelling continues to develop his own philosophy in the *General Overview*, and in reviewing the history of German philosophy, develops a newfound appreciation for the philosophy of Leibniz. This fact is registered immediately in the introduction to the *Ideas*—which was composed after Books I and II were completed—and in later installments of the *General Overview*. By now, Schelling has become extremely interested in the organic and, as Karl Schelling and Gustav Plitt tell us, devotes the bulk of his scientific study to physiology, delving deeper into medical coursework. Thus, he scraps the second part of the *Ideas* and writes *On the World-Soul*, which stands as a testament to his increasing familiarity with the life sciences.
Chapter 6: From Leipzig to Jena

INTO JENA’S ORBIT

This chapter will examine Schelling’s Naturphilosophie in the years 1798-1799, both of which have a special relationship to the University of Jena. Although the Ideas for a Philosophy of Nature was a remarkable achievement, it was his next book, On the World Soul, which earned him the esteem of Goethe and allowed him to obtain a full professorship there. The First Outline, written as a companion piece to Schelling’s Jena lectures, and accompanied shortly thereafter by an Introduction to the Outline, is the first full systematic presentation of his Naturphilosophie. However, the Introduction to the Outline was the first text on Naturphilosophie composed in Jena. Thus, I will argue for the most part that Schelling arrived at his systematic Naturphilosophie while still in Leipzig!

There are significant differences of opinion regarding the periodization of Schelling’s three large monographs on Naturphilosophie. By all accounts, a large gulf separates the highly inductive Ideas of 1797 from the highly deductive First Outline of 1799. The former started with empirical science and worked its way up to tentative conclusions, while the latter begins with a statement of methodology and immediately explains the first principles of nature. There is far less consensus regarding On the World Soul, written in 1797 and published in 1798, while Schelling was still tutoring the Riedesels in Leipzig. Some scholars, because of its chronological proximity to the Ideas,
and because of its abundance of empirical content, classify *On the World Soul* as inductive.\(^{631}\) Others see elements of Schelling’s mature system appearing in it, and classify it alongside the *First Outline*.

Although I have already argued that even the *Ideas* began to lay the groundwork for the mature *Naturphilosophie*, I side with the latter group of scholars. *On the World Soul* differs significantly from the *Ideas*: Schelling finally fleshes out the cursory sketches of organism he had offered in the *General Overview* and the Introduction to the *Ideas*. And in doing so, he finally brought himself into the intellectual orbit of Jena, where German Romanticism was about to bloom. *On the World Soul* reveals an affinity between Schelling, Goethe, and the emerging Jena Circle, all of whom shared a passion for the idea of a living, organic nature. This is not to say, however, that the origins of Schelling’s *Naturphilosophie* lie in Romanticism itself.\(^{632}\) Tempting though this hypothesis may be, and as important as the Romantics may have been for the advancement of Schelling’s ideas about aesthetics, most of the architectonic of Schelling’s philosophy of nature was already in place before he ever met the Schlegels or

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\(^{631}\) Wilhelm Metzger’s *Die Epochen des Schellingschen Philosophie* groups *The World Soul* alongside the *General Overview* and the *Ideas* in Schelling’s “second period.” He hardly discusses it at all, focusing on Schelling’s unification of mechanism and organism and the “Aether” which Schelling identifies as the World Soul. “Schelling does not really use this aether—or, metaphorically, this “World Soul”—as a deductive starting point in 1798. He rather leads himself to it moreso inductively.” (74). However, Metzger says that the “World Soul” concept” embodies the “cosmic vitalism” that characterizes Schelling’s next period. (75). Kurt Schilling claims that “In the development of Schellings concepts of nature and truth, [The World Soul’s] importance lies more in the program expressed in its title than in its actual execution. This program would first be realized in Schelling’s next book, the *First Outline*.” (98)

\(^{632}\) I am unwilling to go as far as Manfred Frank, who claims that Schelling was not a Romantic at all! Frank, in his attempt to highlight the philosophical contributions of early Romanticism, sharply distinguishes between the more cautious approaches of Hölderlin, Novalis, and Friedrich Schlegel on the one hand, and “speculative idealism” on the other. Schelling, Frank says, was really a “wayward son of the Romantic generation,” and despite sharing some of the “realism” of Novalis and Schlegel, “nevertheless remained tied to Grundsatzphilosophie and its deductive program.” See Frank, *Unendliche Annäherung*, 662. Frank thus differs with Beiser, who argues that the philosophy of Romanticism is inseparable from “absolute idealism.”
Novalis. This dissertation focuses on the *genesis* of his *Naturphilosophie* and thus places surprisingly little emphasis on the other Romantics.\(^{633}\) Goethe—whose scientific works were well known by the time Schelling reached intellectual maturity—is the exception, although once again, even he played no direct role in Schelling’s thought until 1798. The twin engines behind Schelling’s *Naturphilosophie* were still his encounter with the natural sciences and his desire to expand the scope of Idealism beyond the subject-centered limitations of Kant and Fichte. Unfortunately, Schelling was still a tutor in 1797, and he could not complete his project while simultaneously preparing the Riedesels for their law exams.

**THE AMBITIOUS HOFMEISTER**

With the publication of Schelling’s *Ideas* in mid-1797, he began a new phase in his career. His philosophical progress hampered by his duties as a tutor, Schelling—despite his deep reservations about the constraints of a professorial position—decided to pursue an academic career.\(^{634}\) Two major options presented themselves at this time, and they could not have been more different. First, Schelling’s friends began an attempt to install him as a professor in Jena. Niethammer was the prime mover in this process, but the formal recommendation was made by H.E.G. Paulus, who had helped Schelling publish

\(^{633}\) Of course, another reason to eschew a detailed discussion of Schelling’s relationship with the Jena circle is that Robert Richards’ *The Romantic Conception of Life* sketches out Schelling’s personal and biographical relationship with the other Romantics that there is little else to add.

\(^{634}\) One need only recall Schelling’s comments about school philosophers in the *General Overview* to see his ambivalence.
his dissertation in 1793.\textsuperscript{635} In a letter to Voigt, Paulus recommended Schelling, emphasizing the "liveliness" of his writing, as well as the fact that he was "not simply a speculative philosopher." He cites the Ideas, which "united physics and metaphysics" as evidence of Schelling's versatility.\textsuperscript{636} Given Schelling's reputation as a disciple of Fichte, who was still chair of philosophy in Jena, this plan was by no means unrealistic, and Schelling himself fully expected to receive a professorship.\textsuperscript{637} However, Joseph Schelling devised his own scheme to place Schelling on the long road to a professorship at—of all places—Tübingen. The younger Schelling initially shrugged off his father's idea, as he was revolted by the idea of becoming a "repentant" again. But despite his hatred for the professoriate in Tübingen, Schelling warmed up to a new and bolder plan. Bök's chair in moral philosophy at the Stift would be open at the end of the 1797-98 winter semester. If Schelling could get a job in Jena—as an associate professor—he could then quickly jump to Tübingen, which he could tolerate as a full professor, the following semester. In the end, the whole scheme would collapse, not because Jena was unwilling to take Schelling in, but because of his own staggering ambition.

Ultimately, Schelling remained a tutor because he demanded something almost unheard of at the time: a free pass through the normal channels of advancement in the German university. Unlike his friend Niethammer, he refused to begin as a Privatdozent and work his way up to the rank of professor. But the situation in Jena was not

\textsuperscript{635} During Schelling's later career, Paulus would transform into his arch-enemy, lambasting him for his mystical tendencies. For a summary of their intellectual feud, see Manfred Frank's introduction to F.W.J. Schelling, Philosophie der Offenbarung 1841/1842, ed. Frank (Frankfurt a.M.: Suhrkamp, 1993).

\textsuperscript{636} Paulus to Voigt (30 October 1797), BuD I: 112.

\textsuperscript{637} "It is highly probable that before Easter I will receive an appointment as professor of philosophy in Jena." (Schelling to his parents (November 1797), BuD, II: 126.)
completely hopeless, as there was one man who could help the young philosopher leapfrog past the thankless life of a private lecturer: that man was none other than the king of German letters, Johann Wolfgang von Goethe. His job as first minister of state in Sachsen-Weimar granted him immense power over the University of Jena. Almost ten years earlier, Goethe had installed another young, radical Württemberger, Friedrich Schiller, as a professor of history in Jena. Schiller and Goethe would become friends five years later and form the powerful alliance that produced the cultural movement of "Weimar classicism." They were not always of the same mind: Schiller was far more philosophically inclined than Goethe and an avid reader of Kant. Goethe, whom Schiller envied for his almost effortless poetic talents, preferred to study not the subjective mind, but objective nature. As such, Goethe revered the "holy Spinoza" and read Kant only with great difficulty. And although Goethe was responsible for Fichte’s hiring, Fichte’s thought repelled him in a number of ways. Not only was Fichte a poor writer, but his system was an abstract subjective philosophy which deprivileged nature. Goethe and Schiller both enjoyed poking fun at Fichte’s ideas.

Imagine, then, Goethe’s reaction when Schiller took up the cause of a young Swabian author named Friedrich Schelling. To date, Schelling had penned only a series of Fichtean works, with the exception of the Ideas, a work which barely discussed Goethe’s favorite topic: the life sciences. Goethe’s reaction was tepid, and he read the Ideas exactly as Rudolf Haym did almost 75 years later: he saw (correctly) that Schelling

638 Robert Richards gives an excellent account of the conversation which began the Goethe-Schiller friendship in The Romantic Conception of Life, 421-427.

took the original activities of the I and projected them onto nature.\textsuperscript{640} In a letter to Schiller, Goethe begins by agreeing with Schelling on one point: “It is not nature that we know, rather it is that which is taken up by certain forms and abilities of our spirit.”\textsuperscript{641} But Goethe complains that transcendental Idealism does not give an adequate place to the purposiveness of nature, instead attempting to explain it away. No matter how much the idealists try to get rid of the thing-in-itself, they still have to recognize the existence of a nature outside the human mind. Thus, Goethe’s criticism of the Ideas is, quite appropriately, very similar to his criticism of Fichte. In addition to Goethe’s cool reception of Schelling’s early works, there was another reason he was reluctant to invite him to the university. Fichte’s political radicalism, as well as the suspicions of atheism which would finally explode in 1799, never endeared him to the politically conservative Goethe. Schelling, too, had acquired a reputation as a radical, and Goethe was afraid to add another subversive professor to the faculty. Thus, for both philosophical and political reasons, Goethe rebuffed Schiller’s requests to hire Schelling.

With Jena out of the question, the possibility of a full professorship at Tübingen was also eliminated. Of course, Schelling could become a \textit{Privatdozent} in Jena, where he desperately wanted to live. But this idea repulsed him, and he wrote to Niethammer, “At this point, becoming a \textit{Privatdozent} in Jena would just be pissing on the philosophical wall, to use the noble expression.”\textsuperscript{642} Schelling was thus stuck as a \textit{Hofmeister}, but his fortunes would soon shift dramatically. For by the time he was rejected for the position


\textsuperscript{641} \textit{WA}, IV, 13: 10. Of course, this could be equally applied to Kant, who asserted that the forms of intuition and the categories organize our knowledge of nature.

\textsuperscript{642} Schelling to Niethammer (24 March 1798), \textit{BuD} I: 121.
in Jena, he had already written yet another book on Naturphilosophie. In this new work, *On the World Soul – A hypothesis of higher Physics for the Clarification of the Universal Organism*, Schelling finally delved into what he had ignored in the Ideas: physiology and organic nature. This shift in focus would endear him to Goethe and jumpstart his academic career.

**THE GENESIS OF ON THE WORLD SOUL**

Unfortunately, the composition of *On the World Soul* is almost as mysterious as the composition of the Ideas. In September of 1797, he announced to Niethammer that he was abandoning his work on the *Philosophical Parallels*—his treatise on Leibniz—and focusing on *The World Soul* instead. In preparation, he threw himself into an exhaustive study of physiology, the subject supposed to be examined in the non-existent third book of the Ideas. However, his work on the new project coincided with a severe illness. His tutoring duties already made it difficult to write, so when he fell ill for two weeks in October of 1797, Schelling was dejected. In a letter to Niethammer, he complained that his physician had forbid him from thinking and philosophizing, going so far as to take his books away! Nevertheless, he felt refreshed after his recovery, and his work became more focused: he resolved to concentrate solely on the *World Soul* and abandon his other “completely heterogeneous projects.” Staying true to his word, he

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643 Schelling to Niethammer (30 October 1797), *BuD* I: 113.

644 Schelling to his Parents (4 September 1797), *BuD* II: 122. Schelling asks for several treatises by Plouquet, one by Gmelin on irritability, and another on electricity in organic bodies. “I wish to have these works, because I am working on a theory of animal life. And if you have anything else, include it!”

