Imagination and Science in Romanticism

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On the way to his famous definition of the imagination in the Biographia Literaria, Coleridge proclaims, “It would be an act of high and almost criminal injustice to pass over in silence the name of Mr. Richard Saumarez . . . the author of ‘a new System of Physiology’” (1: 162). Why does physiology matter to Coleridge’s theory of imagination, so much so that not to mention Saumarez would be “criminal”? And what can physiology and Saumarez tell us about the imagination and Biographia that we do not already know? A great deal, it turns out.

Coleridge defines the imagination as “essentially vital” (BL 1: 304), thereby framing it physiologically. Not only did physiologists of the time understand that the imagination was part of how minds work, but they were also obsessed with vitality. Charles Bonnet, to cite only one of dozens of possible examples, tried to work out how ideas excite the soul and therefore considered the imagination as “the physical cause” of “the reproduction of ideas” (CN xxxvi). Georges Cuvier, whose work Coleridge greatly admired (Levere, Poetry Realized 77), thought “the susceptibility of the nervous system [itself was] governed by imagination” (2: 120). Hence, physiologists could use imagination to put together a physiological science but only if reason and imagination could cooperate. Such cooperation was all the more necessary given that life was the main problem of Romantic physiology. Because vitalism—the theory that life could not be reduced to its chemical and physical components—posited a teleology beyond mechanism, the question was, how could it be made more than something imagined? Physician Anthony Fothergill called the principle of vitality “a mere phantom of imagination” (11) because it could not be localized, and Fothergill underscores why vitalism and imagination could share the same fate.
For physiology to be able to rely on the imagination at all, it had to show that it could limit fantasy and work with reason. One therefore needs procedures for distinguishing the merely imagined from objects that have the possibility of actuality, or else physiology would pursue chimeras and ultimately have nothing to study and no way to study it. If life were a principle, one had to make the case for its existence in order to study it and then find a method to engage with it. Yet this problem provided an opportunity. Physiology could model the cooperation of reason with imagination, which was central not only to science but also to the kind of literary criticism Coleridge sought to encourage. He therefore urged the recognition of moments of “the union of deep feeling with profound thought,” which he describes in terms of “the fine balance of truth in observing with the imaginative faculty in modifying the objects observed” (BL 1:80). In this view, truth and imaginative modification go hand in hand, but the only way to achieve that was to observe with the imagination at work and to be conscious of its modifications.

Chief among methods of cooperation was hypothesis, and the key here was that the hypothesis needed to be testable either by logic or by experiment or supported by facts or laws, or else one was not seeing with imagination, one was capitulating to it. Another strategy was to adopt something as a postulate to accomplish certain limited ends. A third option was to look for patterns that might indirectly support the existence of a principle, and one way of doing so was actively to correlate phenomena into a causal law. Coleridge submits, “The progress of all great science is to labor at a law” (PL 360). The final option was to bring the polarities of the subjective together with the objective in hopes that their correlations would enable the appearance of the absolute (Beiser, Imperative 76). The Biographia tries all of these methods, and in so doing, Coleridge underscores, on the one hand, the need to at least limit imagination to objects that have the possibility of actuality so that reason can have its say. On the other hand, without the ability to see with imagination—to “dissolve, diffuse, dissipate, in order to recreate”—no law itself would become apparent.

Understanding how physiology and imagination shape each other allows us to explain the unified ambitions of the Biographia in ways that criticism has been unable to do. When Coleridge referred to the Biographia as his “immmethodical . . . miscellany” (BL 1:88), he alludes to the reasons why it is so difficult to find methods to reconcile imagination and reason. Coleridge agreed with Kant’s thought that “genius is the medium through which Nature gives rules to art, but not to science” (Class 153) and that “genius cannot itself describe or indicate scientifically how it brings its products into being” (Kant, CJ 5: 308). But these meant that science and art and genius are not reconcilable, which was an obstacle
to Coleridge’s claims of genius. Coleridge’s solution in his *Biographia* was therefore to claim genius and science by insisting upon the ways in which life and imagination resisted both rules and conscious knowledge about their principles. Yet principles could be studied indirectly by paying attention to relevant patterns, which would allow one to hypothesize natural laws out of what otherwise might remain merely empirical differences or isolated facts. For Coleridge, physiology was about the drive to individuation, and he thus turns to biography, or life writing, and autobiography to find those patterns that narrate his own individuality, which can be known only retroactively. In this way, physiology helps Coleridge to counter the problem of the unknown origin, by seeing it as a retroactive posit that can be deduced. Because such individuation is beholden to the context that allows the self to appear to itself, but only in relation to an other that cannot be subsumed by the self, the imagination does not devolve into solipsism or endless regression to an unfounded origin.

My procedure here will be first to set up some contexts for Romantic physiology that help us to understand why Coleridge would and could invest himself so much in it. As he sought cures for his opium addiction, physiology increasingly became important to him. I then show how the problem of vitalism—how to make present something that might be a principle—demanded models for the cooperation of imagination and reason, and one needed methods to assess how well each model worked. Kant thought that physiological science had to stick to mechanism, or else it would risk venturing beyond what science and reason could know. Nonetheless, with regard to living organized matter, he turned to a concept of purposiveness because the “inner possibility of the product is understandable only through a causality in terms of purposes” (CJ 413), and “in terms of” reminds us that Kant is analogizing causality as if it were a purpose and thus making it regulative, not constitutive. Nonetheless, Coleridge thought that mechanism implied the death of free will, and, without free will, he could not imagine morality. Where Kant turned to purposiveness via analogy, Coleridge turns to organicism and life, and tries to make life and will a part of scientific knowledge by showing his readers how to look for indirect evidence of it that would confirm it as a kind of causal law. Otherwise, imagination, will, and life would be too unruly, untameable by reason. Although Jerome Christensen reads the *Biographia* in terms of a failure “to establish the free will either ontologically or epistemologically” (96), Coleridge knows with the help of physiological science that all he can do is to posit a will, which he does so he can have a moral system, and this view endows imagination with possibility rather than presumes failure. Possibility of course entails skepticism. He then argues for indirect evidence that would support
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its existence so that the will is more than mere imagination.⁰¹⁵ An added bonus: the discipline of imagination could indicate the strength of the will.

Cooperation between imagination and reason could not take place without a healthy imagination, and thus one needed to know what its and the system’s proper functioning looked like. Lorraine Daston traces how Enlightenment thinkers worried about the imagination’s ability to overtake the will and pathologized a domineering imagination (“Fear” 79).¹⁶ The fact that Coleridge recognizes how the imagination works surreptitiously to unify phenomena meant that one needed to make sure any unities did not violate reason.¹⁷ That the imagination sometimes worked automatically outside of the will did not help. He listed “Blush[ing], contagious Yawning, Night-Mair[s], and Palpitation[s] of the heart” from fear as examples of the mind’s ability to produce changes in his body without any intentional act of the will (SWF 2: 913). Indeed, he explicitly confronts the “surreptitious act of the imagination, which, instinctively and without our noticing the same, not only fills out the intervening spaces, and contemplates the cycle . . . as a continuous circle giving to all collectively the unity of their common orbit; but likewise supplies by a sort of sub intelligitur the one central power, which renders the movement harmonious and cyclical” (BL 1: 267). The imagination’s ability to function outside of human awareness did not have to be a problem if one posited a larger intelligence at work—the Latin refers to an under-intelligence or a secondary intelligence—but this is to move beyond the claims of science. Coleridge defines intelligence as “a self-development” (1: 286). While the appearance of unity is the work of the synthetic imagination, its automaticity enables the feeling of harmony, here described in terms of “movement,” which Kant had insisted made matter empirically available to us. Crucially, Coleridge limits his claims by insisting that the imagination “supplies” the harmony. He further underscores that he “assumes” the power of intelligence “as my principle, in order to deduce from it a faculty, the generation, agency, and application” (1: 286). By highlighting the figure of the circle, a symbol of infinity, and its work of “rendering,” the poet underscores the work of representation.

Coleridge elaborates. In spite of the appearance of chaos, he posits a “method of Nature, which thus stores the mind with all the materials for after use, promiscuously indeed, and as it might seem without purpose, while she supplies a gay and motley chaos of facts, and forms, and thousandfold experiences, the origin of which lies beyond memory, traceless as life itself and finally passing into a part of our life more rapidly than would have been compatible with distinct consciousness and with a security beyond the power of choice!” (Logie 8). Several points must be made here. First, Coleridge insists nature’s seeming promiscuity is an
appearance that should not prevent us from positing methods or purpose behind it and then finding kinds of evidence that would support such purpose. Second, the facts that origins are beyond our awareness and that the velocity of thought makes it impossible to have complete awareness in the moment obviate neither subsequent reflection nor the possibility of a larger organism that would proffer intelligibility. This means that the imagination’s automaticity and quickness need not vitiate its ability to work with reason and gives even more incentives to think in terms of forms and appearances so that its products can be evaluated. And, third, mental rapidity mirrors the elusiveness of life, which not only means that the one might usefully analogize the other, but also that the feeling of vitality might indicate some underlying possible unity in the form of laws between reason and imagination. The analogy functions here not as ideology but rather as a reminder of the correlations between natural phenomena and human experience that suggest the two might have something to say to each other.18

Saumarez helps Coleridge develop some ground rules for this cooperation, and he does so by offering repeated examples of arguments that are “unreasonable to imagine” (New System 2: 170). Linnaeus, for instance, falsely “imagined” that plants possess “sexual organs” (1: 300). Brunonianism, in particular, was the enemy since it rendered “life [as] an effect instead of a cause” (1: 70). He also rejects Erasmus Darwin on the grounds that he cannot understand his system because Darwin’s imagination is too brilliant: “I am ready to confess that the brilliancy of Dr. Darwin’s imagination is too great for the dullness of my conception” (2: 90). Brilliance is at odds with intelligibility, and Saumarez believes that the imagination should strive for the simplicity of clarity. At one point he warns, “Imagination, assuming the office of reason, would willingly assign a particular use to every part; and pronounce one to be a residence or rather the instrument of memory, another of abstraction, a third of volition” (1: 159). Of course, particular use or localization turns attention away from the system as a whole, thus violating both reason and will. To this end, Saumarez claims that “none have [sic] ventured to collect and connect the [isolated facts] together—or to trace the dependence and relation that subsist between the different organs by which the whole system is constituted” (New System 1: v). By foregrounding relationality over difference within physiology, Saumarez highlights a need to look for and underscore cooperation. Reason thus should not rest with isolated facts but, with the imagination’s help, enable the seeing of relationality.