645 Schelling to Niethammer (30 October 1797), *BuD* I: 113

646 Schelling to Niethammer (15 Nov 1797), *BuD* I: 114-115
continued to study physiology, and repeatedly asked his parents to send him treatises on irritability. By winter, other German intellectuals knew that Schelling was working on something new. Some, like Novalis, believed that he was composing a second installment of the *Ideas*: “I met Schelling. I freely explained my misgivings about his *Ideas* to him, and he was in agreement; he believes that in the second part, he has ascended to a higher level.” Others recognized it as an independent work and even knew of the title: Jacobi wrote to Franz Baader in January of 1798, saying that the new book, *On the World Soul*, would be published at Easter. Nevertheless, Schelling widened his scientific horizons even during the composition of the new book, and no one was more instrumental in this than Christoph Heinrich Pfaff.

In Chapter 5, we saw that Schelling’s second year of scientific study at Leipzig dealt largely with physiology and medicine, and this no doubt provided him with much inspiration and material. Another motivating force was his encounter with Pfaff. Pfaff, though Danish, was a student of Kielmeyer’s at the Stuttgart *Karlsschule*, and wrote a dissertation, later expanded and published, on “animal electricity.” Pfaff’s book emphatically rejected the idea that animal electricity is mechanical, and was also a primer in the history of eighteenth century science. Pfaff chronicled the advances in the eighteenth century life sciences, especially since Haller, whom Pfaff called the founder of

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647 Novalis to Friedrich Schlegel (26 December 1797), *Novalis Werke*, IV, (Stuttgart:


truly scientific physiology. His book quickly made him a respected member of the German scientific community. His galvanic experiments—which he repeated for Schelling in Leipzig in early 1798—were recognized as first rate by some of Germany’s most important scientists. Pfaff was no Naturphilosoph, and heavily favored an inductive scientific method, but Schelling was deeply influenced by their meeting. He wrote almost longingly to Pfaff:

Since you have left, most beloved friend, I find myself completely lonely...The galvanic experiments you showed me have caused me many sleepless nights. The force which I witnessed there continues to amaze me, the more I think about it...I hope that our newly begun friendship [continues and that] we never become distant.

In addition to familiarizing Schelling with Galvani’s discoveries, Pfaff most likely acquainted him with the theories of Kielmeyer. In On Animal Electricity, Pfaff’s Lebenskräfte, which he claims are possibly different “manifestations of a single

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650 That electricity is not mechanical “hardly needs an intricate proof.” (303) On Haller, see 236.

651 Pfaff won the admiration of luminaries like Lichtenberg, Sömmering, Gren, and Gmelin. (Kragh, “Volta’s Apostle,” 70.)

652 Pfaff’s preference for induction is clear in his Über tierische Electricität. “Laws only attain importance, consistency, and reliability when based on an induction from a large and diverse series of experiments and their concomitant appearances” (214).

653 Schelling to Pfaff (6 March 1798), BuD, I: 119-121.

654 Hans-Uwe Lammel argues that Pfaff “advanced Kielmeyer’s project in an expanded form” by incorporating Galvani’s discoveries into his system. “Kielmeyer und die frühromantische Bewegung” in Kai Torsten Kanz, ed., Philosophie der organischen in der Goethezeit: Studien zu Werk und Wirkung des Naturforschers Carl Friedrich Kielmeyer (1765-1844) (Stuttgart: Franz Steiner, 1994), 211-231. Quotation from 220. Manfred Durner (“Naturphilosophie im 18. Jahrhundert”) argues that Schelling personally knew Kielmeyer in 1791 or 92, but Thomas Bach disagrees, claiming that Pfaff was the real intermediary between the two (Biologie und Philosophie, 235).
Lebenskraft,” are identical to Kielmeyer’s: irritability, sensation, reproduction, secretion, and “fluid movement” or Saftbetwegung, clearly a variation of Kielmeyer’s Propulsionskraft. Despite Pfaff’s cautious empiricism, he shared with Schelling one of the fundamental beliefs of Naturphilosophie—that the diverse phenomena of the physical world can be traced back to a common source. Pfaff—along with Schelling’s physiology professors in Leipzig—provided a human link to the wider scientific community which supplemented the results of Schelling’s textual research.

ON THE WORLD SOUL – THE UNIVERSAL ORGANISM

In the opening chapters of this dissertation, I discussed one of the fundamental features of post-Kantian Idealism: the relentless drive to overcome philosophical division by revealing the unifying roots behind different aspects of the mind. Kant separated intellect and sensibility but cryptically left open the possibility that they spring from an unknowable “common trunk.” Fichte, Hölderlin, and Schelling each tried to bridge this gap in different ways. But it was only Schelling who attempted to carry over this “unification project” into nature, and the World Soul is an excellent example of this tendency. In the Ideas, Schelling had already hinted at the concept of a universal, organically linked, living nature. He marveled, like Herder, at the balance of forces which, through eternal conflict, create and preserve life. But Schelling scattered those ideas around in the empirical sections, and only briefly followed up on them in the Introduction. Moreover, in Book II, Schelling “constructed” the physical world philosophically from attraction and repulsion. But, like Kant, he refrained from digging

655 Pfaff, Über tierische Electricität, 235.
deeper, and attraction and repulsion remained separated as independent forces. In the World Soul, he is bolder: Schelling searches for—and claims to find—a common principle at the root of attraction and repulsion, and thus at the root of the entire phenomenal world. Thus, while many of the empirical insights of the Ideas are recapitulated in the World Soul, his theoretical standpoint changed significantly, moving him towards a monism which traced all natural phenomena back to a single first principle.

In the World Soul, Schelling largely abandons the Kantian focus on attraction and repulsion. Now, he now seeks to overcome another division: that between mechanism and organism. This is the unmistakable main point of the World Soul. Schelling announces immediately that his purpose is nothing less than a search for “a common principle that fluctuates between inorganic and organic nature,” which at the same time is “the first cause of all changes in the former and all activity in the latter.” This organizing first principle is what the ancients referred to as the “World Soul” and which Schelling now seeks to revive. This “World Soul” is the tendency of nature to organize itself, which manifests itself in all of its individual products. Finding this first principle enables the natural scientist to ascend to a new standpoint, one which allows him to see nature as a unified whole, a nature in which the difference between mechanism and organism vanishes. Crucially, it is vital materialism which cuts the Gordian knot: Schelling dismisses “the old delusion that organization and life are unexplainable from

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656 Kurt Schilling stresses not only the centrality of this argument but its necessity for the unity-obsessed Schelling. “Inorganic processes had to be given an organic form...it naturally would be meaningless, if two principally different types of natural processes stood next to one another.” (Natur und Wahrheit, 104).

657 AA, I, 6: 67.
natural principles.” He argues that organic nature can be explained by physical laws, and that he will demonstrate how all organic beings follow a Stufenfolge in their development upwards from “one and the same original organization.” Stripped of its metaphysical language, this statement in no way differs from Herder’s theory of abiogenesis. Schelling is simply asserting that life springs from the same organizing processes which manifest themselves in stars, planets, and even in our own atmosphere.

To be sure, Schelling does not simply contend that there is no difference between life and non-life. He makes the more curious claim that there is no difference between mechanism and organism, something without nearly as much historical precedent. The solution which appears in the World-Soul will recur in his later works on Naturphilosophie and is elegant, although hard to grasp at first. First of all, Schelling states that mechanism is simply the “negative” of organism, just like “darkness [is the negative] of light, coldness [the negative] of warmth.” Put differently: mechanism can be simply described as the absence of organism. His proof of this is that a purely mechanical universe is impossible: it would “destroy itself” by dispersing everything out

658 AA, I, 6: 68.
659 AA, I, 6: 68.
660 Schelling’s method differs slightly from Herder’s. In Herder’s own Ideas, he sought to explain the transition from inorganic to organic by locating the point at which life sprang from non-life. In modern terms, Herder is more interest in the emergence of life at a particular point in history. Schelling makes a bolder move, declaring that there really is no difference between the two. As we will see from my exposition of the World Soul, Schelling continuously insists that the organic is always “presupposed” by Nature, even in its supposedly “dead” manifestations.
661 AA, I, 6: 69
662 This is how Tilliette puts it (Schelling, I: 149).
into infinity. Since mechanical forces, which operate in straight lines, are infinite, they must be countered and conditioned (bedingt) by an equally infinite, universal organism, which makes causality not linear but circular. Organism is “the broken stream (aufgehaltene Strom) of [mechanical] causes and effects. Only where Nature has not limited (gehemmt) this stream does it travel outwards in straight lines.” Schelling’s argument here echoes Book II of the Ideas, but there is a crucial difference. In the Ideas, he closely followed Kant’s Metaphysical Foundations of Natural Science, asserting simply that repulsive forces must be countered by attractive forces. In the World Soul, he follows a different path.

It is striking how quickly Schelling deviates from Book II of the Ideas; he devotes the first half of the World Soul to an exploration of “The first force of nature.” Repulsion, the “positive power” of all movement, is counteracted by a “negative power” which “leads movement back to its source.” This all sounds familiar, but Schelling’s new system now identifies the former with light. Light is “the positive cause of all movement” and is responsible for the filling up of space. It is the “Proteus of Nature,” which “in every system streams out from the center to the periphery.” It moves “with such power and speed” that some even doubt its materiality. In other words, the World

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663 Recall that both Kant, in his Metaphysical Foundations of Natural Science, and Schelling, in the Ideas, believed that an unchecked repulsive force would result in nothingness.

664 AA, I, 6: 69. The “universal organism” has now taken on the role of gravitational force in the Ideas, which counteracted matter’s basic repulsivity.

665 Ibid.

666 AA, I, 6: 77. Schelling also makes the stronger epistemological claim that attraction actually gives us “experiences of the world” (Erscheinungen in der Welt).

667 AA, I, 6: 90.

668 AA, I, 6: 78.
Soul attributes all the properties of Kant’s “repulsive force” to light. But Schelling deviates radically from the “construction of matter” found in the Ideas. In fact, he barely mentions the opposite component—attraction—at all.\textsuperscript{669} Schelling now insists that the “original duplicity” of nature can only be understood as originating within the first principle itself. Therefore, repulsion and attraction are not separate forces, each with their own independent existence. Newton was only partially right in assuming that attraction is “the negative principle of all movement in the world (Prinzip der allgemeinen Weltbewegung).”\textsuperscript{670} He erred in giving it a separate, positive existence outside of the repulsive force.\textsuperscript{671} Thus, the first half of the World Soul deals not with the interaction between repulsive force (light) and attraction, but rather the duplicity within light itself, out of which the entire phenomenal world unfolds.

Therefore, the bulk of Book I of the World Soul is a lengthy treatment of many of the same topics covered in the Ideas: light, combustion, the atmosphere, electricity, and magnetism.\textsuperscript{672} But now, he attempts to connect them back to the original duality present in light. Schelling seems less empirically grounded than he was in the Ideas, and given some of the theories he defends, this is probably for the worse. Light itself, he contends, can be divided into positive (the aether) and negative (oxygen!) tendencies. Oxygen

\textsuperscript{669} In my discussion of the General Overview, I showed how Schelling, in subsequent editions of his works, often tried to reinterpret his own writings. The 1806 and 1809 editions of the World Soul were accompanied by “a treatise on the relationship between the real and ideal in nature, or the development of the first principles of Naturphilosophie to the principles of gravity and light” (AA, I, 6: 65-66). The juxtaposition is interesting because gravity plays almost no role in the World Soul.

\textsuperscript{670} AA, I, 6: 91

\textsuperscript{671} AA, I, 6: 92. If Newton erred in this regard, then so did Kant, and so did the Schelling of the Ideas!

\textsuperscript{672} Summarizing the World Soul is a challenge. Despite its more systematic orientation than the Ideas, Tilliette notes that the World Soul, especially its first half, is largely a “string of dissertations” (Schelling, I: 151).
itself, though it is the negative side of light, itself has a negative side (phlogiston). That Schelling still makes use of phlogiston in his system, despite the fact that the German chemical community had overwhelmingly converted to Lavoisier’s views in the early 1790s, is puzzling.\footnote{Lavoisier’s theory of combustion initially encountered an enormous amount of resistance on the part of German chemists. Karl Hufbauer, following the methodology of Thomas Kuhn, argues that it was only the intervention of outsiders, unassociated with the German chemical community, that enabled a “paradigm shift” in Germany itself by 1795. See Hufbauer’s narrative in the final chapters of The Formation of the German Chemical Community 1720-1795 (Berkeley: University of California Press, 1982).} But it points to one of Schelling’s tendencies: the perpetual desire to reconcile opposing viewpoints in natural science, at all cost. At various points he attempts to reconcile Newton and Euler on light, Franklin and Symmer on electricity, and Stahl and Lavoisier on combustion.\footnote{Rudolf Haym notices this tendency as well, but actually tries to connect it to the Fichtean method of reconciling opposites (Die romantische Schule, 653). Haym actually argues that the methodology of the Ideas and the World Soul is the same. Although he does not directly address Haym, Michael Rudolphi seems to answer this charge, and I agree with his assessment: “The World Soul investigates nature differently than the Ideas.” Both are concerned with unifying opposites, but “While the Ideas locates the [unifying] principle in the knowing subject, the World Soul locates it in Nature itself” (Rudolphi, Produktion und Konstruktion: zur Genese der Naturphilosophie in Schellings Frühwerk (Stuttgart: Bad-Cannstatt: Frommann-Holzboog, 2001), 110.} The weaknesses of these chapters are obvious, but, as always, we must be careful not to dismiss the larger project of Schellingian Naturphilosophie because of its isolated aspects.