With Saumarez’s help, Coleridge sought to make the speculative powers of imagination a key player in this physiology, but to give these speculative powers
free reign, as when every part of the brain is assigned a particular use (phrenology), would amount to usurping reason. On the one hand, Saumarez declared as his goal the exploration of “the final cause of animated existence attained throughout the universe” (New System 1: viii). On the other hand, he recognized that “I have extended the power of life beyond what has been hitherto supposed, and that some will fancy it to be visionary and absurd. I shall however be ready to support my opinions whenever called upon” (ibid.). If “visionary” declares awareness of a necessary limit to the physiological imagination and that “final causes” belong to God, Saumarez’s bracketing of his remarks as “opinions” needing support testifies to his recognition of that limit. Saumarez further insists on the constant examination of “the structure and . . . action of different animated beings from the most simple to the most complicated. . . . so that I have found the study of the subject always connected with the practice of it” (1: viii).19

Coleridge likewise underscores the speculativeness of his physiological claims because understanding the difference between what is known and what has yet to be proven was a key requirement for imagination to be able to work with reason, and labels his thoughts having to do with religion as “opinions.”20 Thus, in his Hints Towards the Formation of a More Comprehensive Theory of Life (TOL), Coleridge insists, “I shall have done all that I dared propose to myself, or that can be justly demanded of me by others, if I have succeeded in conveying a sufficiently clear, though indistinct and inadequate notion, so as of its many results to render intelligible that one which I am to apply to my particular subject, not as a truth already demonstrated, but as an hypothesis, which pretends to no higher merit than that of explaining the particular class of phenomena to which it is applied” (49). By framing his remarks on life in terms of an hypothesis, and not as a truth already demonstrated, he deliberately refuses to credit his claim as ontological, instead adopting the goal of explanation or intelligibility of a limited class of phenomena, which presumably would change if the facts on the ground changed. And yet there must be a correlation to phenomena if the law is to have any explanatory value. If he were a partisan of speculation, he also was careful to discipline that speculation by both probability and external objects, even though he admitted that “I have no hesitation in avowing, that many an argument derived from the nature of Man, nay, that many a strong tho’ only speculative probability, pierces deeper, pushes more home, and clings more pressingly to my Mind than the whole sum of merely external evidence” (CL 25 May 1820, 5: 1235).21 Here, feeling is the ground of believing, but it is, by implication, only a form of probable internal evidence.
My claim that Coleridge’s thinking about the imagination was heavily indebted to Saumarez and physiology is surprising on a number of counts, many of which have to do with the fact that physiology granted an important role to the imagination, and thus physiological science was hardly necessarily opposed to the creative arts.22 Saumarez in fact thought that physiology was then more of an art than a science because it, like medicine, relied upon experience and practice and it was only just moving toward an understanding of principles and causes (Principles 1: 12–14). In light of Saumarez’s distinction between art as practice and science as principles, Coleridge should be seen as aligning literary criticism with principles insofar as he both seeks to remove it from the concerns of merely personal interest (BL 1: 43–44) and thus to avail himself of knowledge gleaned from physiological science.

There are several reasons for physiology’s salience. For one, we have lost sight of how capacious physiology was: historian of medicine W. F. Bynum argues that from the seventeenth to the nineteenth century, virtually all scientists believed that “the theological soul has physiological functions” (459), and thus spirit and matter had to be reconciled somehow. Physiology grew out of natural philosophy, and natural philosophy centered on finding final causes, which led back to God. Consequently, “adaptations were accepted virtually a priori as the result of design” (445). Moreover, physiologists like Cabanis, Bichat, Magendie, and Whytt reduced mental activity to sensibility, making psychology the province of physiology (Temkin, “Materialism” 318–25). We therefore have blinded ourselves to how much physiologists took for granted the imagination as part of how the mind and body work.23 Cuvier, for instance, wondered how the imagination reproduced ideas, and he insisted that “physiology . . . shews us that there is a certain order of corporeal motions which correspond exactly to those sensations and combination of ideas” (2: 115).

Physiology thus comprehends epistemology, and the question was, how could the imagination become a reliable engine of epistemology? Physiologists felt so entitled to talk about the mind that Maine de Birain was prompted in 1808 to secure the rights of psychology over physiology, and this meant that epistemology and physiology would go their separate ways (Clarke and Jacyna 273). Indeed, Coleridge hoped to move medicine and physiology beyond mere diagnosis of symptoms and organs; he urged the inclusion of mental perceptions as well (P. Edwards 153). John Thelwall, radical, friend, and sparring partner of Coleridge, insisted that “physiological analysis of rhythmus and euphony” was essential to one’s appreciation of poetry (9). Making the case for a science of elocution, Thelwall...
resorted to “impress[ing] the rude imaginations” of his patients, so that they would pay attention and change their habits (13). One thus needed principles to anchor the effective cooperation of imagination and reason.

Coleridge’s understanding of what counts as a physiological definition, moreover, demands a place for imagination and for reason and imagination together to become suitable cognitive powers for the understanding of nature (R. Richards, Conception 68). Coleridge argued that “physiological definition” “must consist in the law of the thing, or in such an idea of it, as being admitted, all the properties and functions are admitted by implication” (TOL 25). In this view, the law must provide causal insight into the various phenomena, and thus imagination must not only draw comparisons but also abstract and harmonize those differences into a causal law. Saumarez had designated the “perfection of mind” as the “final cause of human existence” (New System 1: 198), thus making the imagination key to such development. He also insisted, “Knowledge, properly so called, does not simply consist in the impressions made on the senses by the operations of external phenomena; . . . he alone can be denominated the man of science, who is able to connect the cause with the effect” (Principles 12). Coleridge found this suggestive and went a step further by insisting that the goal of physiology was individuation, which put a concept of a will at the center of his physiology and which allowed his autobiography to dovetail with the demands of physiological understanding. In his Egerton Manuscript entry “Physiology,” Coleridge defined it as being “distinguished from Physics by Life” and then further refined his definition of it as the “tendency to individualize” (folio 91). When he defines “essence” in terms of the “principle of individuation, the inmost principle of the possibility, of any thing as that particular thing” (BL 2: 62), he allows for the becoming of being, for its potentiality, and potentiality too must be imagined. Key to Coleridge’s understanding of individualization were intellect and free will, those posited entities beyond mechanism, and this meant that his physiology actively resisted anything that might make the mind into a form of passivity and that might foreclose the potentiality offered by the will. As he put it to Thomas Poole, “If it [the mind] indeed be made in God’s image . . . , any system built on the passiveness of the mind must be false, as a system” (CL 2: 388). His “if” reminds us that God’s image is a posit.

In addition, the stakes of the imagination were so high within the physiology of the time because before 1800 physiology was more of a theoretical discipline with experiment playing a subordinate role, which meant that imaginative speculation had no one necessary counter to it. As Cunningham puts it, physiology’s “claims to be a science were based precisely on the fact that it dealt in reasoning, not in empirical phenomena, and that it sought causes” (“Pen” 645). It was hence
simultaneously dependent upon rational speculation (637–39). John Abernethy, for instance, defends theory by insinuating that what many call theory is really a product of a “lawless imagination.” He elaborates, “The antipathy which some have entertained to the term theory has arisen from its misapplication . . . opinions formed by processes of mind, similar to those which occur in dreaming, when lawless imagination produced combinations and associations without any reference to realities” (Enquiry 8). Here, Abernethy implies that the encounter between theory and reality enables knowledge and prevents misapplication.27

These already high stakes were further raised by the fact that the imagination was thought to have a central physiological role in the cure of diseases. Far from being immaterial, the imagination was increasingly theorized and documented to effect corporeal change. Simply put, Romantic physiology enabled imagination to matter by granting it corporeal effects. At Thomas Beddoes’s Pneumatic Institute, Coleridge and Davy had given a man claiming to be ill a thermometer to put in his mouth, and the patient became convinced that he was cured by it. Davy asked him to return, and the treatment was repeated for a fortnight (Levere, Poetry Realized 20–21). While the famous Albrecht von Haller fingered the imagination for the pregnant mother’s cravings (Dissertation 330), the noted physiologist John Hunter credited it for both nocturnal emissions and impotence (VD 198–99), and the physician James Adair claimed it was responsible for hypochondria. Hunter cautioned men feeling impotent that “the imagination will operate so strongly as to make the patients believe they really are weakened” (199). Indeed, the American physician Benjamin Rush defined as facts “the influence of the imagination and will upon diseases” and lectured physicians to “avail [them]selves of the handle which these powers of the mind present us in diseases” (6).

Anton Mesmer and Benjamin Perkins helped to document the influence of imagination within physiology and thus helped to make a “rational physiology” seem more realizable in at least two ways. Mesmer claimed that he could manipulate “animal magnetism” and cure patients of various ailments. Physicians in France were so concerned by Mesmer’s infiltration into French medicine that they got King Louis XVI to convene a panel to examine whether Mesmer had these powers or whether he was a charlatan. Benjamin Franklin was one of the examiners. They concluded that “animal magnetism” was mere imagination, and Mesmer’s influence could be explained by the impressionable imaginations of his often female and lower-class patients. Yet if the commissioners disproved mesmerism, they raised the fortunes of imagination and documented that the imagination mattered. They blindfolded themselves and the patients, and, since no one knew when they had received a treatment, one could ferret out whether the alleged
cure actually worked. The imagination then precipitated both the double-blind experiment and the use of placebos, and in so doing helped to make the discipline more rational, insofar as it had improved how it could test claims. In the mid- to late eighteenth century, Elisha Perkins sold metal tractors at an astonishing five guineas per set, which he claimed could cure patients of everything from insect stings to epilepsy. He counted none other than George Washington as one of his patients (Langworthy 39). Perkins had learned a thing or two from Mesmer’s downfall, and so he sold these tractors at a high enough price so that the lower classes and their feeble imaginations would not be an issue. The physician John Haygarth decided to test whether these rods had any powers at all, and so he painted wood versions of these metal tractors and found his patients reported them to be equally efficacious. He encouraged others to test the tractors and advised them that “the cases should be accurately stated, and the reports of the effects produced by the true and false tractors be fully given, in the words of the patients” (4: 2). Since wood lacked the properties to do the work, the only explanation was that those patients had been cured by their imaginations. Haygarth concluded one of his reports with, “This astonishing power of the Imagination was evinced by the unanimous testimony of four physicians and fifteen surgeons and philosophical spectators” (4: 38). If Romantic science helped validate the imagination’s curative powers, it simultaneously put such techniques as the placebo and the double-blind experiment in place. Coleridge himself wondered why there was so much hostility toward animal magnetism, and he resolved “to see it <tried> by others . . . and till then [remain] neutral” (SWF 1: 595). That is, he wished to subject it to scientific scrutiny. These newly documented imaginative powers, then, were to be contained by insisting that only women and the poor believed in them, granting them efficacy.

**SPECSULATION AND HYPOTHESIS**

A physiological understanding of the imagination allows us to see how interconnected the fortunes of the imagination, theory, and hypothesis became during the Romantic period. The role of imagination within physiology enables us to put to bed the notion that the Romantics were, as friends of the imagination, hostile to science. Because within physiology hypothesis could be regulated by being brought in line by either a scientific experience (a statement about the world known to be true thanks to the senses [Dear, Discipline 12–13]), or by experiment, or by what William Whewell would name consilience, or by epistemological modesty, all of which were enhanced by a disciplined subjectivity that would come to be objectivity (Daston and Galison), the imagination’s ability to foster delusion
and fantasy could likewise be constrained by careful discipline. Once the imagination is disciplined, the very power to visualize something not present or visible can become valuable, since one must imagine how to operationalize experiment and share both the experience of the experiment along with any concomitant doubts. The tendency of historicist critics to equate the imagination with ideology thus ignores the methods of discipline the culture put into place to prevent that very problem.

Physiology’s disciplinary issues became ensnared with the problems of imagination because the ability to posit things not present is aligned with hypothesis, theory, and speculation. Physiology provides ways of imagining the contact zones between reason and imagination, mind and body, not to mention science and religion. Saumarez seeks to make physiology into a coherent system, and Coleridge follows suit by asking about the imagination’s role in the development of both mind and faith. And, in fact, Coleridge underscores how, when disease renders a patient unintelligible to him- or herself, he or she becomes “more distressed in mind, more wretched, from the fact of being unintelligible to himself and others, than from the pain or danger of the disease” (BL 2: 234). Making the individual intelligible to him- or herself was thus part of the aim of physiology, and one might say that autobiography thus became a physiological genre.

Paul Ricoeur argues that “every science has a right to allow conjecture to run ahead of confirmation for a time” (118), and, without conjecture, physiology would have no path forward. In the absence of cell theory, electrophysiology, and brain scans, could one have knowledge about the imagination and the brain? If one wanted to talk about the brain at all, therefore, one could not conveniently demonize speculation/hypotheses/imagination. Even Newton himself could not resist hypotheses in his Queries: historians of science therefore recognize two Newtons, the one of the Principia and the other of the Optics. One has to imagine a thing to prove it true. The fate of imagination and hypothesis within science depended in part on whether one thought speculation might help, by positing purposiveness in nature while recognizing that one had no basis for positing godly design, or make things worse, by generating occult entities about which science had nothing to offer. When materialism was equated to French atheism, speculation might rescue the scientist from becoming a scourge. Scientists, of course, generally could not afford then to look like atheists, and, in Science and Spirituality, David Knight has insisted that scientific thought up until the early nineteenth century was often of a piece with religion. And Coleridge considered that too much reliance upon rationalism would allow the soul [to] become “a mere ens logicum” (BL 1: 117), and for that reason both the feltness of its spontaneous
intuitions and information from the senses mattered. Today, Stephen Asma argues that the “imagination is a multi-media processor that jumps laterally through connotations, rather than downward through logical inferences” (27), and Romantic thinkers acknowledge something like this when they turn to association to explain how it works, and then render association into a law so that one did not have to specify its workings beyond spontaneity.

The problem, then, was not how to get rid of imaginative speculation but rather to work with it and figure out its limits, which entailed getting the imagination to work with reason instead of against it. Pretending something is true can be productive for science. And pretending that something is true for a larger gain, like the possibility of morality, was a risk Romantic scientists were sometimes willing to take. Charles Henry Wilkinson speculates in his Essays Physiological that there “may be an insect to whom a mite is an elephant: we may even carry our imagination so far, as to suppose, with Malebranche . . . that in a spot our visual powers are not capable of discriminating, a world may be contained” (188–89). Although Bacon was famous for his advocacy of experiment and was considered to have a “habitual aversion to all speculation,” Coleridge insisted to the contrary that “those sciences ought not to be thought useless that are in themselves useless, if they sharpen and order the wits” (BL 1: 290). But how then to know when speculation sharpened the wits or had gone too far? Kant had argued that the imagination should not encourage occult qualities, and Coleridge likewise rejects material explanations supported only “by the imagination” (TOL 29), which, in the name of substance, often multiplied occult entities, making claims of ontology hardly the work of essence.

Those limits were difficult to suss out, especially because “experiment” had limited powers against speculation. Saumarez explains that physiological experiment was sometimes the brutal work of one’s hands, and as such was powerless against excess speculation: “There is not a lad of twenty years of age, who comes from the country to any of our hospitals in town, and who, after passing with common industry two seasons in any of our anatomical schools, is not perfectly competent to perform any physiological experiment. In addition to a precise knowledge of position, the only requisites wanting, are a steady hand,—a sharp knife,—a tolerably good pair of eyes, and an unfeeling heart” (Principles 7). He argues that “science begins from principles, and proceeds through proper media to the conclusion, from cause to effect, from things general and universal to things particular and occasional” (New System 1: 190). Without principles, experiment was blind. John Abernethy agreed, insisting that “experimental science has not as yet informed us of more than reason has suggested” (Enquiry 34–35),
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and he argued that “hypothesis and theory are the natural and inevitable result of thinking” (8).

By starting with principles, Saumarez was trying to shore up the intellectual prestige of physiology: even the brilliant physiologist John Hunter was known as the knife man or a butcher. Borrowing from Saumarez, Coleridge insists upon “the laws explained by which experiment could be dignified into experience” (TOL 30). A later entry in Table Talk fleshes out Coleridge’s ambivalence to experiment: “Personal experiment is wanted to correct Observation of those experiments which Nature makes for us—i.e. the phenomena of the Universe; but Observation is more wanted to direct and substantiate the course of Experiment. Experiments of themselves cannot advance Knowledge; they amuse for a time and then pass off the scene and leave no trace behind them” (1: 212). Here Coleridge claims observation is “more wanted” than experiment, but also note the modifier “personal,” which seems strange. Personal experiment counters nature’s experiments, which human beings can only know as phenomenality. Not only does “experiment” move from the subject to the object and back again to the perceiving subject, but “observation” must entail reflection, and therefore involve both the poles of subject and object. However, instinctive intuition offered some kind of footing. He argues, “The necessary tendence therefore of all natural philosophy is from nature to intelligence; and this, and no other, is the ground and occasion of the instinctive striving to introduce theory into our views of natural phaenomena” (BL 1: 256). In this view, our instinctive theoretical striving provides both logical evidence for final causes and enables intuition, but logical evidence and intuitions were not to be confused with empirical evidence. Natural philosophy, moreover, tells us something about how our minds work. That instinctive striving was also important because it tied thought to the spontaneity of being, which allowed rules to emerge from the process of thought and thus enabled reason to move beyond the mechanical application of preexisting ideas and rules and toward free will.

Saumarez further helps Coleridge to hypothesize the laws of action behind life and to focus not on the parts themselves but rather on the entire system. Saumarez notes that the “infinite multitude of animated beings we behold in the universe, the various faculties and powers they possess, prove that each system, not only in its progress and evolution, but in the various operations it performs, is governed by laws distinct and peculiar, dependent on the class to which it belongs; and that the living matter of which it is composed is totally different from common matter in a common state” (New System 1: 3–4). Here he posits different laws for living matter as a whole as well as for its local classes, and the question is
how to get to them. When Saumarez labels the “perfection of mind” as the “final cause of any rational physiology” (1: 198), he provides a potential basis for the finding of those laws, though “final causes” does venture into metaphysics.

Coleridge does feel a strong pull to the speculative side of things, as did Saumarez and much physiology writ large. It is especially telling that he risks an alliance with the mystic Jacob Behmen, a theosophist about whom Coleridge remarks, “Many indeed, and gross were his delusions” (BL 1: 146–47). He adds, “There appears to have existed a sort of secret and tacit compact among the learned, not to pass beyond a certain limit in speculative science” (1: 148). He continues, “The true depth of science, and the penetration to the inmost centre, from which all the lines of knowledge diverge to their ever distant circumference, was abandoned to the illiterate” (1: 148). Yet to value speculation was not necessarily engaging in “lawless speculation,” not to mention that a limit to speculation in advance of it was no less dogmatic. Coleridge further takes up from Kant the need to figure out what this entails (1: 237), by which Coleridge means, as Kant did, airy speculations like corpuscularism or those that exceed the possibility of our experience and therefore threaten the very possibility of a “rational physiology” (1: 132). In his Theory of Life, Coleridge insists that the definition of life “must consist . . . in the law of the thing, or in such an idea of it, as, being admitted, all the properties and functions are admitted by implication” (25). Because the particulars must speak to a larger general law, he “reject[s] fluids and ethers of all kinds, magnetical, electrical, and universal,” because they are “super-substantiated” (34) and are therefore ironically beyond substance, and be on alert to avoid such “notional phantoms” (BL 1: 244). By this, Coleridge means notions that either defy laws of embodiment or that exceed our ability to have some experience of them. Both instances show his awareness that imaginative speculation can be unproductive.