Although Schelling revisits familiar material in the first part of the World Soul, one new feature is his growing obsession with polarity, or as he sometimes calls it, “duplicity” in nature. To be sure, polarity appeared in the Ideas, but here it ascends to the status of a guiding principle.\footnote{Although Tilliette declares that the World Soul is not a systematic treatise, this coherent methodological principle sets it apart from the Ideas. “Schelling has in his hands a [methodological] conducting wire, the duality of principles and of forces: this internal antithesis, source of all life, conditions all organization” (Schelling, I: 151)} He flatly states at one point that “It is the first principle of a philosophical doctrine of nature (Naturlehre) to begin with polarity and duality in the

\textit{...}
whole of nature.” The earth itself is a product of eternal conflict, the struggle between positive forces and their corresponding limitations.

All variety in the world first arises within the various limits, within which the positive [force] acts....Wherever a natural force finds opposition, it forms for itself its own sphere [of activity]... The positive force first awakes the negative....Everything which belongs to the Earth has a common property, [a property] which is opposed to the positive principle streaming towards us from the Sun. The seeds of all universal world-organization lie in this original antithesis.677

This is but one example of Schelling’s emphasis on polarity. He repeats it again and again throughout the work, making it clear that conflict is the norm in nature. The absence of conflict is rest, and “absolute rest in the world is a non-thing (Unding). All rest in the world is only apparent (scheinbar).”678 We also see how Schelling has unified the principles which stood independently of one another in the Ideas. Nature is not composed of divided principles; rather, Nature is the self-division of a first principle. Here, we see traces of Schelling’s Identitätsphilosophie. But, as he reminds the reader at the outset, this approach specifically emphasizes the multiplicity of nature. “I hate nothing more than that spiritually empty attempt (geistlose Bestreben) to extinguish the

676 AA, I, 6: 151.
677 AA, I, 6: 90-91.
678 AA, I, 6: 79. Elsewhere he describes Nature as “hating equilibrium” (I: 6, 204)
multiplicity of natural causes through imagined identities. In the *World Soul*, nature is full of variety and life, not a "night in which all cows are black."

If the empirical content of the first sections of the *World Soul* leaves something to be desired, the second half of the work, "On the origin of the universal organism," touches on all the most important issues discussed in Chapter 4, and, although speculative, is explicitly grounded by the latest developments in the life sciences. As such, it is much easier to summarize, although the interpreter must still sift through a barrage of empirical digressions. The most remarkable section—which points directly back to the main argument of the *World Soul*, and can thus be used as a starting point for the second half of the work—contains Schelling's remarks on the *Bildungstrieb*. He introduces the subject by stating that *Naturphilosophie* needs a way to reconcile the "unfreedom" of mechanical causality with the "freedom" so apparent in organisms.

"For this unification of freedom and lawfulness we have no other concept than the concept of a drive (*Trieb*)." Insofar as Schelling recognizes a *Bildungstrieb* "operative in organic material...which [causes it] to take on, preserve, and restore a specific form," he agrees with Blumenbach. However, Schelling denies that the *Bildungstrieb* is the "explanatory principle (*Erklärungsgrund*)" of organism. The *Bildungstrieb* explains how organic material operates, but it does not explain how organic material originated in the first place. Indeed, were one to assume that the *Bildungstrieb* explains organic material,

679 AA, I, 6: 67.

680 AA, I, 6: 216. This also relates to Kant's solution to the Third Antinomy

681 Ibid.

682 Ibid.
it would be a "barrier to rational inquiry (ein Schlagbaum für die forschende Vernunft), or
the outer layer (das Polster) of an occult quality" which serves only to frustrate reason.\textsuperscript{683}

Schelling argues that there must be a higher drive operative in nature, a drive
towards organization in general, which enables the Bildungstrieb to do its work:

This concept [of the Bildungstrieb] presupposes organic
material, for that drive can and should only be operative in
organic material. This principle cannot, therefore, be a
cause of organization; \textit{it would be better to say that this}
concept of the Bildungstrieb presupposes a higher cause of
organization. Insofar as one deploys this concept, one also
postulates this higher cause, because this drive is
unthinkable without [this higher cause] and without organic
material.\textsuperscript{684}

This is simply another way of saying what Schelling said at the outset of the \textit{World Soul:}
that organism is implicit in the structure of the world as a whole. There is a natural drive
towards organization, even in the inorganic world, and assuming a barrier between the
two—as Kant and Blumenbach did—serves only to hinder scientific and philosophical
inquiry. For Kant and Blumenbach, the Bildungstrieb was the end of inquiry. For
Schelling, it is "a reminder to the natural researcher that a first cause of organization...is
to be found beyond it."\textsuperscript{685} And in a footnote, he offers a remarkable and direct refutation
of Kant: "By the way, regarding [Kant's] assurance that it is impossible to go beyond the

\textsuperscript{683} \textit{Ibid.}
\textsuperscript{684} \textit{Ibid.}
\textsuperscript{685} \textit{AA, I, 6: 217.}
Bildungstrieb, we can at best answer, that we have gone beyond it.\textsuperscript{686} In other words, the late eighteenth century life sciences—i.e. their concrete discoveries—blatantly refute Kant’s philosophical arguments. In this case, it is Kant, not Schelling, who prefers \textit{a priori} philosophy to sober empirical science! Indeed, the rapid disciplinization of the German biological community invalidates Kant’s argument that biology cannot be a science.

In other parts of the \textit{World Soul}, Schelling shows how the original organizing principle—a principle \textit{higher} than Blumenbach’s Bildungstrieb—manifests itself on the individual level in thousands of different ways. Like Leibniz, Herder, and Goethe, Schelling emphasizes unity in multiplicity. As such, like Buffon, Maupertuis, and Diderot, he demolishes the barriers between plant and animal, animal and man. After all, if all the individual products of nature are simply different manifestations of an original unity, there can be no firm boundary lines. Schelling only devotes a few pages to plants, showing how Nature uses them to create a “circle of life.”\textsuperscript{687} Plants consume carbon dioxide and produce oxygen, while animals consume the latter, and produce the former. As always, Schelling finds polarity lurking around every corner: plants, he says, are the “negative” of the “life-process,” and are not actually alive (!). Plants have only “the appearance of life” in their role as negative of the life process.\textsuperscript{688} Later in the text, he

\textsuperscript{686} AA, I, 6: 218. Nicholas Jardine also regards this as a central point of Schelling’s \textit{Naturphilosophie}. “In Schelling’s early works there is elaborated a rich and powerful methodology designed to engage with questions of types that the Blumenbach/Kant scheme had placed beyond ‘the bounds of sense’...Schelling leaves us in no doubt that his breaching of the barriers erected by the Blumenbach/Kant scheme is a deliberate one” (“The Significance of Schelling’s ‘Epoch of a Wholly New Natural History’: An essay on the Realization of Questions” in \textit{Metaphysics and Philosophy of Science in the Seventeenth and Eighteenth Centuries: Essays in Honour of Gerd Buchdahl}, ed. R.S. Woolhouse, (Boston: Kluwer, 1988), 327-350. Quotation from 341.

\textsuperscript{687} AA, I, 6: 183.

\textsuperscript{688} AA, I, 6: 185.
discusses plants again, this time in order to show that the products of nature are characterized by an increasing individualization of basic structures. Such an argument would have been music to Goethe’s ears, especially since Schelling directly cites Goethe’s *Metamorphosis of Plants* (1790), which had argued that all the structures of a plant are different manifestations of the leaf. Nevertheless, Schelling is far more interested in animals than in plants, which leads him to weigh in on the issues raised in Pfaff’s own work on animal electricity.

Schelling begins his section on animal life by trying to answer a basic question: at issue is whether “life” resides inside or outside of “animal matter (theirische Materie).” Schelling dismisses the latter option quickly, but goes into more detail regarding the first, which he says refutes itself. First of all, the idea that organisms can be explained mechanically is, by now, so discredited that he barely offers any refutation. But there are still those who insist that life is a property of matter, a position he describes as “the height of anti-philosophy (Unphilosophie).” For Schelling, life cannot be a property of matter any more than repulsivity and attraction can be. In the *World Soul*, he stays true to his *Ideas*, and reminds us that “matter itself is simply a product of opposed forces,” not a substrate onto which properties can be added. Matter and mechanism are not primary. Forces and organism are primary.

689 AA, I, 6: 221.

690 Although I do not discuss it here, Schelling is referring back to a long debate—discussed extensively by Pfaff in his *On Animal Electricity*—about whether irritability could reside in nerves or muscles.

691 “All true physiologists agree that natural, animal operations are unexplainable via the laws of impact and attraction.” (AA, I, 6: 188).

692 AA, I, 6: 186.

693 AA, I, 6: 187.
[The formation of animal matter], where it happens, already presupposes life itself. Life is not a property or product of animal matter, rather, conversely, matter is a product of life. Organism is not the property of certain natural things, but rather, conversely, these certain natural things are the many limitations (Beschränkungen) or various points of view (Anschauungsweisen) of the universal organism.694

One would be hard pressed to find a more concise expression of Romanticism. But it is also interesting to note the veiled reference to Leibniz’s monadology. In light of Schelling’s desire to revive the philosophy of Leibniz in the Ideas, and also considering that he moved directly from a project on Leibniz, the Philosophical Parallels, to the World Soul, it is surprising that Leibniz is hardly mentioned in this work. Nevertheless, given Schelling’s continued resistance to the idea of “dead” matter in this passage, as well as the similarities between this passage and Leibniz’s “city metaphor,” it seems highly probably that Leibniz was still on his mind during the composition of the World Soul.

If life resides neither inside nor outside of animal matter, where does it reside? That Schelling’s answer involves polarity should not surprise us. He tells us that the basis of life lies both outside (positively) and inside (negatively) animal matter. The positive principle of “life” stretches beyond individual animals, but in its negation, in its individualization, it does in fact lie within animal matter. He fleshes out this opaque

694 AA, I, 6: 189.
explanation with a brief historical sketch. Haller, though he “could not completely break away from the mechanical philosophy,” was the first to show that life could not be explained mechanically, and he did so scientifically, without resorting to the “hyperphysical fictions” of Stahl. Haller tried to philosophically construct the concept of irritability, he would have conveniently arrived at the system of Pfaff, which unites the positive and negative principles of life.

Schelling’s observations about irritability and sensibility—two of the three Lebenskräften which figured so prominently in Kielmeyer’s works—are empirically derivative. Like Kielmeyer, he stresses the inverse relationship between sensibility and irritability, and once again, he makes some mistakes: for example, he argues that irritability is directly proportional to the quantity of oxygen in animal matter. However, this was by no means a preposterous statement at the time; in fact, Christoph Girtanner, one of the most important German chemists of the late eighteenth century, argued precisely the same thing, and Schelling duly cites him. This is yet another example of a Schellingian position which, when taken out of context, looks ridiculous, but when read against the backdrop of science at the time, gains historical plausibility. This aside, it is more important to understand the larger point Schelling makes in his discussion of irritability and sensibility.

It is no accident that, leading up to this discussion, he explores Galvanism at length—complete with references to Volta, Wells, Humboldt, Braunstein, and Pfaff.