Yet to value Behmen’s speculations in spite of their failures and offer what amounts to a historical corrective to that compact against them, Coleridge draws a distinction between enthusiasm and fanaticism, even insisting with rhetorical flourish that the distinction is a “contradistingu[ing]” (BL 1: 147). While Coleridge likens the latter to a swarm of bees, “whose wild and exorbitant imaginations had actually engendered only extravagant and grotesque phantasms” (1: 149), the former amounts to “the perception of a new and vital truth tak[ing] possession of an uneducated man of genius.” Coleridge elaborates, “Need we then be surprised, that under an excitement at once so strong and unusual, the man’s body should sympathize with the struggles of his mind; or that he should at times be so far deluded, as to mistake the tumultuous sensations of his nerves, and the co-existing spectres of his fancy, as parts or symbols of truths which were opening up on
him?” (1: 150–51). The upshot here is that, whereas fanaticism does not even have the possibility of getting to the truth, enthusiasm can amount to a perception of a truth, but Behmen’s mistake is to be possessed by the truth rather than being capable of evaluating it. Behmen once again allows Coleridge to assert a difference between seeing with the imagination and being captivated by it. Coleridge’s explanation stresses the power of ideas to affect the body, but we should also note how the correlation of “tumultuous sensations of his nerves” with “spectres of his fancy” is not a relationship of identity but rather one of mistaken interpretation. Interpretation and the understanding of the limits of correlation, then, provide possible ways to make the will the driver of physiology. And even Behmen could help Coleridge figure out what genuine cooperation between reason and imagination looks like, and, to this end, one needed at very least methods that would distinguish between phantasms and truth.

In the physiology of the time, thus, we find on the one hand a need to speculate in order to make steps forward and have intelligibility. On the other hand, we find a modesty that asserts itself to limit anything smacking of metaphysics so as not to generate phantasms. Dr. Haighton’s thirty lectures in physiology is exemplary. Haighton insists, “We do not pretend to explain to you the manner in which the brain performs its office. We only know that it imparts a something to the nerves by which sensation and volition are carried on; we also know that these can perform no function without the assistance of the brain” (184). Nonetheless, he felt the need to end with this: “conjecture with a great degree of probability. Nerves are conductors of electrical fluid. The experiments made by Galvani and which are resolvable into one, tend to render the theory that the nerves convey a something analogous at least to the analogous to the electric fluid very probable” (203–04). Haighton’s modesty is typical: he does not let us forget that these remarks are at best “probable,” and he urges that the relationship between nerves and electricity is nonetheless merely analogical. Here the literariness of the figure enables intelligibility yet imposes a modesty upon science. That is to say, figurative language was useful to science.

The diminished role of hypothesis within Romantic science further complicates what a rational physiology might look like. In the mid-eighteenth century, Franklin, Buffon, Hartley, and Boscovich hypothesized unobservable entities to explain observable ones: fluid electricity, organic molecules, vibrationuncles, and points (Laudan 12). These led to a methodological impasse: How could induction and experiment justify these entities? Such an impasse helps explain why between 1720 and 1830, hypotheses had fallen radically out of favor within science (Laudan 10–12). No friend to hypothesis, Thomas Reid wrote a compelling polemic against
them, arguing that no real discoveries in physiology and anatomy were ever made by them (Essays 1: 49). His choice of physiology as the ground for thinking about the uses of hypothesis was no accident: after all, everyone had a stake in thinking about how the body and mind cooperate to deal with both sensation and thought (Jackson, Science and Sensation). Moreover, since “conjectures and hypotheses are the invention and workmanship of men, . . . [they] will always be very unlike to the works of God, which it is the business of philosophy to discover” (Reid 1: 48). Unlike Kant, who thought hypothesis and imagination could be disciplined by reason, Reid lambasted hypothesis as prideful and useless and, even worse, a hubristic challenge to God’s works. According to Reid, not a single law or discovery was the result of speculation about nature. He then quotes Newton’s distrust of hypotheses, making him a key ally for cordoning off science from hypothesis (1: 51–52). But of course this was merely selective quotation. Lorraine Daston and Peter Galison frame the issue surrounding hypotheses this way: “how to know when a hypothesis was not a beacon but a fata morgana?” (313). “Fata morgana” raises the issue of an undisciplined imagination, which is why reason and imagination were so insistently yoked together in the science of the time.

A close examination of Thomas Reid’s dismissal of hypothesis shows his assumed linkage of hypothesis and imagination to their mutual detriment. Reid submits, “Conjectures in philosophical matters have commonly got the name of hypothesis, or theories. And the invention of hypothesis, founded on some slight probabilities, which accounts for many appearances of nature, has been considered as the highest attainment of a philosopher. If the hypothesis hangs well together, is embellished by a lively imagination, and serves to account for common appearances; it is considered by many as having all the qualities that should recommend it to our belief” (Essays 1: 47). Reid refutes the many, insisting that our beliefs should have higher criteria. In thinking about why hypotheses had recently gathered enough steam to be dangerous within science, Reid points to the role of intelligibility within natural history, a goal that makes accounting for appearances, in his view, wrongly more important than truth. Even worse, because “men of genius” are especially “prone to invent hypotheses” (1: 47), the fortunes of hypotheses rise with the cult of Romantic genius. Implicitly, Reid suggests that such genius amounts to an overestimation of human powers. Finally, he claims that “discoveries [in physiology] have always been made by patient observation, by accurate experiments, or by conclusions drawn by strict reasoning from observations and experiments; and such discoveries have always tended to refute, but not to confirm, the theories and hypotheses which ingenious men had invented” (1: 49). Perhaps because it is so difficult to come up with a protocol for inventing
useful hypotheses, not to mention to discipline geniuses, Reid would not admit that hypotheses provide things to confirm. Note how Reid lines up on one side patience, strictness, and accuracy against ingenuity and invention. Kant had rejected genius within science because there was no rational accounting for it: “It cannot itself describe or indicate scientifically how it brings its products into being” (CJ 308). Because it was so difficult to invent rules for inventing hypotheses, the resistance of hypothesis to method made it dangerously close to genius.47 Yet even Reid recognized that “in the operations of mind . . . we must often be satisfied with knowing that certain things are connected and invariably follow one another, without being able to discover the chain that goes between them. Such conventions are what we call ‘laws of nature’” (203). Laws, then, finesse the gap between particulars and knowing.

Some Romantic physiologists followed Reid and argued for the need to simply jettison hypothesis because it was equivalent to a prejudiced notion. In his Academical Lectures on the Theory of Physic, Herman Boerhaave consistently linked the term “hypothesis” to a prejudiced notion, and the great Albrecht von Haller treated “hypothesis” with skepticism, going so far as to insist, “beyond the scalpel or microscope I do not make many conjectures” (cited in Gigante 17). John Haighton laments the fact that physiology itself had been reduced to the hypothetical: he argues, “Many have depreciated the study of physiology as being merely hypothetical and therefore of no real use; but such as do this, do this as an excuse for their idleness or to bring others down to a level with their own contracted understanding” (“Physiological Lectures”). Georges Cuvier thought it necessary to distinguish between metaphysical and physiological hypotheses: “By what means is our imagination able to reproduce [images], and our judgment to combine them, draw conclusions, and form abstractions from them? These and other effects of habit and attention, the metaphysician may establish historically, but the physiologist cannot explain” (1: 115).

Coleridge, by contrast, strives to make hypothesis more useful and even methodologically coherent, recognizing that, even if one could not generate protocols for its invention, one could develop ways of testing it so that hypothesis could yield probability. When theories could not be proven or disproven or at least made more probable, they were not scientifically useful as hypotheses.48 Hence, in the Biographia, Coleridge praises Aristotle for proffering “a just theory without pretending to an hypothesis” (1: 101). Although the Greek philosopher uses “movements” to express representations, “he carefully distinguishes them from material motion” (1: 102). Unlike many physiologists who offer such imaginary entities as “successive particles propagating motion like billiard balls . . . or animal spirits . . . or
chemical compositions by elective affinity” (1: 101) in the name of material objects, Aristotle knows the difference between theories and hypotheses, images and things. Theories were fine so long as they did not pretend to be making ontological claims.

We witness Coleridge elaborating on how imagination should cooperate with reason in his discussion of hylozoism and the proper use of hypothesis. Hylozoism was the theory that all matter is part of life or being (BL 1: 131n4). Kant had argued, “If we are to make a hypothesis that [we acknowledge to] be very daring, we must have certainty that the basis we have assumed for it is at least possible, [so that we] can be sure that the concept of that basis has objective reality” (CI 394). Note that Kant insists the concept have a basis in objective reality, which is a long way from the claim of the reality of hylozoism as a thing. Rather, the concept must have some correlation to phenomena. He knocks Spinoza because he thinks “the mere presentation of the unity of the substrate,” referring to the conatus, “cannot give rise to the idea” (394). Coleridge agrees, and warns that hylozoism amounts to the “death of all rational physiology, and indeed of all physical science; for that requires a limitation of terms, and cannot consist with the arbitrary power of multiplying attributes by occult qualities” (BL 1:132). Coleridge echoes Kant’s claim that hylozoism is nothing less than “the death of all Naturphilosophie” (MFNS III, 544). The problem with “occult qualities” is that they impose no limits on science and do not even impose Kant’s demand of the possibility of actuality. Without those limits, the imagination runs amuck.

David Hartley, one of the strongest supporters of hypothesis, argued, “The frequent making of Hypotheses, and arguing from them synthetically, according to the several Variations and Combinations of which they are capable, would suggest numerous Phaenomena, that otherwise escape notice, and lead to Experimenta Crucis, not only in respect of the Hypothesis under consideration, but of many others. The variations and Combinations just mentioned suggest Things to the Invention, which the Imagination unassisted is far unequal to” (1: 347). Hartley insists that hypothesis must lead to experiments, and he even lends support to the myth of the crucial experiment that will solve all the problems; moreover, he calls upon the imagination as a part of the invention of variations and combinations, though he warns that the unassisted imagination cannot cope with all those variations.

We are now prepared to look more closely at Coleridge’s rejection of Hartley and to see how hypothesis plays a role in that rejection, along with the implications of this for the imagination. Although Coleridge appreciates Hartley’s support of hypothesis, Hartley’s method of hypothesis was fatally flawed. From Coleridge’s perspective, Hartley’s problem is that his system is not even logically tenable: his
suppositions are so incoherent that they merit the name of “suffictions,” since one hypothesis is used to buttress another hypothesis, and no facts or observations are involved to back them up. Kant had warned that “if something is to serve as a hypothesis to explain how a given phenomenon is possible, then at least the possibility of this something must be completely certain” (CJ 466). The certainty of possibility becomes the benchmark for measuring the imagination’s contribution. “Suffictions” thus reminds readers of the need for standards of evidence, since there is only thin air holding the hypothesis up, leaving no possibility of testability of the claims. Accordingly, Coleridge lumps Hartley together with “more recent dreamers . . . of chemical compositions by elective affinity, or of an electric light at once the immediate object and the ultimate organ of inward vision” (BL 1: 101).

Crucial to the project of cooperation between reason and imagination was a keen understanding of what an image actually means. Saumarez had warned that “the elastic force of human imagery” was responsible for the false assumption that the medulla of plants was analogous to brain and nerves of animals: plants, Saumarez insists, were not endowed with sensibility (New System 1:312). Coleridge thus warns that although metaphysical systems become popular “in proportion as they attribute to causes a susceptibility of being seen, if our only visual organs were sufficiently powerful” (BL 1: 107), one must not credit imagination or the possibility of visualizability for truth. He continues, “It is a mere delusion of the fancy to conceive the pre-existence of the ideas, in any chain of association as so many differently colored billiard-balls in contact” (1: 108). Coleridge’s simile, his advertised “as,” seeks to remind his audience of what Hartley himself forgot, the essentially figurative status of his vibratiuncles. In a reversal of what historicist Romantic critics of the imagination suggest, he thus accuses Hartley of what we call ideology and reminds us that fancy, not imagination, lacks the capacity to recognize the difference between the real and ideal. Coleridge thus concludes that the law of Hartleyan association would amount to being “the slave of chances” (1: 116).

He insists, “In association then consists in the whole mechanism of the reproduction of impressions” (1: 103), tarring association with the brushes of mechanism and idolatry.

Moreover, anytime images have an agency of their own, they risk idolatry. Bacon had linked the imagination to the idols of the mind, making it the subject of much distrust. Simply put, its images could become idols. Bacon thus warned in The New Organon that “human understanding is moved by those things most which strike and enter the mind simultaneously and suddenly, and so fill the imagination, then it feigns and supposes all other things to be somehow, though
it cannot see how, similar to those few things by which it is surrounded” (98). Framing understanding as easily moved and the imagination as an empty container needing to be filled, Bacon makes it difficult for the imagination to work with reason. Blumenbach warned that the imagination “wakes up the very images of things, bestows on them form and colouring, and marshals them under the view of the mind, as if the objects themselves were again actually present” (Elements 196–97). Hence, Coleridge cautions that picturability is not the same as intelligibility or knowledge. He mocks the presumptions that “whatever our fancy (always the ape, and too often the adulterator and counterfeit of our memory) has not made or cannot make a picture of, must be nonsense” (BL 2:235). Chastening “modern philosophers,” he derides the assumption that “nothing is deemed a clear conception, but what is representable as a distinct image.” The danger here is that “the conceivable is reduced within the bounds of the picturable” (1: 288), and the unspoken danger is that fancy will “ape” clear images.

Only an imagination that was too weak would allow itself to capitulate to the images it produced. Coleridge thus reminds readers that “a dimness of the imaginative power, and a consequent necessity of reliance upon the immediate impressions of the sense, do, as we know, render the mind liable to superstition and fanaticism” (BL 1: 30). In this view, imaginative weakness could lead to an over-reliance upon immediate empirical sensation, and, by connecting empiricism to superstition, Coleridge pushes back on the unquestioned hierarchy between perception and ideas even as he makes perception more active. Moreover, he stipulates that the will can act “by confining and intensifying the attention . . . [to] give vividness or distinctness to any object whatsoever” (1: 127). And, to this end, he deploys the word “sensuous” to refer to “perception considered as passive, and merely recipient” (1: 172). Finally, he calls it “delusion” when one “simply permits the images presented to work by their own force” (2: 134).

What has obscured Coleridge’s self-reflexiveness about Romantic images is de Man’s influential reading of them. De Man, we recall, stipulated that Romantic images had a nostalgia for nature and its alleged stability, which made them especially susceptible to what he called ideology (“Intentional Structure” 13–15). Coleridge, by contrast, brackets the image and refuses to let it become nature by making it an object of epistemological inquiry. He then insists that the imagination’s images are limited to possibility, thus imposing upon them skepticism. De Man’s “image” is closer to Coleridge’s depiction of how fancy works. In this view, the deconstructive critic is the one with the nostalgia for nature, because that nostalgia underwrites the de Manian definition of ideology: “What we call ideology is
precisely the confusion of linguistic with natural reality” (RT 11). To make matters worse, this alleged nostalgia screens the degree to which the discourse of Romantic nature itself resists such metaphysics.

Coleridge’s thinking on how to handle the imagination’s images is even more specific. Using the example of a drawn line, Coleridge writes:

Philosophy is employed on objects of the inner sense, and cannot, like geometry, appropriate to every construction a correspondent outward intuition. Nevertheless philosophy, if it is to arrive at evidence, must proceed from the most original construction . . . In Philosophy the inner sense cannot have its direction determined by any outward object. To the original construction of the line, I can be compelled by a line drawn before me on the slate or on sand. The stroke thus drawn is indeed not the line itself, but only the image or picture of the line. It is not from it, that we first learn to know the line; but, on the contrary, we bring this stroke to the original line generated by the act of the imagination; otherwise we could not define it as without breadth or thickness. Still however this stroke is the sensuous image of the original or ideal line, and an efficient mean to excite every imagination to the intuition of it. (BL 1: 250)

Coleridge is very careful to separate inner from outer and to avoid analogizing the outer from the inner: the outward cannot direct the inner sense. Seeing with imagination, thus, requires the ability to see from both perspectives. He labels the imagined line, “the line generated by the act of the imagination,” as original, giving it temporal priority over the representation of it. Coleridge here considers how the imagined idea of it enables one to abstract away the qualities of depth and breadth. By meticulously separating the inner imagined image from the outer drawn existing image, which is in turn a “sensuous image” of the imaginary line, Coleridge limits the kinds of knowledge that can be gleaned from it. “It is not from it (the sensuous stroke just drawn), that we first learn to know the line,” Coleridge cautions, taking care to separate the representation both from its imagined appearance and from knowledge of the thing. What the sensuous representation can achieve is “an efficient means to excite every imagination to the intuition of it.” Intuition is a feltness that is not yet scientific knowledge, though the shared nature of the excitement—the communication of it—is properly the work of imagination. Making matters more convoluted, philosophers often assume “impresses or configurations in the brain, correspondent to miniature pictures on the retina painted by rays of light from supposed originals” (1: 258). Coleridge therefore warns that “deductions from it” are only “for the purposes of explanation” (ibid.) and implicitly do not count as evidence. Note his emphasis on “correspondent.” John Aber-
nethy had famously declared that “the phenomena of electricity and of life correspond” (*Enquiry* 39), and even he was careful not to presume an identity.

By reminding us of a difference between picturability and intelligibility, Coleridge demands that the imagination’s pictures become essentially objects of critical reflection and not assent. So too does he insist that distinct images are not the same thing as clear conceptions (*BL 1*: 135), thereby widening the gap between image and thought. Furthermore, by framing a “coincidence of subject and object” and not an identity between the two (1: 252) as the vantage point from which to evaluate it, he creates space for the images of imagination to be representations, which, in turn, underscores their role as opportunities for reflection. Where identity imposes one meaning, coincidence and correspondence not only allow for multiple takes on this convergence of happenstance but also refuse the imposition of any one version of causality as a logical predicate.

**PHYSIOLOGY OF KANT AND BLUMENBACH**

Romantic physiology struggled with what to do with life, and these struggles were instructive to Coleridge because they let him know the imagination could not simply be given free reign, especially since some worried that vitalism was merely a phantom of the imagination. If imaginative speculation were to be productive for science, hypothesis had to conform to rules and dogmatism had to be eschewed. Those rules nonetheless could shift based on the larger philosophical framework in place. Although Coleridge’s critics have been divided on the meaning of his use of Kant, with some arguing that it amounted to mere undigested appropriation (Wellek) and others insisting upon thoughtful use of him (Class), my interest here is to show how Kant and Blumenbach helped shape what Coleridge thought healthy cooperation between imagination and reason might look like.

One strategy was to link the rationality of physiology with the argument by design, and in this way science could reinforce theology. Kant, however, had fairly recently taken issue with what he calls “physicotheology” because he considered it to be incoherent. He argues, “No matter how far we take physicotheology, it still cannot reveal to us anything about the final purpose of creation, for it does not even reach the question about such a purpose” (*CJ* 438). For Kant, to conduct biological research, it was necessary to assume the notion of a purposive agent without presuming the existence of a designer, which would take science into theology. The way forward would be to apprehend biological organization as if it were designed—the “as if” coming from the imagination—and to presume “some original organization uses mechanism, . . . without which there can be no natural science at all” (419). So while purposiveness is necessary to account for the possi-
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bility of an organism, was it also real? At the same time, since mechanism alone was “insufficient to allow us to conceive of how organized beings are possible” (422) and although purposiveness is there, one must continue to limit oneself to mechanical explanations if one is to keep to science. Coleridge disagreed.