695 AA, I, 6: 193.
696 Schelling also criticizes John Brown here.
697 AA, I, 6: 230.
Galvanism provides the natural scientist with the ultimate clue as to the natural-physical origin of life. Irritability, the Lebenskraft active in galvanic phenomena, becomes "the middle point around which all organic forces are collected" thus gives us the ability "to unveil the secret of life and to disperse the fog of nature (den Schleyer der Natur aufheben)."699 In Schelling’s system, sensibility becomes the negative of irritability, and the two combine to produce the concept of instinct. It is instinct—that which unites the unfreedom of involuntary movement with a conscious drive to move—which characterizes animal life. But once again, this interplay is only the result of a higher principle, manifesting itself on the organic level. And it is at this point that Schelling can finally explain the Stufenfolge, or stages of natural development, with which he concludes The World Soul. According to Schelling, it was Kielmeyer’s speech at the Karlsschule which announced "the epoch of a completely new natural history,"700 and which hinted at the fact that the organic powers "are branches of one and the same power," and that, just as all inorganic phenomena can be traced back to light, all organic phenomena can be traced back to a first principle which causes all life.701


700 AA, I, 6: 253. Thomas Bach comments that this particular passage is somewhat of a misreading of Kielmeyer. See his “Kielmeyer als 'Vater der Naturphilosophie'? Anmerkungen zu seiner Rezeption im deutschen Idealismus,” in Philosophie der Organischen in der Goethezeit, 232-251. Bach’s discussion of the appropriation of Kielmeyer in the World Soul and the First Outline can be found on 241-246. Jardine uses this quotation as the starting point for the above cited essay “On the Realization of Questions.” Iain Hamilton Grant also takes Kielmeyer to be absolutely central to Schelling’s Naturphilosophie, explicitly saying that Schelling’s idea of “higher physics” is derived from Kielmeyer’s Rede. See Grant, “‘Philosophy become Genetic’: The Physics of the World Soul,” in Judith Norman and Alistair Welchman, eds., The New Schelling (New York: Continuum, 2004), 128-150. See especially 133.

701 AA, I, 6: 252.
Here, the concept of the Bildungstrieb returns, this time in a new form. The "principle of all organization," which the natural sciences force us to presuppose, is not Blumenbach's Bildungstrieb but rather a "universal Bildungstrieb," which is not to be mistaken for a Bildungskraft, which is only able to generate "dead products."\(^{702}\) This Bildungskraft is obviously important: it creates matter and "rules over the inorganic world."\(^{703}\) But once again, Schelling asserts that the organic Trieb must be primary. He emphatically denies that there are Lebenskräften in the true sense: a Lebenskraft is "a completely empty concept," for it carries along with it the assumption that there is a special force operative in organic matter which is absent from the rest of the Nature.\(^{704}\) "The essence (Wesen) of life does not lie in a force, but in a free play of forces....Therefore, the forces which are at play in life are not special [forces], unique to organic Nature."\(^{705}\) Organic forces are, in fact, latent even in the inorganic world, and they spring from that "universal Bildungstrieb" which manifests itself in individual living things and thus unites them all:

The principle of life does not come into organic material
(for example, through infusion, which is a stupid but popular concept), but conversely, this principle reveals itself in organic material (dieses Princip hat sich die organische Materie angebildet)....Therefore, we should not talk as if this principle raises (aufhebe) the dead powers of

\(^{702}\) *AA*, I, 6: 253.

\(^{703}\) *Ibid.*

\(^{704}\) I, 6: 254.

\(^{705}\) *Ibid.*
matter up into living bodies. Rather, 1. [this principle] gives direction to these dead forces which, left to themselves, would not [form life] and 2. this principle arouses and continuously sustains the conflict between these dead forces, which otherwise would quickly result in equilibrium and rest.\textsuperscript{706}

Once again, organism and life imply perpetual conflict. Mechanism and death are simply the suspension of it. And the “universal Bildungstriebe” which animates the world is the “World Soul.” It unites the entire natural world in an immense circle of life:

Therefore, this principle sustains the continuity between the inorganic and the organic world, and links together all of nature in a universal organism. In it, we recognize anew that Being (Wesen) that the most ancient philosophy dreamingly greeted (ahnend begrüßte) as the joint soul of nature, and which the physicists of that epoch identified with the formative and creative Aether….\textsuperscript{707}

Schelling’s World Soul is thus a spectacularly metaphysical vision of unity in multiplicity. It is a portrait of a world so teeming with life that even “death” is simply organism at rest. In the context of German Idealism, the World Soul represents a radical overcoming of Kant’s Third Critique. Schelling contends that there are real purposes in nature, and that the most recent empirical sciences prove this fact. Rather than seeing

\textsuperscript{706} I, 6: 255.

\textsuperscript{707} AA, I, 6: 257.
teleology as a useful, hypothetical tool, scientists must accept nature’s teleological aspects and use them to investigate nature as a universal, living organism characterized by the very “hylozoism” that Kant dreaded. Furthermore, one can clearly see Schelling breaking away from Fichte in this text. Unlike the Ideas, there is no residue of transcendental philosophy here. If nature is a universal organism, and humans are simply one manifestation of the “first force of nature,” then Fichte’s I needs to be radically reshaped. The World Soul clearly implies that the human mind does not stand outside of nature; the mind is a part of nature, albeit the only part capable of reconstructing its own development. True, the Introduction to the Ideas had declared that “Nature is visible spirit, spirit invisible nature.” But the World Soul gives nature a real, ontologically independent existence, and lays the seeds of the “Absolute Idealism” of the Identitätsphilosophie and Hegel’s system.

Furthermore, just like the other “Spinozists” of the eighteenth century, Schelling now explicitly combines Spinoza’s obsession with the unity of nature with Leibniz’s vitalist tendencies. It is difficult to miss the pantheistic tendencies of the World Soul. In his next work on Naturphilosophie, the First Outline, this combination will become even more explicit. But the World Soul was already more than enough to win over Goethe, who read Spinoza as if he were a divinely inspired prophet. The publication of the World Soul was thus Schelling’s ticket to Jena, which was entering its annus mirabilis.

SCHELLING, GOETHE, AND NATURPHILOSOPHIE

Johann Wolfgang von Goethe was central to the development of Naturphilosophie; he approved of and inspired Schelling’s work during the latter’s time in Jena. For Goethe
scholars who accept the erroneous thesis that Schelling wished to do away with empirical science, and that Schelling’s Naturphilosophie is simply disguised mysticism, this is an embarrassment. As such, they go to great lengths to sweep the relationship under the rug, often distorting Goethe’s own words and completely ignoring the close collaboration between Schelling and Goethe from 1798-1800. In fact, Goethe is commonly called an enemy of Naturphilosophie. While I do not dispute that there were real differences in the respective approaches of Goethe and Schelling, I will show that any attempt to construct a barrier between the two is misguided. Rather than viewing any association with Schelling as poisonous, Goethe scholars should discard the notion that association

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708 One example of this distortion comes from R.H. Stephenson. Arguing that Goethe was an outright enemy of Schelling, he cites a conversation with Müller from 1823, in which Goethe refers to Schelling’s “forked tongue.” This supposedly proves Goethe’s “rejection of Schelling’s attempts at uniting opposites by mere verbal identities in conciliatory synthesis.” (Goethe’s Conception of Knowledge and Science (Edinburgh: Edinburgh University Press, 1995), 29). There are two major problems with this. First, we have already seen that, in the World Soul, Schelling explicitly warned against ignoring the multiplicity of nature in favor of empty identities. Second, Stephenson takes Goethe’s remark completely out of context. Goethe’s word Zweizüngelnd is no allusion to the Identitätsphilosophie but a very clear pejorative referring to the mystical-religious path which Schelling embraced after 1809. The entire passage reads: “Goethe spoke about the philosophical systems of Kant, Reinhold, Fichte, and Schelling, and remarked that, through the latter’s fork-tongued expressions on religious things great confusion has arisen, and rational theology has been set back by half a century.” WA Anhang: 4. Clearly this is an indictment of Schelling’s religious philosophy, not his Naturphilosophie. Unfortunately, this type of distortion is typical of those who try to sever Goethe from Naturphilosophie.

709 Arthur Zajonc states that Schelling and Goethe’s approaches to nature were “very different—one might even say, diametrically opposed” (“Goethe and the Science of his Time: An historical Introduction,” in Seamon and Zajonc, eds., Goethe’s Way of Science: A Phenomenology of Nature (Albany: SUNY Press, 1998), 18). Ronald H. Brady, in an essay in the same volume, states that “it is time that Goethe’s erroneous placement within the confines of a speculative Naturphilosophie were corrected by a proper identification.” (“The Idea in Nature: Rereading Goethe’s Organics,” in Goethe’s way of Science, 84). Dennis L. Sepper, in his Goethe contra Newton: Polemics and the Project for a New Science of Color (New York: Cambridge University Press, 1988), takes a more moderate and correct approach, saying that although Goethe “did indeed have close and personal scientific ties” with many Naturphilosophen, “he must not be casually assumed to have been one of them” (169).

710 Dietrich von Engelhardt has written a commendable summary of Goethe’s “ambivalent” relationship to the various Naturphilosophen. “Natur und Geist, Evolution und Geschichte. Goethe in seiner Beziehung zur romantischen Naturforschung und metaphysischen Naturphilosophie” in Peter Matussek, ed., Goethe und die Verzeitlichung der Natur (Munich: C.H. Beck, 1998), 58-74. Engelhardt characterizes his “judgments of the romantic natural-researchers, their personalities and their writings” as “many-sided and often contradictory.” (61). But he also realizes that there were broad philosophical agreements between Goethe and the Naturphilosophen, enough to dispel the idea that they were, to use a naturphilosophische term, polar opposites.
with any Naturphilosoph is akin to drinking from a poisoned well. Certainly they cannot deny Goethe's change of heart about Schelling which followed his reading of the World Soul.\footnote{Robert Richards emphasizes the difference between the Ideas and the World Soul as a means of explaining Goethe's conversion. In the Ideen, Schelling approached the problem of a priori demonstration not from the perspective of nature—which a reader might have expected—but from that of the ego itself. He began with the kinds of deductively derived ego structures that originated with Fichte an then moved to show how these structures could be displayed in his surveys of inductive natural science. In the next two major tracts...he readjusted his conception of the proper disposition of induction and deduction in natural science..." (The Romantic Conception of Life, 137).}

The most powerful evidence of this conversion is Goethe's letter to Voigt from June 1798, shortly after he met Schelling for the first time. Goethe notes that "Schelling's short visit was very pleasing to me" and says how beneficial it will be to remove Schelling from the isolation of Leipzig and place him in the "active and industrious society" of Jena, so that Schelling could better apply his "beautiful spiritual talents."\footnote{Fuhrmans points out the personal aspect of Goethe's conversion. He expected a "Sans-culotte," but Schelling turned out to be "well-raised, cultured young man." BuD, I: 133.}

As for Schelling's newest book, Goethe's approval could not be more apparent: the World Soul "contains very beautiful insights and vividly excites the wish that the writer will become more and more familiar with the details of experience." However, despite this somewhat ambivalent comment about Schelling's commitment to empiricism, Goethe is already impressed with the depth of Schelling's scientific knowledge. He notes that the method of this "thinking young man" will have much to contribute to the disciplines of physics and chemistry.\footnote{All this comes from Goethe's letter to Voigt (21 June 1798), WA IV: 3, 187-190.}

That the World Soul would have pleased Goethe should not surprise us, for he shared Schelling's belief in the duality and polarity of nature. The following passage from Goethe could be put into the World Soul and pass as Schelling's words:
True observers of nature...will agree with one another that everything that appears, everything that confronts us as phenomenon, must hint at either an original division for which a unification is possible or an original identity from which a division can be reached, and in such a manner present itself. To divide the united, to unite the divided, is the life of nature; this is the eternal systole and diastole, the eternal synkrisis and diakrisis, the inhaling and exhaling of the world in which we live, breathe, and exist.  

Schelling's belief that the development of nature is the process of "individualization" of an original, self-divided unity is thus recapitulated almost verbatim by Goethe. Goethe reinforced this idea in a little piece entitled "Polarity." In the examination of natural appearances, "the particular leads to the general, the general to the particular."  

This is precisely the method of the world soul: scientists must synthesize empirical observations and follow them back to their origin, while simultaneously explaining how those origins created the individual products of nature. Like Schelling, Goethe believes that all the diversity in the world arises from "a few foundational maxims."  

Finally, we should not ignore an amazing passage from Goethe in which he explains how basic forces of nature can "intensify (steigern)" and ascend to new levels of organization. It reminds one of Schelling's assertion that the unified "universal Bildungstrieb" raises up heterogeneous "dead forces" in order to direct them towards

714 WA II, 1: 296.
715 WA II: 1: 164.
716 Ibid., 165.
organism. Goethe states that the principle of life “contains the possibility of diversifying the simplest beginnings of appearances through intensification (Steigerung).” If the opposed forces balance each other out, nothing happens. Like Schelling, Goethe identifies equilibrium with mechanism and death. “The unification can, however, happen in a higher sense, in which the divided first intensifies, and through the unification of the intensified, a third, new, higher, unexpected thing is brought forward.”

Goethe’s account of nature’s development is thus very similar to the outlines of Schelling’s Stufenfolge, which will reappear in the First Outline. This passage seems very metaphysical for the supposedly “empirical” Goethe, but he uses the methodology contained in it in his actual scientific works. Indeed, he sees the growth of a plant as a series of alternating expansions and contractions. Goethe, like Schelling, believed that the opposed forces of nature were capable, when teleologically directed, of bringing about the “higher” phenomena of organism and life.