As Kant explains, purposiveness had the capacity to “guide our investigations of organized subjects and to meditate regarding their supreme basis . . . for the sake of [assisting] that same practical power in us [viz., our reason] by analogy with which we were considering the cause of the purposiveness in organized objects” (CJ 376). The benefit of this strategy, Kant maintains, is that the investigation of the cause of organized subjects thereby requires the very exercise of reason (the practical power in us), and part of this exercise of reason is knowing the limits of our reason and sticking to those limits. At the same time, Coleridge is aware of the fallacy of mistaking “the process by which we arrive at the knowledge of a faculty for the faculty itself” (BL 1: 123). Although purposiveness in Kant is an a priori idea because it is necessary to account for the inner possibility of organized beings, it is the imagination working with reason that allows empirical evidence to be connected to that idea. Kant puts it thusly: “This apprehension of forms by the imagination could never occur if reflective judgment did not compare them, even if unintentionally at least with its ability to refer intuitions to concepts” (CJ 190). He also warned that mechanism had to be combined with purposiveness because “[going to the extreme of explaining everything only mechanically] must make reason fantasiize and wander among the chimeras of natural powers that are quite inconceivable, just as much as a merely teleological kind of explanation that takes no account whatever of the mechanism of nature made reason rave” (411). Kant suggests that looking at living beings with mechanism by itself or purposiveness by itself would allow imagination to usurp reason, either by encouraging fantasy and chimeras or by making reason rave. Earlier, he had described the convergence of transcendental idea and its objects as only “an idea (focus imaginarius)” (CPR B672). For our purposes here, the status of purposiveness had tremendous implications for imagination’s ability to work with reason. Because Coleridge posits the imagination is a “living power,” and because physiology itself is underwritten by the fact that purposiveness—which Coleridge often refers to as “intelligence”—is a concept that corresponds to empirical data but cannot dogmatically refer to a beyond beyond itself, Coleridge learns from Kant the virtues of being modest about the ontology of intelligence within science, and he applies this wisdom to his thinking about organicism. Although Coleridge does argue that “a productive Idea, manifesting itself and its reality in the Product, is a Law, . . . A physical Law, in the right sense of the term, is the sufficient Cause of the
Appearances” (marginalia to Richard Hooker, CM 2 :1144–45), his qualifier “productive” insists that the idea must be evaluated before it can become a candidate for “manifest” reality. Crucially in this marginal note, Coleridge takes Hooker to task for asserting the preexistence “of the Thing to all its constituent powers . . . and which under any scheme of Cosmogony is a mere phantom, having its whole and sole substance in an impotent effort of the Imagination or sensuous Fancy” (CM 2: 1144). Kant, in turn, was following Blumenbach.

Blumenbach, Coleridge’s teacher, developed the concept of the Bildungstrieb, a formative force. Kant praised Blumenbach for having “establish[ed] correct principles for applying it, which he did by avoiding too rash use of it” (CJ 424). Most physiologists of the time granted organicism some kind of causal role but took from Kant the need to justify their metaphysics (Beiser, “Kant and Naturphilosophie,” 8–10). Blumenbach explained his reasoning in his An Essay on Generation. “It is to be hoped, that there is no necessity for reminding the reader, that, the expression Formative Nisus, like that of attraction, serves only to denote a power, whose constant operation is known from experience, but whose cause, like the causes of most of the qualities of matter is a qualitas occulta to us. We may say this, as of all similar powers, what Ovid says:—Causa latet, vis est notissima” (20–22). Blumenbach clearly defines this formative nisus as an effect, and he is careful to insist that our experience has access to it, but only as an effect. Formative nisus, thus, is here the expression of an effect. Experience shows us its constant operation but cannot get to its cause nor claim it as cause. Blumenbach even quotes Ovid to say that “while the results are known, the cause is hidden,” and Ovid makes this pronouncement about the cause of Salmacis’s fountain’s ability to enervate men in book IV of The Metamorphosis. If causality is beyond knowing, then the obligation is to extrapolate general laws from the phenomena that have the potential to be the form for causality, but not causality itself. Blumenbach thus appropriates Ovid’s figurative language to indicate a gap between effect, which can be seen, and cause, which cannot, but the power of his concept of the nisus stems from its ability to be both cause and effect. While this gap suggests for Kant Blumenbach’s awareness of the limits of the concept, Blumenbach’s use of the concept is not in actuality so tidy. It is fitting that Ovid’s Metamorphosis, which is about change but not so much about causality, provides Blumenbach with the figurative language with which to finesse this difference, but the figure is of an enervating fountain, which claims effects but not causes.

Blumenbach goes on to state, “I know no means so well calculated for rendering the existence, and activity of this nisus evident to an impartial eye, as to observe the origin and progress of such organized bodies, which increase so rapidly
in bulk, that the action of the growth becomes almost evident; and which are of
delicated and semitransparent a texture as to be capable of being evidently seen
thought with the assistance of a microscope, and a due degree of light” (Essay 62).
Several points need to be made. Blumenbach must figure out how to render the
existence of the nisus, which means that instead of taking ontology for granted,
he has to make a case for it and then show us what to look at. To do that he adopts
the stance of an “impartial eye” and then invents kinds of evidence that would
speak to that eye. He chooses the embryo’s growth but warns that the semitrans-
parent texture of the growing organs makes the action difficult to see. By defining
the nisus in terms of its action, he correlates its effects, which can be seen, to its
cause, which cannot. Frederick Beiser suggests one further nuance, which is that
the Romantics take Kant’s concept of natural purpose and then generalize it to all
of nature. As a result, “there is no fundamental difference in kind between the
ideal and real, the mental and physical, since they are only different degrees of
organization and development of living force” (“Kant and Naturphilosophie,” 12).
I would qualify Beiser to insist that while this is true of their idealizing moments,
in times of skepticism, they saw the dangers of this strategy. The Romantic imag-
ination writ large is about this very problem. Where Kant praises Blumenbach for
recognizing the difference between cause and effect, which seems to license a dis-
tinction between the regulative and constitutive use of concepts, Coleridge sees
in Blumenbach a method for “rendering” imagination into reasoned cause that
does not dogmatically assume a particular cause to be an empirical object.

In his manuscript on physiology, Coleridge adopts Blumenbach’s idea of a
formative nisus. In it, he tries to solve the problem of how to get to an I or con-
sciousness that is distinct from the organic body but yet of a piece with it. Here is
how is goes about it:

There is but one way of escaping—namely beginning with the highest idea, or
the problem which involving its own solution at once renders further ascent
impossible, and the thought of any antecedent absurd, and possesses the con-
ditions of solving all other problems—then from this to obtain the idea of the
lowest—and lastly, by the two-fold force, a nisus ascension is from the latter and
a vis potential from the former to cause the Idea, Self, Consciousness, or the I
to rise as a product and as a necessary part of the same series with Body, Orga-
nization, &c.

(“Physiology” n.p.)

Coleridge follows Kant on how to bring causality in line with reason. Kant writes,
“Such a [causal] connection, considered as a series, would carry with it depen-
dence both as it ascends and descends” (CJ 372). Like Kant, Coleridge is preoc-
cupied with how a reasoned causality for organized beings is not merely effective at one level, but rather must work whether one ascends to a higher level or descends to a lower one. In this view, when physiology can grapple with higher and lower versions of a nisus, an I can emerge from the lowest form of it. The nisus is both part of the body and part of what allows the self. What allows the difference to occur is the passage of time and organic processes. Note that in keeping with Kant’s insistence that we limit our knowledge of things to their forms and appearances, Coleridge frames this nisus as an “idea.” Because this idea is “part of the same series with Body and organization,” dualism is attenuated, and the phenomena of organization can be correlated to the idea of the self or consciousness. Coleridge argues in the *Biographia* that the self “is groundless; but only because it is the ground of all other certainty” (1: 260), and what he suggests here is that it is the vantage point through which we have consciousness. The idea of nisus, thus, can be the basis for the conceptualization of the origins of a self as individual. As Coleridge remarks, “It will be hereafter my business to construct by a series of intuitions the progressive schemes, that must follow from such a power with such forces, till I arrive at the fullness of the human intelligence” (1: 286). That scheme, the poet insists, is his construction of intuitions. The levels of its analysis nonetheless give it some validity because it is starting to take on the form of a law and won’t do so until that fullness has been reached.

Blumenbach was also helpful to Coleridge insofar as he thought that metaphor could be generative for science. In the poet’s later marginal annotations to Blumenbach’s *On the Natural Differences of the Human Race*, Coleridge argued, “The fault common to the Systems & Systematizers of Natural Hystery (sic) is, not so much the falsehood not even unfitness of the guiding principle, diagnostic or teleological, adopted in each; as that each is taking as the only one, to the exclusion of the others” (CM 1: 536). Blumenbach had written, “Although I can on no account admit that ordinary importance and dignity in the theory of the gradation of nature which is so generally embellished and praised by natural theologians, nevertheless I gladly concede that these metaphorical and allegorical games are undeniably useful in facilitating the methodology of natural history” (ibid.). Thinking of physiology as an allegorical game that can be methodologically useful allows more than one leading idea to take root and organize it, lending a plurality of options because what one observes has more to do with the appearance of the thing than the thing itself. With more options on the table, Coleridge thinks that the chances of improving intelligibility rise because metaphor provides asymptotes to totality.

We are now in a position to understand how carefully the imagination must
tread in order to work with reason. Coleridge made a place for ideas as physiological phenomena and indeed explicitly considered “the laws that direct the spontaneous movements of thought and the principle of their intellectual mechanism” (BL 1: 91). So that physiology would not become a mechanical cause, but rather work with the will, he postulated the law of vital action as the action of individuation.58 He therefore considered how “inward experiences” had previously been categorized in terms of the “merely receptive quality of the mind; the voluntary, and the spontaneous,” which he thought occupied the middle position between the other two (1: 90), and he names the principle for these distinctions “the absence or presence of the will” (1: 89). One way previous researchers have underestimated the will is by “mistaking conditions of a thing for causes and essences” (1: 123). As he insists, “We are not investigating an absolute principium essendi . . . but an absolute principum cognoscendi” (1: 282). That is, following Kant, his quest was not for principles of being but rather for principles of how we can reliably know something. This meant that any claims of constitution would require the utmost skepticism, or else they risked providing mere imaginative phantoms.