Upon reading the World Soul—Goethe did not need to wait for its publication, because Schelling sent him a copy immediately—the poet sprang into action and used his power to install Schelling as a full professor in Jena. Voigt dashed off a letter to Duke Karl-August, telling him of Goethe’s decision and reassuring him that the funds

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717 WA, II, 11: 165-166.

718 “By repeating here a remark made earlier, that styles and stamens represent the same stage of development, we can further clarify the cause of this alternate expansion and contraction. From the seed to fullest development of stem leaves we noted first an expansion; thereupon we saw the calyx developing through contraction, the petals through expansion, and the sexual organs again through contraction; and soon we shall become aware of the maximum expansion in the first and the maximum contraction in the seed. In these six steps nature ceaselessly carries on her eternal work of reproducing the plants by means of the two sexes” (WA II, 6: 62-63). Translation from Myles W. Jackson, “On Natural and Artificial Budgets: Accounting for Goethe’s Economy of Nature,” Science in Context 7 (1994): 409-431. Passages quoted on 418.
necessary to bring Schelling to Jena would be money well spent.\footnote{Voigt to Karl-August (End of June 1798), \textit{BuD} I: 140-141.} The Duke, in turn, notified the local nobility of Schelling’s appointment, repeating Goethe’s words of praise and insisting that “the entire academy in Jena will be provided with a useful colleague.”\footnote{Karl-August to the court (30 June 1798), \textit{BuD} I: 141.} At the end of July, the University wrote Schelling, formally offering him the position.\footnote{The University of Jena to Schelling (30 July 1798), \textit{BuD} I: 147.} Needless to say, Schelling happily accepted, writing to Karl August and to the University on August 12. “All my efforts will be directed towards the wonderful task of becoming a member of your University, and being worthy of the favor you have shown me.”\footnote{Schelling to the University of Jena (12 August 1798), \textit{BuD} I: 151.}

Schelling, of course, knew of his appointment before the official correspondence arrived. Niethammer lived in Jena and kept him up to date on University politics. Since Schelling’s duties as professor would not begin until the start of the winter semester, he had some free time, and continued to talk about new projects, including a review of a book on \textit{Zoonomie} and a treatise on Theodicy. Neither would ever appear, but Schelling did stick to one of his plans: he told Niethammer he would go to Dresden at the end of the summer.\footnote{On the two uncompleted projects, see Schelling’s letter to Niethammer from 28 June, \textit{BuD} I: 138-139.} This would be a fateful journey, because he would be introduced to the Romantic circle for the first time.\footnote{Schelling had already met Novalis, as evidenced from the letter Novalis wrote to Schlegel regarding the \textit{World Soul}.} Schelling arrived in Dresden on the 18 August, and although he was able to spend very little time with Novalis and Friedrich Schlegel, both of whom left at the end of August, A.W. Schlegel and his wife Caroline—who would
eventually become Schelling’s own wife—stayed until Schelling’s departure in October.\footnote{BuD I: 156.} Caroline seemed instantly fascinated by Schelling, writing to Friedrich Schlegel in October that Schelling was more interesting than Friedrich had let on, and that Schelling was like “granite,” a man meant to “break through walls.”\footnote{Caroline to Friedrich Schlegel (14 October 1798), in \textit{Kritische Friedrich-Schlegel-Ausgabe}, ed. Ernst Behler, et. al., 35 vols. (Paderborn: Ferdinand Schöningh, 1988), XXIV:179.}

However, despite Schelling’s eventual love for Caroline, he was not similarly infatuated, at least not at first. Rather, in the initial stages of his stay in Jena—the time when he was composing the \textit{First Outline} and the \textit{Introduction to the Outline}—his main influences were Goethe, Schiller, and Fichte.\footnote{Fuhrmans makes this point in \textit{Briefe und Dokumente}: “If one assumes—as many sources do—that Schelling was immediately drawn into the “Romantic upheaval,” one is completely mistaken. The Romantic circle did not yet exist: only A.W. Schlegel and Caroline lived there at the time (Friedrich Schlegel and L. Tieck first arrived in the spring of 1799), and Schelling’s heart was not yet stirred by Caroline. His primary contacts were Fichte, Schiller, and Goethe.” (\textit{BuD I: 157}).} The Romantics no doubt played an enormous role in Schelling’s intellectual development: for instance, they helped push him back to aesthetics in the \textit{System of Transcendental Idealism} and his \textit{Philosophy of Art}. Furthermore, there was certainly an elective affinity between Schelling’s conception of nature and that of Novalis and Friedrich Schlegel. But to say that the Romantics played an important role in the \textit{genesis} of his \textit{Naturphilosophie} misses the mark. By and large, this aspect of his early thought was driven along by the desire to overcome the problems of subjective Idealism by harvesting the contributions of the empirical sciences.

Upon arriving in Jena, Schelling began lecturing on \textit{Naturphilosophie}. Starting in mid-October, he offered public lectures “On the concept and the essence of \textit{Naturphilosophie},” and he also stated that, starting at the end of October, his lectures would follow “my own outline.” In fact, in early November, Schelling would send the
manuscript of the *First Outline* to Goethe, although it would not be published until Easter of 1799.\textsuperscript{728} The implications of this are clear: the *First Outline* was actually a product of the Leipzig period!\textsuperscript{729} How else could he have completed it so soon after beginning his lectures in Jena? Furthermore, if we know little about the composition of the *Ideas* or the *World Soul*, we can say almost nothing about the origins of the *First Outline*. This makes Schelling’s achievement all the more remarkable: his first fully systematic presentation of *Naturphilosophie* was completed even before he had the chance to interact with the intellectual culture of Jena. It was, like the other two works of *Naturphilosophie*, the fruit of intense private study of philosophy and empirical science.

THE FIRST OUTLINE: THE SYSTEM ESTABLISHED

The *First Outline*, along with its *Introduction*, is the most comprehensive exposition of the methodology and conclusions of Schellingian *Naturphilosophie*, and thus stands at the endpoint of this dissertation. It is true that traces of Schelling’s mature system already appeared in the *Ideas*, and even more so in the *World Soul*, but those works—which often drifted back and forth between mountains of empirical detail and wider philosophical insights—lack the cohesiveness of the *First Outline*. Schelling by no means stops referring to the natural sciences in his new text, but he now places most of his references in footnotes, allowing him to lay out his own philosophy without interruption. Much of the content of the *First Outline* should come as no surprise to

\textsuperscript{728} On Schelling’s lecture announcements and his letter to Goethe, see *BuD* I: 169-170.

\textsuperscript{729} Indeed, Thomas Bach argues that Schelling began work on the *First Outline* in July, at the same time he was writing to Niethammer and preparing to take his position in Jena. Bach surmises that Schelling realized that the *Ideas* and the *World Soul* would be insufficient for classroom use because of their hypothetical nature. For that reason, he needed a true *System* and the *First Outline* was the result (*Biologie und Philosophie*, 264).
anyone familiar with the *Ideas* and the *World Soul*, but Schelling once again makes some subtle, though important, modifications to his ideas. There are two main aspects of the text on which I will focus. First, Schelling provides, for the first time, a detailed account of his own methodology. A quick reading of the opening pages instantly dispels the myth of Schelling’s supposed rejection of empiricism, and sheds light on what Schelling himself believes his *Naturphilosophie* can accomplish. Second, and perhaps more importantly, the *First Outline* offers a grand synthesis of Spinozism and Leibnizianism nowhere found in his earlier works. The *World Soul* was fundamentally Spinozist insofar as it embraced nature as a totality, as a universal organism. This idea persists into the *First Outline*, and I will not repeat material found earlier in the chapter. Instead, I will focus on the unspoken but constant references to Leibniz found in the *First Outline*. Schelling’s Leibnizian tendencies are strong enough in the text that it is fair to call his *Naturphilosophie* a physical monadology.

Schelling begins the *First Outline* by telling us exactly what *Naturphilosophie* should and should not be. In doing so, he reaches back to the methodology of his early Idealism. In *On the Possibility of a Form of Philosophy*, he accepted Fichte’s “self-positing I” as the *Grundsatz* of philosophy and maintained that all sciences—including philosophy—must have an unconditioned starting point. The same is true for *Naturphilosophie*. The starting point for the *Naturphilosoph* is a particular view of nature: he must see nature not as a collection of individual things, but as an unconditioned totality. The philosopher cannot even say that nature “is,” for nature is something higher: it is *being itself*. Furthermore, the *Naturphilosoph* must understand this totality not as an inert, powerless substance, but as “a continually operative natural
activity.” In fact, Schelling argues that we can only “know” nature as active. We cannot know it as “product.” This is consistent with his arguments in the *World Soul*. Conflict in nature is the norm, and this is why the mechanical philosophers of the seventeenth century failed: they began with the presupposition that nature is fundamentally dead and powerless, and then were left with the thankless task of explaining life from that standpoint. Schelling reverses this order: nature is fundamentally alive and active, and mechanism is simply the absence of activity. This explains Schelling’s contention that we can only know nature as active.

Schelling has now elucidated the basic task of *Naturphilosophie*: the understanding of nature as an unconditioned, active totality. Does this mean that empirical investigation is unnecessary? Schelling does distinguish sharply between empirical science and *Naturphilosophie*. The former concerns itself with “individual beings,” while *Naturphilosophie* investigates being itself. Schelling seems to de-emphasize the importance of individual things, which are the subject of empirical research. “Being itself,” i.e. the subject of *Naturphilosophie*, “does not exhibit itself entirely in any finite product, and every individual is, as it were, a particular expression of it.” He also goes on to say that individual things are simply “the color of the unconditioned.”\(^7^3\)\(^0\) Taken on their own, these passages might lead the reader to conclude that Schelling does indeed wish to dispose of empirical science.

However, on closer inspection, we find that Schelling says just the opposite. *Naturphilosophie* must begin with empirical research, because simply identifying

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\(^7^3\)\(^0\) Both quotations from *AA*, I, 7: 77. All translations are from the *First Outline* and the *Introduction to the Outline* are from Schelling, *First Outline of a System of the Philosophy of Nature*, trans. Keith R. Peterson (Albany: SUNY Press, 2004). The *Introduction* is not yet available in the *Akademie Ausgabe*, and therefore references to it are from Schelling, *Sämtliche Werke*, 14 vols., ed. K.F.A. Schelling (Stuttgart: Cotta, 1856).
absolute activity is insufficient. Rather, the Naturphilosoph must explain how an infinite, absolute activity "will present itself empirically, i.e. in the finite.""^{731}

--Possibility of the exhibition of the infinite in the finite—is the highest problem of all systematic science. The subordinate sciences solve this problem in particular cases. Transcendental philosophy has to solve the problem in its greatest universality."^{732}

Schelling said the same thing in the World Soul, although in slightly different language. There, he attempted to show how nature unfolds as an individualization of a universal drive to organization. The raw data of empirical science provides us with a starting point; we must then trace the various activities of nature back to a common source. But the message is the same. Naturphilosophie is not ignorance of empirical science, but the attempt to philosophically synthesize the data provided by those sciences. In order to show how nature operates on a universal scale, we must first see how it operates in the concrete and tangible world.

Critics of Schelling might still object, and point to passages in which Schelling says we must deduce nature a priori. These are not difficult to find: at one point Schelling states that we must "determine the various organic functions and their various possible proportions a priori."^{733} But Schelling's method is much more sophisticated than this. He sees abstract (a priori) philosophy and empirical science (a posteriori) as mutual participants in Naturphilosophie. Abstract thought directs empirical investigation

^{731} Ibid., 79.

^{732} Ibid.

by identifying the “intermediate links” which “still [lie] hidden in the depths of Nature.”

Deciding what needs to be investigated is the task of philosophy. “It is, therefore, conceivable, that speculative physics (the soul of true experimentation) has, throughout all time, been the mother of all great discoveries in Nature.” But “empirical research” also plays an important role. Finding out the “intermediate links” is the job of the particular natural sciences, which then throw new dilemmas back to philosophy. Quite often, new discoveries answer old questions but beget new ones. “Since every new discovery throws us back upon a new ignorance, and while one knot is being loosed a new one is being tied.” Naturphilosophie is, quite simply, the back-and-forth cooperation between philosophy and science. During the twentieth century, historians of science gradually dismissed the positivist fiction that metaphysics and science are and should be separate projects, and thus this particular passage seems remarkably modern.

Furthermore, the meaning of a priori for Schelling is different than it was for Kant (or for Schelling’s critics). Schelling believes that empirical a posteriori knowledge can actually be transformed into a priori truths! “A judgment of experience...becomes, notwithstanding, an a priori principle as soon as I arrive, whether directly or indirectly, at insight into its internal necessity.” For instance, our a posteriori knowledge of irritability and electricity becomes a priori as soon as we are able to trace them back to the activity of the universal organism. In the same section of the text, he seems to foresee the criticisms of his positivist critics, and one wonders if those who dismiss Naturphilosophie have ever read this section, which I do not hesitate to quote at length:

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734 SW, III: 280.
735 Ibid., 279.
736 Ibid., 278.
The assertion that natural science must be able to deduce all its principles \textit{a priori} is in a sense understood to mean that natural science must dispense with all experience, and, without any intervention of experience, be able to spin all its principles out of itself; an affirmation so absurd that the very objections to it deserve pity.—\textit{Not only do we know this or that through experience, but we originally know nothing at all except through experience, and by means of experience, and in this sense the whole of our knowledge consists of judgments of experience. These judgments become \textit{a priori} principles when we become conscious of them as necessary}....

Schelling thus refutes his positivist critics ahead of time. The method of \textit{Naturphilosophie} is not the abandonment of empirical research, but the recognition of the reciprocal labor of philosophy and the natural sciences.

Now Schelling’s methodology is clear, we can move to an examination of the monadological aspects of the \textit{First Outline}. Although Schelling completely banishes any mention of Leibniz from the text, it is almost impossible to miss his influence. In the preface to the book, Schelling states that his intention is to construct a system of “dynamic atomism,” one which does for the dynamic philosophy what LeSage had done for its mechanical counterpart.\textsuperscript{737} To be sure, Schelling believed he had already refuted LeSage in the \textit{Ideas}, but he had only offered hints of his own system. In the \textit{First

\textsuperscript{737} AA, I, 7: 65.
Outline, this dynamic atomism finally appears in a robust form. The productivity and
development of nature is, for Schelling, rooted in what he calls “individual actants” or
“natural monads.” Schelling’s “individual actants” are even closer to Leibniz’s
monads than Wolff’s or Kant’s. For whereas these reformed monadists attempted to
reconcile Newtonian gravitation with Leibniz’s doctrines by declaring the monads to be
physical things, Schelling relegates them to the level of pure activity, completely prior to
all matter. Schelling uses these “natural monads” to fuse Leibnizianism with
Spinozism in the First Outline: he began with the desire to investigate nature as
unconditioned, and he will later describe this standpoint as the “Spinozism of Physics.”
But the process by which the absolute productivity of nature reveals itself and guides
itself along its stages of development is thoroughly Leibnizian—it is the activities of the
“natural monads” that drive nature along this path.

Schelling’s insistence that we cannot know Nature as product, only as activity,
predisposes him towards Leibniz’s philosophy. Already in the World Soul, Schelling laid
out the relationship between the universal organizing principle—i.e. the World Soul—and the individual products of nature, which express that principle. In the First Outline,
however, he asserts something new: not only is conflict pervasive in the natural world,
but there is also a conflict between the world-organism and its individual products. No
matter how successfully the individual resists, each product in nature—which is only a

738 Ibid., 86.

739 Kant’s own opinions on this matter changed during the transition between his pre-critical and mature
phases. In the Physical Monadology, he still aimed at a compromise between Newton and Leibniz. By the
time he wrote the Metaphysical Foundations of Natural Science, Kant dismissed the ideas of the
“monadists” as misguided and concentrated much more on laying out a foundation for Newtonian physics.
For a brief discussion of this change, see Wolfgang Bonsiepen, “Die Ausbildung einer dynamischen
Atomistik,” 10-12.

740 SW III, 273.
“color of the unconditioned”—contains the seeds of its own dissolution, which are simultaneously the seeds of a future “infinite development.”\textsuperscript{741} In more concrete terms, look at the phenomenon of life. All living things involve a conflict of forces and a limitation of mechanism, but eventually, all living things return to equilibrium and death. Nevertheless, even a dead organism helps beget new organisms: the plant dies and decomposes, but in doing so fertilizes the soil, helping to produce other plants. A dead animal provides nourishment for worms and flies. This is a crude analogy, but it makes sense. This is what Schelling means when he says that nature herself always seeks to abolish individuality. Infinite nature can only manifest itself in the finite: nature must limit itself to produce anything determinate and thus all natural products are caught “in between” a negation and affirmation of the infinite productivity. However, Schelling now asks the question: what is it that prevents the universal-organism from winning out? What is it which ensures that new individuals continue to exist? The answer is the “individual actants of nature,” or what Schelling at one point calls “natural monads.”\textsuperscript{742} They are the self-limitation of Nature, and therefore they lay at the heart of the possibility of Nature in general.

The “individual actant” or natural monad serves as the solution to two problems: first, the concept of the individual actant allows Schelling to solve an epistemological riddle: how can humans experience an infinite activity in finite “external intuition”? By setting up the individual actants as the negations or self-limitations of an infinitely

\textsuperscript{741} \textit{AA}, I, 7, 83.

\textsuperscript{742} Schelling uses \textit{Actionen} in his text, but, following Keith R. Peterson, I prefer the translation of this word as “actants” rather than “actions.” Peterson notes that “The ‘dynamic atom’ that Schelling designates by \textit{Aktion} is best understood as an individual “actant,” a “natural monad” or “simple productivity.” See Schelling, \textit{First Outline}, 244.
productive nature, Schelling makes them the means by which we experience the infinite. This is because actants are the source of all quality. Second, the concept of the individual actant or natural monad allows Schelling to deliver on his promised dynamic atomism. As we cautioned before, his atomism is not a physical monadology like that of the pre-critical Kant—Schelling is quite clear that the actants of nature do not exist per se, but rather are ideal grounds of explanation. They are similar in purpose, yet radically different, from the mechanical atoms of philosophers like LeSage. Or, in other words, they are Leibnizian monads stripped of substantiality. They are pure force.

Schelling begins his discussion of original actants with a desire to explain the products of nature. As noted above, all products for Schelling must only be "apparent products." They appear to us fixed, but in reality are only temporarily so. Schelling reasons that, if all products are only apparent products, they must be capable of further "infinite development." Schelling views the organism as the paradigmatic case of this capacity, for though the organism appears as a fixed whole at any given moment, its possession of circular causality allows for the possibility that it will become something different. In extreme cases, like that of the caterpillar and the butterfly, an organism bears the capability to transform itself radically. But the capacity for infinite development, "cannot occur in [the product], however, without there originally being an infinite multiplicity of unified tendencies in it." What is this "infinite multiplicity of unified tendencies" and how does this multiplicity manifest itself to us? Recall that the unconditioned, i.e the absolutely productive, can only present itself to us in its own

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743 Kant defined this circular causality when he noted that "An organized product of nature is one in which everything is a purpose and reciprocally also a means." Immanuel Kant, A4, V, 376. Translation from Kant, Critique of Judgment, trans. Werner S. Pluhar, (Indianapolis: Hackett, 1987), 256.

744 A4, I, 7, 84.
limitation, and that it can never "be" but only appear to us as infinite becoming. Where, Schelling asks, is the location of all our experience of things external? The answer is that "every external being is a being in space." Therefore, "something has to come to the fore in experience which, although itself not in space, is yet principle of all occupation of space." This is precisely the individual actant or natural monad, and it corresponds to repulsive force in the *Ideas* and light in the *World Soul*. It is the vehicle by which an infinitely productive nature appears on the ground level of experience. These actants are not only the "principle of the occupation of space" but they are precisely those "unified tendencies" which give each product the capacity for "infinite development." These actants bear some similarity to the atoms of corpuscular philosophers. Nevertheless, there is an important difference:

The atomist is mistaken only in that he assumes *mechanical* atoms, i.e., the finitude of *mechanical* divisibility....The original actants, however, ARE not themselves *in space*; they cannot be viewed as *parts* of matter. Accordingly, our claim can be called the principle of *dynamic atomism*. For us, every original actant is just like the atom for the corpuscular philosopher; truly singular, each is in itself whole and sealed-off, and represents, as it were, a *natural monad*.

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745 *AA*, I, 7, 84.
746 *AA*, I, 7, 84-85.
747 *AA*, I, 7, 86.
In the *World Soul*, we already saw Schelling moving away from Kant’s construction of matter. He recognized that attraction and repulsion cannot stand apart from one another as two separate, independent forces. Rather, they must be originally united. In the *Introduction to the Outline*, it seems that Schelling is worried his readers will mistake his position for Kant’s, and as such he makes it clear that “That the notions of dynamical physics popularized until now are very different from, and partially at variance with, those which the author lays down....I speak of the modes of representation which have been put into philosophic heads by Kant” who believed that “all dynamic (qualitative) changes [are] only mere changes in the relation of the repulsive and attractive forces.” Kant’s construction is no longer sufficient for Schelling, because it is difficult to see how attraction and repulsion can account for all the diversity of nature. Schelling now accuses Kant of reductionism:

> We do not indeed deny that these phenomena at the extreme limit of their manifestation are changes in the relation of the principles themselves; we only deny that these changes are *nothing more*. On the contrary, we are convinced that this so-called dynamical principle is too superficial and defective a basis of explanation for all Nature’s phenomena in order to reach the real depth and manifoldness of natural phenomena, since by means of it,

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748 *SW*, III, 281.
in fact, no qualitative change of matter as such is constructible...\textsuperscript{749}

Why does Schelling insist that attraction and repulsion are insufficient as an explanation of nature's diversity? This question is difficult to answer for certain, but it likely has to do with the primacy of organism. At the end of the \textit{World Soul}, Schelling insisted that, at times, the "universal \textit{Bildungstrieb}" could "raise up" dead forces in order to create something new, i.e. living things. Left to themselves, repulsion and attraction could not possibly generate life. It is impossible that these forces, which operate in straight lines, could somehow transform themselves into the circular causality of the organism. They must be guided by a higher principle from which they are both derived.

Since we now understand both the wider scope of Schelling's \textit{First Outline} and the particular role the "individual actant" plays in his system, we can move on to a detailed examination of these "natural monads" which highlights Schelling's debt to Leibniz. I will focus on three main areas of similarity between the Leibnizian monad and Schelling's "individual actant." Some of these are relatively straightforward, while others are more complex, especially the cases that deal with Schelling's explanation of "composite actants" and their interplay.

First, Schelling's "individual actants" are the principle of the occupation of space, i.e. extension or matter, and they are therefore not material, nor parts of material. Schelling acknowledges that atomism is not wholly misguided: "The atomist is mistaken only in that he assumes \textit{mechanical atoms}, i.e., the finitude of mechanical divisibility....what is \textit{in space} is in space by means of a continually \textit{active} filling-up of

\textsuperscript{749} \textit{SW}, III, 281.
space; therefore, in every part of space there is moving force.”750 Thus, for Schelling matter is not mere extension, not “dead” and inert stuff, but the result of an active force. “Accordingly, our claim can be called the principle of dynamic atomism.”751 Leibniz, too, objected to the Cartesian-Newtonian characterization of matter, and would agree with Schelling on this point (although Leibniz still uses the vocabulary of substance, which Schelling had discarded). This is a core Leibnizian doctrine, and expressions of it are not difficult to find. In his Specimen Dynamicum Leibniz insisted that

in corporeal things there is something over and above extension, something prior to extension, namely, that force of nature implanted everywhere by the Creator…[Force] constitute[s] the innermost nature of bodies, since to act is the mark of substances, and extension means nothing but the continuity or diffusion of an already presupposed striving and reacting (that is, resisting) substance.752

In his quasi-autobiographical New System of Nature, Leibniz insists that “formal atoms,” not material atoms, are the best way to explain extended matter, because they allow us to reintroduce the notion of force.753 And his conviction that the monads were the “true atoms of nature” is found in the Monadology itself.754 Thus, Schelling and Leibniz both

750 AA, I, 7, 85-86.
751 AA, I, 7, 86.
752 Leibniz, “A Specimen of Dynamics,” Philosophical Essays, 118.
754 “Monadology” §3, 213.
agree that they have found the correct version of atomism, one whose active “true atoms” are prior to, or even “over and above” matter.

Second, Schelling hints at the idea that each individual actant is “sealed” and thus causally independent from all other actants. Each actant, Schelling insists, “is in itself whole and sealed-off, and represents, as it were, a natural monad.” Schelling hardly traces out the full implications of this statement, although he mentions later that each actant undergoes “a development according to its own nature.” It is difficult to tell whether Schelling is denying causal interaction of actants here, but a tentative case can definitely made for this interpretation. He talks about the “universal prehension by every actant of the others,” but at the same time implies that actants can reach into each other’s “spheres.” The possibility that Schelling is denying inter-actant causality is bolstered by his positive mention of Monadology §7 in the introduction to the Ideen. This is the famous “no windows” passage, which argues that “There is also no way of explaining how a monad can be altered or changed internally by some other creature...The monads have no windows through which something can enter or leave.” That one of Schelling’s few direct citations is to this passage is striking, and Leibniz’s declaration in Monadology §11 that “the monad’s natural changes come from an internal principle” seems similar enough to Schelling’s insistence that each actant behaves according to its

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755 AA, I, 7, 86.
756 AA, I, 7, 100.
757 AA, I, 5, 77.
758 “Monadology” §7, 214.
759 “Monadology” §11, 214.
nature. If Schelling is indeed arguing for the lack of a real causal relationship between actants, it will only be comprehensible in light of his theory of their combinations.