Organicism and imagination stand at the intersection of subject and object; they require for Coleridge a teleology beyond mechanism that can be adduced by a posit undertaken for sake of a specific goal or by the recognition of patterns from which one can infer causal laws. Coleridge thus speaks skeptically of physiological laws in terms of constitution, a word that explicitly hearkens back to Kant’s distinction between a regulative and constitutive law. Thus, when he dismisses the reality of the billiard-ball metaphor for ideas, he writes, “No! we must suppose the very same force, which constitutes the white ball, to constitute the red or black; or the idea of a circle to constitute the idea of a triangle, which is impossible” (BL 1: 108). Here, the claim of constitution is incoherent. Critics who argue that Coleridge’s constructions are constitutive have not taken seriously his skepticism about constitutive arguments. Mere assertions of constitution can only be dogmatism. When he considers the hypothesis that the nerves acquire a disposition to certain vibrations, his tactic is to allow the supposition temporarily, determine whether it conforms to logical possibility, and then evaluate the claim. He insists, “We will grant, for a moment, the possibility of such a disposition in a material nerve” (1: 108). He goes on to waive an initial objection, and “pre-suppose the actual existence of such a disposition,” but, in the end, he determines that reason has gained nothing from this pre-supposition (ibid.). He goes on to insist, “The highest perfection of natural philosophy would consist in the perfect spiritualization of all the laws of nature into laws of intuition and intellect.59 The phenomena (the material) must wholly disappear, and the laws alone (the formal) must remain.”
Coleridge’s explicit goal then is to allow the material to be seen in terms of formal laws, which, in turn, speaks to the phenomena in the forms that they appear. Only in this way, he argues, will imagination be kept within its proper bounds, and his conditional verb “would,” as well as his insistence on the formality of those laws, telegraphs those bounds.60

With regard to teleology, Coleridge, on the one hand, adopts providential language, as when he opines that “to us [referring here to the British] heaven has been just and gracious” (BL 1: 190). On the other hand, he is mindful that science imposes limits to teleology, and certain claims of preexistence are beyond the bounds of science and would in fact undermine scientific reason itself. He thus insists that, “for to bring in the will, or reason, as causes of their own cause, that is, as at once causes and effects, can satisfy those only who in their pretended evidences of a God having first demanded organization, as the sole cause and ground of intellect, will then coolly demand the preexistence of intellect, as the cause and ground-work of organization” (1: 112). In this regard, Coleridge’s definition of the imagination in terms of “a repetition in the finite mind of the eternal act of creation in the infinite I am” needs revisiting. “Repetition” announces the subjective side of things insofar as it is a pattern to be perceived. Moreover, “repetition” suspends teleology insofar as the meaning of this repetition and its function are not clear, although repetition then does offer a parallelism between the human and the divine that licenses correlations between the two kinds of phenomena. Coleridge’s avoidance of symbol and underscoring of allegory here—the finite allegorizes the divine—nonetheless leaves open the question of what the allegory is to achieve even as it suspends ontology.

**WILL AS POSTULATE**

The danger of a physiological imagination was that it might subject everything to corporeal regulation or blind causes. Especially mindful of this problem, Coleridge insisted that the living power “must act in my Will and not merely on my will” (CL 25 May 1820, 5: 1235). Not only did he consider the will to be “an especial and pre-eminent part of our Humanity,” but also he recognized that there was “more in man that can be rationally referred to the life of Nature and the mechanism of [biological] Organization” (AR 135–36). This will was “something more than can be rationally referred to . . . Nature and Organization,” but thankfully science had an alternative method of turning to geometrical postulates. Coleridge later comments, “We have begun, as in geometry, with defining our terms, and we proceed like Geometricians, with stating our postulates” (136). Like Kant, he thought the will had to be postulated, or else there was no possibility of moral enfranchise-
ment at all. As he puts it in “Elements of Religious Philosophy,” from *Aids to Reflection* of 1825, “Beginning with one or more Assumptions... is common to all science” and that he “assume[s] a something, the proof of which no man can give to another, yet every man may find for himself” (136). The bottom line was that, for Coleridge, will explains how life works teleologically according to its own purposiveness, which he frames as individuality. Within the *Biographia*, he notes that “geometry therefore supplies philosophy with the example of a primary intuition, from which every science that lays claim to evidence must take its commencement” (1: 250). Hence, he “assume[s] as a postulate, that intelligence and being are reciprocally each other’s substrate” (1: 143), and this postulate allows mind/will to interact with matter.61

To this end, Coleridge demands what he calls a “rational physiology” (*BL* 1: 132) that is wary of dualism and of mechanistic theories, but one that turns to postulates like the will and a common substrate between intelligence and being to prevent physiology from being reduced to mechanisms while postulates prevent the imagination from cashing a blank check.62 As he argues explicitly in his refutation of Hartley’s association, “The will, the reason, the judgment, and the understanding, instead of being the determining causes of association, must needs be *represented* as its creatures, and among its mechanical effects” (1: 110). He thus refuses a physiological model that would allow his “muscles and nerves... [to be] set in motion from external causes equally passive” and thereby leaving anything like an I out of it (1: 118–19). Coleridge further argues that “the essence of a scientific definition [is] to be causative, not by the introduction of imaginary somewhats, natural or supernatural, under the name of causes, but by announcing the law of action in the particular case, in subordination to the common law of which all the phenomena are modifications or results” (*TOL* 25). The way science pursues cause is to find laws of action that pull together various phenomena. His phrase, “imaginary somewhats,” is crucial, insofar as it defines the ontologizing of imaginary entities as a major fault line beyond which science cannot exist. He therefore chides Descartes for his “fanciful hypothesis of material ideas” (*BL* 1: 98). As a result, physiological entities are to be apprehended as hypothetical agents and defined in terms of the laws of their actions, and not just mechanisms and effects. Nor are conditions to be mistaken for causes or laws (1: 110). On the ground, this translates to a correlation of biological phenomena to laws of action and the limits of the claim to the status of representation or form. Here he builds upon Saumarez’s rejection of physiological systems like Brunonianism, because they insist that life is “merely an effect of which the action is the cause” (1: v). Coleridge continues, “It must likewise be so far causal, that a full insight having been ob-
tained of the law, we derive from it a progressive insight into the necessity and generation of the phenomena of which it is the law” (TOL 25). The claim of causality must produce insight into the production of the phenomena. He warned that “imagination [must] not be left limitless and employed as a mere x y z or substitute for the whole terra incognita of Causation” (SWF 2: 913). Once again, Coleridge is shrewder than he has been given credit for being.

Dualism, moreover, must also be contained because mind must have some way of interacting with the body. Not only did dualism threaten the unity of nature, but also it failed to explain how the intelligible and sensible could interact with one another. Coleridge explicitly rejects the idea that a “Principle of Thought and Life was really distinct, as well as mentally distinguishable from the Organic Body” (“Physiology” 94) on the grounds that “organic lesions, or obstructions, exert a disturbing force on the thoughts themselves” (ibid.). Since lesions impacted thought, thought logically must at least supervene on the material. He added in the Biographia, “The mind is affected by thoughts, rather than by things; and only then feels the requisite interest even for the most important events, and accidents, when by means of mediation they have passed into thoughts” (1: 31). Although he uses the term “mind” here, which might suggest dualism, he emphasizes the feeling that surrounds thought, and thereby allows thought to have corporeal impact.63 At the same time, because, as Seamus Perry notes, any monism also comes with the threat of determinism (79–81), Coleridge never allows any unity to remain stable.

BIOGRAPHIA

Although critics of the Biographia and of the poet’s theory of imagination have been obsessed with determining its success or failure in harnessing the unifying powers of imagination, a physiologically attuned understanding of the imagination recognizes how physiology provides a model for Coleridge’s thinking about life and organicism, and the relationship between imagination and reason. It is less the product that matters than the process put in place for imagination and reason to produce knowledge. A central focus of the Biographia is to understand the difference between the real, what can be proven as real, and the imagined. Without knowledge of these differences, no knowing is possible. A rational imagination has the added benefit of recognizing the difference between hypothesis and knowledge, and the recognition of a gap between the two serves as a necessary condition for the seeking of kinds of verification or confirmation, be they experiment, logical reasoning, or the finding of patterns that suggest laws of action.

Coleridge’s critics have long known that one of his goals in the Biographia was to prove his own unlearned genius. What has gone unnoticed is that he simulta-
neously claims physiological science and genius, and he can do so because, although genius operates spontaneously by unconscious rules and thus would seem to be outside science’s grasp, physiology has methods for extrapolating rules and laws from patterns of phenomena. Thus, life can be indicated by showing that a law of individuality applies to living things. Coleridge writes, “Even natural science, which commences with the material phenomenon as the reality and substance of things existing, does yet by the necessity of theorizing unconsciously, and as it were instinctively, end in nature as an intelligence; and by this tendency the science of nature becomes finally natural philosophy, the one of the two poles of fundamental science” (BL 1: 256–57). Here, science begins with material phenomena, only to unconsciously theorize those phenomena as if nature were intelligence, and in this way natural science and natural philosophy combine to produce knowledge by pursuing the poles of object and subject. In the process, unconscious principles can reveal both what we need in order to know something and patterns in the relevant material phenomena, which is to say that nature and our minds are to be read as forms. When Coleridge insists that “in all acts of positive knowledge there is required a reciprocal concurrence of both, namely of the conscious being, and of that which is in itself unconscious” (1: 255), he allows science, too, to partake of genius, despite genius’s debts to the unconscious, and he defines the form in terms of reciprocal concurrence. He posits simultaneity and reciprocity, implying there is some kind of ecology between the two, but crucially once again refuses identity.

In the chapter on the irritability of men of genius in the Biographia, Coleridge further defends genius against solipsism and turns to physiology to do so. Although he makes a distinction between an author and a man—he argues that, where the author tempers irritability, the man is ruled by it—Coleridge hopes that all men will learn the wisdom of a “calm and tranquil temper” (1: 33), a precursor to objectivity and to the proper disciplining of imagination. He insists, “What is charged to the author, belongs to the man, who would probably have been still more impatient, but for the humanizing influences of the very pursuit which yet bears the blame of his irritability” (1: 37). While irritability may be physiological, it can be influenced by our pursuits, and those influences are also part of the study of physiology. Of course, Coleridge warns that it is only those desiring to be thought poetic geniuses who are truly irritable, and the condition is to be explained by the fact that irritability is a screen for the knowledge that they cannot attain the reputation they most want. Implicitly, the author and reader of literature can be humanized, and, by understanding the true cause of irritability, something can be done about it. We should expect nothing less from the man who invented the
term “psychosomatic.” Moreover, he insists that “true genius” bears a sensibility beyond one’s own “personal interests” (1: 43). Because genius of the time is being defined as not capable of being learned, this indifference to self-interest was the only thing keeping it from being totally self-absorbed. He elaborates, “The man of genius lives most in the ideal world in which the present is still constituted by the future or the past; and because his feelings have been habitually associated with thoughts and images, to the number, clearness and vivacity of which the sensation of self is always in an inverse proportion” (1: 43–44). Not only does Coleridge seek to remind readers that sensibility does not necessarily entail mere selfishness, but he also highlights how both paying attention to the right habits and distancing oneself from the immediate needs of the self can influence at least the meaning one makes out of one’s physiology, if not the physiology itself.