Third and finally, Schelling offers a complex description of how the "individual actants" interact with each other to create a unified "Nature." This is where he most thoroughly blends Spinoza with Leibniz. Nature as productivity (or as he will call it in the Einleitung, natura naturans) "uses" the individual actants to guide Nature along its stages of development, towards an "absolute organism." Schelling, like Leibniz, argues that the whole is "mirrored" in every single individual actant and thus, one can draw a parallel between Leibniz's "God" and Schelling's extremely heterodox "absolute productivity." In addition, Schelling emphasizes that the individual should not be swallowed up into the whole, for he, like Leibniz, saw nature as a unity in multiplicity; sacrificing the individual means sacrificing multiplicity. This lines up perfectly with his insistence that all natural products are "in between" the absolute and its negation.

As we saw before, actants have an innate drive towards combination, through their "prehension" and "receptivity" for one another. This makes them capable of being "used" by a creative Nature in the formation of an all-encompassing product. Again, this product is only apparent—it is always changing. "The whole of Nature, not just a part of it, should be equivalent to an ever-becoming product. Nature as a whole must be conceived in constant formation, and everything must engage in that universal process of formation."\(^{760}\) Therefore, the actants themselves "should together represent only one absolute product."\(^{761}\) In order for this to happen, "Nature must combine them," but this is

\(^{760}\) AA, I, 7, 93.

\(^{761}\) AA, I, 7, 93.
not a problem, since “a universal compulsion toward combination must occur throughout the whole of Nature.”

All this certainly explains the unity of nature—every actant, in a way, moves towards the creation of one, giant natural product. But what about multiplicity? Schelling seems clear enough when he states that “All multiplicity in Nature is to be sought in the elementary actants alone.” But this does not explain why there are singular products in nature. Why are there individual organisms, and not just one universal organism? Schelling answers that “Individual products...can only be seen as misbegotten attempts” to achieve a total unity. Thus, in a sense, individual products are “mirrors” of the all-encompassing product or absolute organism that “creative Nature” seeks. This explains why Schelling can confidently assert that “the intuition of the whole universe is contained in every individual.”

Schelling’s representation of individual products as only “misbegotten attempts” to achieve an absolute product seems at odds with his reverence for the individual organism. The individual organism is for him the most striking example of the power of the actants, and it is worth quoting him at length:

> Each organism is itself nothing other than the collective expression for a multiplicity of actants, which mutually limit themselves to a determinate sphere. This sphere is something perennially enduring—not something merely fading into the background as appearance—for it is that

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762 AA, I, 7, 93.
763 AA, I, 7, 93.
764 AA, I, 7, 102.
765 AA, I, 7, 83.
which originates in the conflict of actants, the monument, as it were, of those activities prehending one another; its is the concept of that change itself, which is the only enduring thing in change. In all the lawlessness of the actants continuously jostling one another, there yet remains the lawful aspect of the product itself, which they (and no others) are constrained among themselves to produce; as a result, the perception of the organism as a product, in which what it is it is through itself—which is simultaneously cause and effect of itself, means and end—will be justified as in accordance with Nature.\textsuperscript{766}

Thus, if we can temporarily rid our minds of Schelling’s comment about individual organisms being “misbegotten attempts,” we see traces of Reill’s description of “Enlightenment Vitalism,” for which the organism is a “constituent assembly of forces,” and which focused on the “synergy” of the organism and explained its harmony “by emphasizing the centrality of interconnection…” between different relations. Schelling, like other vitalists, believed that, “In the world of living nature, each constituent part of an organized body was both cause and effect of the other parts. All forces were symbiotically linked,” and pushed onwards by a teleological cause of development (in Schelling’s case, the infinite productivity of Nature).\textsuperscript{767}

\textsuperscript{766} AA, I, 7, 114.

Leibniz's work is filled with descriptions of the harmonious interplay of forces or monads, and like Schelling, he links these descriptions to the issue of multiplicity. Schelling guarantees multiplicity in Nature by implying that each "attempt" to represent the absolute will "fail" in a different way, depending on the unique combinations of the actants, which themselves represent the entire universe. Leibniz likewise discusses the "interconnection or accommodation of all created things to each other," the result of which is that "each simple substance is a perpetual, living mirror of the universe."\(^768\) Leibniz then moves to his recurring "city analogy," in which he states that each monad represents the universe in a particular way, exactly as different observers would see a city differently from varied directions.\(^769\) It is precisely in this way that there is as much variety in the world as possible.\(^770\) Leibniz's insistence that the individual mirrors the whole is so prevalent that, when we see Schelling using similar language, it is impossible not to infer a direct connection. Thus, although they speak slightly different philosophical languages, and although the empirical science of Schelling's time ruled out a number of Leibniz's own assertions,\(^771\) these are kindred spirits, devoted to the idea of a harmoniously interconnected universe built upon simple substances or forces.

Schelling's own monadology is now complete. His "individual actants" are the "dynamic atoms" out of which the world is constructed. Once this has been established,

\(^{768}\) "Monadology," §56, 220.

\(^{769}\) "Monadology," §57, 220.

\(^{770}\) "Monadology," §58, 220.

\(^{771}\) For instance, in "Monadology" §74, 222, Leibniz wholeheartedly supports the doctrine of embryological preformationism. By the time Schelling was developing his Naturphilosophie, the rival theory of epigenesis had achieved such dominance that preformationism had become a thoroughly retrograde idea. Schelling states succinctly in the First Outline—without even bothering to make an argument—that "all formation occurs through epigenesis." (AA, I, 7, 112).
Schelling concludes the *First Outline* by doing what he failed to do in the *World Soul*: give a robust deduction of the "stages of nature" or *Stufenfolge*. The individual actants, in conflict with one another, yield not only the inorganic forces of light, electricity, and magnetism, but the corresponding organic forces of *Bildungstrieb*, irritability, and sensibility. These are the successive stages of development of inorganic and organic nature. Schelling claims he has succeeded in showing how life arises from physical causes. To be sure, most "natural historians" have "in part intimated, in part actually asserted" the connection between life and those physical causes. But Schelling sees his own system as the only one which grasps the "inner necessity" of the stages of nature.

True to his method, Schelling argues that he has taken the *a posteriori* discoveries of eighteenth century researchers like Buffon and raised them to the status of *a priori* knowledge by grasping the necessary therein.

At times, while demonstrating that nature proceeds to ever higher levels of complexity, Schelling seems to hint at the modern concept of evolution. For instance, he notes:

*Natural History* has been, until now, really the *description of nature*, as Kant has very correctly remarked. He himself uses the name "natural history" for a particular branch of natural science, namely, the knowledge of the gradual

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772 "The original duality develops into ever more complex inorganic and then organic forms, processes, and systems. But at the same time, at every stage, in every product and every process the basic structure of nature is repeated, as infinity and finitude, expansion and boundary-setting, activity and limitation, productivity and product become actualized." (Jorg Jantzen, "Die Philosophie der Natur, in F. W. J. Schelling, 100).

773 *AA*, I, 7: 244.

774 *AA*, I, 7: 245.
alterations which the various organisms of the Earth have suffered through influence of external nature, through migrations from one climate into the other, and so forth. However, if the idea set out above were put into practice, then the name “natural history” would get a much higher meaning, for then there would actually be a history of Nature itself.\textsuperscript{775}

But Schelling is far from accepting the historical change of species. It is true that the \textit{physical origin} of each species is the universal organism.\textsuperscript{776} After all, there really is only one, giant organism which strives against all individuality. This is, however, something very different from the statement that all species have a common \textit{historical} origin, or that “the origin of all organisms [is] successive.”\textsuperscript{777} Schelling flatly denies historical species change: “The assumption that different organisms have really formed themselves from one another through gradual development is a misunderstanding of an idea which actually does lie in reason.”\textsuperscript{778} In fact, Schelling says, once each species divides itself into different sexes, absolute species fixity results. Yet he cryptically leaves open the possibility of a Lucretian history of nature in the style of Diderot. Schelling comments that Nature must “start over” with each individual species. Therefore, if one demands an historical picture of nature’s development from Schelling, it would perhaps involve the

\textsuperscript{775} \textit{AA}, I, 7: 316.
\textsuperscript{776} \textit{AA}, I, 7: 112n.
\textsuperscript{777} \textit{AA}, I, 7: 112.
\textsuperscript{778} \textit{AA}, I, 7: 112.
continual appearance and extinction of different species. Nevertheless, Schelling emphatically rejects the modern notion of historical species change.

To conclude this chapter, one must caution against an approach which condemns Schelling for not being Darwin. There is still innovation here. Schelling's idea of the "evolution" of species is similar to Goethe's in that it is a Platonic unfolding of an original archetype. To arrive at the modern idea of evolution, all one needs to do is take this ideal conception of species change and temporalize it. Furthermore, Schelling went further than many in the eighteenth century by giving a fully articulated account of the relationship between physical and organic forces. He championed the idea that life is explainable from "natural principles," sweeping aside both mystical vitalism and soulless mechanism in the process. Schelling's Naturphilosophie, while sometimes striking in its excess, thus looks remarkably modern. In the conclusion to this dissertation, I will investigate some of the ways Schelling is being revived today, and provide some insight as to which approaches succeed and which, thought sympathetic, are dead ends.

779 Ernst Mayr is a good example of this tendency. He complains of the influence of "Platonism" and essentially condemns every scientists prior to Lamarck for failing to recognize historical species change. See The Growth of Biological Thought, passim.
Conclusion: Schelling in the Twenty-First Century

The misguided conception that *Naturphilosophie* represented a brief descent into philosophical lunacy—bracketed on either side by sober, empirically oriented science and philosophy—has long overstayed its welcome.\(^{780}\) The vast majority of German Schelling scholars have long since dismissed this idea, but the English-speaking world lags somewhat behind its German counterpart. Some contemporary American philosophers still use *Naturphilosophie* as an easy, catch-all insult to hurl at their opponents.\(^{781}\)

Ironically, they use the dreaded word “*Naturphilosophie*” much as early eighteenth century orthodox thinkers used the word “Spinozist.” In both cases, the negative effect of the word presupposes a reading public wholly unfamiliar with the primary sources. To a reader familiar with the first part of Schelling’s *First Outline*—the text of which explicitly refutes the idea that *Naturphilosophie* is unconcerned with empirical science—the suggestion that Schelling wanted science to be carried out from the philosopher’s desk will seem uninformed at best and intellectually dishonest at worst. Even Peter Hans

\(^{780}\) The language is deliberately similar to Bertrand Russell’s. Russell famously stated that Fichte “carried subjectivism to a point which seems almost to involve a kind of insanity.” Schelling was apparently unworthy even of a detailed condemnation, since “philosophically, although famous in his day, he is not important.” Both quotations are from *History of Western Philosophy* (New York: Routledge, 2004), 650-651.

\(^{781}\) For example, see the comments of Daniel Brazeale, one of the leading Fichte scholars in America: “It is important to note, even if only in passing, the radical dissimilarity between Fichte’s conception of a philosophy of nature and certain other projects that have gone by the same name. What is most striking about Fichte’s concept of nature is how little he believed one can learn about nature from the a priori standpoint of philosophical reflection—which may explain why he himself showed so little interest in developing this branch of his system....Fichte would appear to have far more in common with what we today call the philosophy of science than with the a priori *Naturphilosophie* of Schelling and Hegel.” See Brazeale, “The Spirit of the *Wissenschaftsidee*,” 179.
Reill, who is thoroughly acquainted with the contextual background of *Naturphilosophie*, engages in some sleight of hand: his dismissal of *Naturphilosophie* rests largely on the conflation of Schelling’s positions with those of his later Jena colleague, Lorenz Oken (1779-1851).782

Hopefully this dissertation has convinced the reader that Schelling himself refuted his later critics not only theoretically—in the methodological sections of the texts—but practically as well. If he really believed that empirical science was unnecessary, he would not have spent years acquainting himself with the latest discoveries in physics, chemistry, and the life sciences. Nor would he have bothered to demonstrate his command of that subject material in his philosophical writings. At times, his theories seem wildly implausible and smack of mysticism. But are they really anymore outlandish than the theory of preformationism, which an entire generation of “real scientists” embraced? The issue here is one of context: if we see Schelling’s project not from our own perspective, but from his, we understand the fact that his *Naturphilosophie* was not a bizarre attempt at dressing up theosophy as science. Rather, it was a serious, painstaking attempt at employing natural-scientific research to answer some of the most pressing philosophical questions of his time. As such, I hope that my presentation of Schelling’s early career contributes to the American Schelling revival already epitomized by the works of Beiser and Richards. Still, even if we dismiss the positivist caricatures of *Naturphilosophie* that have prevailed for nearly two centuries, another question remains to be answered. Does Schelling’s *Naturphilosophie*, properly understood, have anything

782 I do not wish to throw Oken under the proverbial bus in order to make Schelling appear more sympathetic. Were I to do so, I would be engaging in the same practice as Kant and Fichte scholars who dismiss Schelling. However, there is little doubt that some of Oken’s Naturphilosophie—for an easy example, Oken’s placement of snails and elephants in the same class of animals (!)—makes Schelling’s most extravagant passages look tame.
to say to us today? Or is there an insurmountable boundary between his own problems and ours, such that the best we can do is merely to understand him?

One way to argue for Schelling's present-day relevance is to make him out to be a forerunner of this or that scientific theory. This approach has many precedents. One of the easiest and time-honored methods of defending Naturphilosophie is to demonstrate its influence on physics during the nineteenth century. Johann Ritter (1776-1810), a Naturphilosoph in his own right, discovered ultraviolet light partly because he believed in the polarity of nature: since William Herschel had discovered infrared light, Ritter reasoned—in this case correctly—that there must be invisible light on the other end of the spectrum as well.783 Hans Christian Ørsted (1777-1851), the Danish physicist who first established the unity of electricity and magnetism, is also reputed to have been led to his discovery by his affinity for Naturphilosophie and his belief in the unity of all the forces of nature.784 Likewise, some find Naturphilosophie to be a significant influence on the electromagnetic theories of Faraday and Maxwell. One can even find traces of Naturphilosophie in the work of the German mathematician Bernhard Riemann.785 One can even show—much to the chagrin of Ernst Mayr—that Romantic Naturphilosophie

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783 A brief summation of Ritter's discovery in English can be found in Walter Wetzels, "Johann Wilhelm Ritter: Romantic Physics in Germany," in Romanticism and the Sciences, Andrew Cunningham and Nicholas Jardine, eds. (New York: Cambridge University Press, 1990), 199-212.


played a crucial role in moving towards a theory of species change.\textsuperscript{786} By no means am I denying these connections, but I believe they fail as demonstrations of Schelling’s relevance. No positivist will be suddenly converted to Schelling’s cause simply because one particular idea (polarity) proved fruitful.

Given this tendency among defenders of Naturphilosophie, it should come as no surprise that some of the most dominant voices in the present-day Schelling revival set him up as a forerunner to modern self-organization theory. The work of Marie-Luise Heuser-Keßler is undoubtedly the driving force behind this movement. Heuser-Keßler sees a convergence between the ideas of Schelling and those of Ilya Prigogine, who extensively studied dissipative systems. Dissipative systems are, put simply, instances in which nature departs from equilibrium and temporarily organizes itself. One well-known example is a tropical storm or hurricane. A unique set of forces combine to create a well-organized, self-perpetuating system which persists so long as the conditions for it are right. The formation of crystals is another easily understood example. There are, in addition, more complex instances of dissipative systems, such as lasers, convection currents, and even life itself. Dissipative systems are proof that nature has a tendency towards self-organization, and it is easy to find traces of this idea in Schelling’s Naturphilosophie. In the World Soul, Schelling repeatedly insists that there is a universal, organizing principle in nature which drives it out of equilibrium and towards

\textsuperscript{786} Richards’ The Romantic Conception of Life is the obvious example here, although Richards lays out a case using Alexander von Humboldt as an intermediary between Naturphilosophie and the young Darwin.
the “free play of forces” which results in organic life.\textsuperscript{787} Organism is simply the limitation (\textit{Hemmung}) of linear forces in a way that results in a closed causal loop.\textsuperscript{788}

Prigogine drew sweeping conclusions from his study of dissipative systems, rejecting one of the fundamental beliefs of western science. From the ancients up to the twentieth century, scientists have largely been committed to casual determinism. This does not imply that all scientists deny human freedom, but it does mean that they carry out their research in a way which presupposes the operations of nature as deterministic. Pierre-Simon Laplace gave the most famous expression of this belief, stating that, for “An intellect which at a certain moment would know all forces that set nature in motion, and all positions of all items of which nature is composed...nothing would be uncertain and the future just like the past would be present before its eyes.”\textsuperscript{789} Prigogine refers to this belief—that, if we fully comprehended the present, as well as all of nature’s laws, we could deduce both the future and the past—as “reversibility,” and argues that twentieth century discoveries reveal it to be a false assumption:

- Classical science emphasized order and stability; now, in contrast, we see fluctuations, instability, multiple choices, and limited predictability at all levels of observation....In the classical view...laws of nature express certitudes.
- When appropriate initial conditions are given, we can predict with certainty the future, or “retrodict” the past.


\textsuperscript{788} \textit{Ibid.}, 51.

\textsuperscript{789} Laplace, \textit{A Philosophical Essay on Probabilities}, Frederick Truscott and Frederick Emory, trans. (New York: Dover, 1951), 4.
Once instability is included, this is no longer the case, and the meaning of the laws of nature changes radically, for they now express possibilities or probabilities.  

Prigogine thus argues that self-organization reveals a sort of freedom in nature, and this certainly bears some resemblance to Schelling’s Naturphilosophie. In the Oldest System Program, Schelling pleads for a new type of physics which is reconcilable with human freedom, and in the First Outline, he talks about “raising nature up from dead mechanism and quickening it with freedom.”  

However, despite the superficial similarities between Schelling’s and Prigogine’s projects, attempting to revive the former by way of the latter is problematic. While a safe case can be made regarding self-organization, associating him with all of Prigogine’s beliefs is problematic. Prigogine’s commitment to “irreversibility” is by no means uncontroversial. In fact, the vast majority of scientists would reject his theory out of hand. Quantum physicists by no means accept the notion that probabilism leads to an “end of certainty”: Laplace devoted himself to the study of probability for this exact reason. Therefore, this is a very tenuous means of reviving Schelling in the twenty-first century; it appeals only to a small cadre of scientists who are committed to irreversibility. Furthermore, there is no guarantee that even Prigogine’s partisans would care to associate

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791 It is no accident that Walter Ehrhardt, writing on the relationship between Schelling and self-organization theory, identifies the little comment in the Oldest System Program as the departure point of Schelling’s entire Naturphilosophie. (“Selbstorganisation als Metapher” in Marie Luise Heuser-Keßler, Wilhelm G. Jacobs, eds., Schelling und Selbstonorganisation: Neue Forschungsperspektive (Berlin: Duncker und Humblot, 1994), 27-32. Quotation from 30).
themselves with Schelling.\textsuperscript{792} Prigogine himself seemed to accept all the common
criticisms of \textit{Naturphilsoophie},\textsuperscript{793} and if we have learned anything from proponents of the
“non-metaphysical Hegel,” it is that sanitizing German Idealism in an attempt to make it
more palatable fails to convince anyone already inclined to dismiss it as irrelevant.\textsuperscript{794}

Second, and perhaps more importantly, portraying Schelling as the first theorist of
modern self-organization theory means making the same error this dissertation has
continually sought to avoid: pulling him completely out of context. There is simply no
reason to assume that Schelling’s “universal organizing principle” is equivalent to
modern self-organization, for the respective theories respond to dramatically different
contexts. Schelling used his principle as a way of explaining the connection between the
organic and inorganic world in an era where the many doubted even the possibility of
establishing biology as a “real science,” much less basing that science on the idea of
historical species change. On the other hand, modern self-organization theory addresses
itself to an age where biology is recognized as no less scientific than physics or
chemistry. Although scientists still argue about the degree to which biological
phenomena could ultimately be “reduced” to physics, almost no one believes that biology

\textsuperscript{792} To be fair, Hermann Haken, the foremost authority on self-organization in lasers, has commented on
Schelling in a sympathetic light, but he does not appear convinced that there is any point in comparing the
two theories. See Haken’s article “Strukturentstehung und Gestalterkennung in den neueren

\textsuperscript{793} Heuser-Keßler admits this in \textit{Die Produktivität der Natur}, 15.

\textsuperscript{794} A perfect example of this is Robert Wallace’s review of Terry Pinkard’s \textit{Hegel’s Phenomenology: the
Sociality of Reason}. While Wallace admits that “Pinkard’s book illuminates the \textit{Phenomenology’s}
historical narrative very helpfully,” he still is unconvinced that Hegel’s arguments “need to be taken
seriously in the way that Descartes’s, Hume’s, or Kant’s leading arguments need to be taken seriously by
as a separate science should cease to exist.\textsuperscript{795} Finally, despite Heuser-Keßler’s implication that, had Schelling possessed computer modeling (!), he would have been able to validate his self-organization theory empirically,\textsuperscript{796} I have serious doubts as to whether Schelling—who continually insisted that \textit{Naturphilosophie} should explain the phenomena of nature from “natural principles”—would assent to “irreversibility.” Schelling did indeed believe that we could “retrodict” the past philosophically. In fact, after acquiring enough empirical data and applying the methods of \textit{Naturphilosophie}, we can actually grasp the \textit{necessity} present in Nature’s \textit{Stufenfolge}! The teleological emphasis of Romantic \textit{Naturphilosophie} actually makes it as committed to “reversibility” as the mechanism of Descartes.

If the young Schelling cannot speak to us as a forerunner of self-organization theory, does he have anything to offer us at all? I believe the answer is yes, but not in the sense that a certain Schellingian doctrine can be transplanted directly into the present, or that some individual passage can provide the spark for a new scientific or philosophical discovery. Rather, the broad themes of \textit{Naturphilosophie} speak to us more forcefully than any of its particular aspects. This result might not be completely satisfying, but it offers us the only hope of finding inspiration in Schelling without divorcing him from his context. Despite the many flaws found in Schelling’s \textit{Naturphilosophie}, from the \textit{General Overview} to the \textit{Introduction to the Outline}, a few things stand out. First, it offers us a model for cooperation between philosophy and science, not just in the sense that philosophy can guide research, but also in the sense that empirical science can help


us to answer philosophical questions. One reason Naturphilosophie is criticized so heavily, as opposed to earlier philosophical movements, might be that it represents the last full interpenetration of physics and metaphysics in the west. In an attempt to collectively forget the fact that, for 2,000 years, the best philosophers were sometimes also the best scientists, we have set Naturphilosophie up as a scapegoat. Descartes believed that the pineal gland somehow united the soul and the body, and he is excused for this. Newton was as interested in the occult as he was in mathematics, and he is excused for this. Schelling, on the other hand, wrote some silly things about light, and he is not only summarily condemned, but those isolated passages are made out to be paradigmatic of his entire approach to natural science. The demonization of Naturphilosophie is actually a testament to the rigid academic boundary between scientists and philosophers, a division which—perhaps with an eye on Schelling—will perhaps begin to disappear.

On a related note, we would do well to return to Schelling's attempts to reconcile human freedom with physics, or at least to grapple with the problem. If Alan White is right, then Schelling's entire career, from On the I as Principle of Philosophy up to his lectures on the Philosophy of Revelation, was primarily oriented questions of human freedom. During the time he was constructing his Naturphilosophie, Schelling clearly saw that philosophy, working on its own, was unable to sufficiently explain human freedom. Kant had insisted on the mere compatibility of physical and free causes in the Critique of Pure Reason, while Fichte never really attempted to answer the question of how an absolutely free being can interject itself into a sequence of natural causes. Schelling turned to the life sciences for answers, and ended up building spontaneity and
life into nature as whole. I do not believe that this settled the question. Indeed, as I have already noted there, there is a tension in Schelling’s system between the supposed “freedom” of nature and the degree to which the unfolding of the *Stufenfolge* was actually necessary. Nevertheless, one of few areas of research where philosophy and natural science currently come together is in the investigation of the mind, and it is no accident that free will is central to that project. Schelling would remind us that neither neurobiology nor philosophy of mind can solve the problem apart from one another.

Perhaps it is dissatisfying to hear that what Schelling offers us today is merely a broad, methodological insight about the unity of metaphysics and physics, philosophy and natural science. However, the attempts to link him to self-organization reveal the dangers of doing anything more. If we must choose between being cautious and historically accurate on the one hand, and bold but ahistorical on the other, as an intellectual historian I must side with the former. I am not a philosopher of science, but if my historical rehabilitation of the young Schelling helps contribute to his revival in America, perhaps a true, presentist rehabilitation of Schelling’s *Naturphilosophie* will happen after all.
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