I now show how Coleridge’s physiologically informed definition of the imagination entails a performative demand: one whereby the active reflection on elements of the definition helps to articulate the imagination’s tendency toward individuality. That is, the act of reasoning about the imagination must inform how to connect intuitions with concepts, but those connections must remain hypothetical. In the process, Coleridge adopts a Kantian strategy to insist upon a transcendental deduction of the idea of an organism in terms of individuality. Coleridge’s insistence that physiology is about the “tendency to individualize” confronts mechanism’s emptying out of the self. And having heard Kant’s worry that claims of purposiveness might speak only to our explanations, Coleridge suspends the question of “whether any other philosophy be possible, but the mechanical; and again, whether the mechanical system can have any claim to be called philosophy” as “questions for another place” (BL 1: 106–07). To this end, Coleridge introduces new vocabulary, or at least tweaks the common meanings of words to prevent stale associations and foster new ones, going so far as to “re-introduce . . . objective and subjective” (1: 172). Cognizant of the fact that the words had earlier meant the reverse of their contemporary meaning, with “objective” earlier referring to the thing as constituted through the perceiving mind and subjective referring to the object of thought, Coleridge tracks both subjective and objective elements of his argument, hoping that both together will provide at least insight into a possible parallelism, which, in turn, may provide a glimpse into the absolute. Coleridge insists that nature “is the sum of all that is merely objective,” and he defines the “objective” as “comprising all the phenomena by which its existence is made known to us” (1: 254). Here, the objective is epistemological and not ontological; it is equivalent to a phenomenality that makes us aware of existence. Thus, when Coleridge brackets his definition of imagination by framing it in re-
lation to himself, he demands that readers adopt a similar distancing and reflection. Coleridge insists, “I consider,” “I hold,” and “I consider,” and his definition evolves into a stance framed around a looking subject. The definition preserves both subjective and objective poles by stopping short of synthesis, leaving space for the imagination to straddle.

Coleridge thus explicitly positions himself between the transcendental philosopher and the natural philosopher. The problem with the transcendental philosopher is that she or he “is anxious to preclude all interpolation of the objective into the subjective principles of his science, as for instance the assumption of impresses or configurations in the brain” (BL 1: 258). The transcendental philosopher’s knowledge is subjective in the sense that it is about the forms and appearances of the thing. The natural philosopher, by contrast, “directs his views to the objective, [and] avoids above all things the intermixture of the subjective in his knowledge, as for instance, arbitrary suppositions or rather suffictions, occult qualities, spiritual agents, and the substitution of final for efficient causes” (1: 257). Both systems avoid synthesis; hence, Coleridge insists on a parallelism of the subjective and objective, but one that preserves difference. As he puts it, “All knowledge rests on the coincidence of an object with a subject” (1: 252).

Coleridge’s reliance upon a “coincidence” of subject and object and not an identity between the two is significant, because “identity” would mix fundamentally different epistemological categories. He adds, “during the act of knowledge itself, the objective and subjective are so instantly united, that we cannot determine to which of the two priority belongs … While I am attempting to explain this intimate coalition, I must suppose it dissolved” (BL 1: 255). Here, unity is a product of the act of knowing, and Coleridge resolves that he must “give hypothetical antecedence [to the one], in order to arrive at the other” (1: 255). And because the imagination, according to Kant, functions at the pole of the subjective by offering a unified self, and at the pole of the objective, insofar as it unifies the manifold of sensations, it alone bears the responsibility for unity at both poles. Only a “strict skepticism” can lead us to and preserve this “coincidence,” which enables a correlation that is a basis for the hypothesis of causality but refuses to assume correlation is identity.

We can witness this skepticism at work in at least two ways. Coleridge’s stance toward common sense bears explanation because it effects how reason works with imagination. He submits that common sense “is not indeed entitled to a judicial voice in the courts of scientific philosophy; but whose whispers still exert a strong secret influence” (BL 1: 131). He goes on to praise Wolff, “the admirer, and illustrious systematizer of the Leibnitzian doctrine, [for] content[ing] himself with de-
fending the possibility of the idea, but . . . not adopt[ing] it as part of the edifice” (1: 131). The upshot here is that while common sense cannot adjudicate, it can influence the scientist to recognize that the proof of something’s possibility is perhaps an insufficient basis for making it part of the system. Once again ontology is off limits; Leibniz garner’s praise for not “adopting it as part of the edifice.” Coleridge’s stance with regard to causation is equally skeptical. “Whenever we . . . pierce into the adyta of causation; and all that laborious conjecture can do, is to fill up the gaps of fancy” (1: 107). His use of the Greek word *adyta*, meaning “innermost sanctuary” and implying something not to be entered, warns that claims of causation might be equivalent to religious superstition, and that laws are only a form of causality. Note how he limits the powers of conjecture to the mere filling in of what fancy left out and thus implies that conjecture alone is insufficient and cannot be considered knowledge. Finally, he acknowledges that the supposition of antecedence is a methodological necessity, because one needs a place to begin.

Let us now consider Coleridge’s own individuality. Read in light of physiology, the *Biographia* postulates a will so that Coleridge’s story of individuation can be told and so that particulars can be narrativized by a guiding principle. What follows is “Sketches of My Literary Life and Opinions,” and thus the poet must sort out how to distinguish what is his from what is everyone else’s. Coleridge is careful not to claim singularity as a writer until after having reviewed Greek, Roman, and British literary history. “Though I have seen and known enough of mankind to be well aware,” he writes, “that I shall perhaps stand alone in my creed, and that it will be well, if I subject myself to no worse charge than that of singularity; I am not therefore deterred from avowing, that I regard, and ever have regarded the obligations of intellect among the most sacred of the claims of gratitude” (1: 15). His syntax is telling, shoring up the pronoun “I” around a sea of others even as he defines singularity in terms of “obligations” (ibid.). “Gratitude” implies that the obligations have been consciously recognized and embraced. Coleridge intends for this blanket “gratitude” to insulate him from the charges of plagiarism. Singularity can be shown only in relation to context, and such a maneuver replicates the very etymology of “individual,” which means “that which cannot be divided from.” Note that Coleridge turns to singularity as a concept, a designation, instead of an attribute. Because the very ground of singularity makes singularity in the sense of complete originality impossible, it transforms method in this case to an endless loop that is the *Biographia*. Such a loop also equates to a drive toward individuation that is equivalent to life regardless of whether that individuation has been fully accomplished: the gap between accomplishment and the principle will end only upon death.
Coleridge thereby simultaneously reduces the conditions of success for individuation to the existence of the life drive and converts singularity into a concept that can be instantiated only as a verb. Analogously, when he connects imagination to the infinite “I am,” he transforms it into a being without end, which is to say an ideal being. Life as individuation allows being to be accessed by method, thereby allowing being and truth to be reconciled if only because they are both beset by the same problems. Likewise, he argues that what looks to his critics like an absence of judgment was really a youthful inability to realize that judgment. Coleridge insists, “My judgment was stronger, than were my powers of realizing its dictates” (BL 1: 8). Because “judgment” here stands in for a kind of unlearned genius whose absence is not an absence of judgment itself but rather the powers of realizing it, Coleridge underscores his youthful genius by insisting that the potential was present if only critics knew how to recognize it in its incipience.

The angle physiology imposes on this quest is, given that human beings share a physiology, how does one know what is mine? Coleridge’s insistence upon distinguishing between the subjective and objective and yet bringing them together as coincidence while refusing identity helps him address this question, as it demands that we keep in mind the difference between concepts that are necessary to our understanding and things that fundamentally are exterior to ourselves, and thus unknowable as things in and of themselves. From Coleridge’s perspective, being cannot be understood without the concept of individuation, which, in turn, cannot be understood without some sense of the development of intelligence. Likewise, truth cannot be guaranteed by what Coleridge refers to as our instinctual reaching for it, but this instinct, to the extent that it can be proven, suggests that being is somehow regulated by it.

The first step was to recognize that one’s claims about things were about their appearances and forms. Following on the heels of Descartes and borrowing from Kant’s argument that existence is not a predicate, Coleridge asks himself, “What proof I had of the outward existence of any thing?” (BL 1: 200). He poses as an example “this sheet of paper, as a thing in itself, separate from the phaenomenon or image in my perception” (ibid.). All Coleridge knows is the phenomenon of the image of his perception, and thus everything imagined must be bracketed by appearance. While Descartes took existence as a predicate for God, Kant argued that “proving the existence of a God by such means is a mere circle, a delusion” (1: 201). Coleridge shows his partial allegiance to Kant by framing this discussion under opinions. He also makes sure to correct Descartes’s claim that if given matter and motion, he could “construct . . . the universe” (1: 297). Coleridge responds, “We must of course understand him to have meant; I will render the construction
of the universe intelligible” (ibid.). Where “construct” implies an ontology that Descartes cannot deliver, the construction of intelligibility is possible and is indeed the appropriate goal for a natural philosopher.

Once phenomenality is front and center, Coleridge can proceed to step 2, to insist that the descriptions of phenomena merit influence only to the extent that they generalize discrete particulars into laws that hold insight or general intelligibility. Laws must perform intellectual or scientific work, or else they devolve into mere dogmatism or fantasy. Moreover, this work must be capable of being evaluated. He thus underscores the fact that “geometry . . . supplies philosophy with the example of a primary intuition, from which every science that lays claim to evidence must take as its commencement” (BL 1: 250). Even empiricism relies upon foundational intuitions, and here Coleridge has anticipated philosopher Bas van Fraassen’s argument that since empiricism, on the one hand, mandates that all things be verified through experience yet, on the other hand, cannot subject its primary postulate to its own rule, it is a stance, a way of looking at the world, and not a coherent philosophy. Nitsch had defined empiricism as an ideal, never to be reached (Class 39). From Coleridge’s view, Abernethy had thus erred by “solv[ing] Phaenomea by Phaenomena that immediately bec[ome] part of the Problem to be solved” (CL 4: 809). One also needed to take care not to subordinate final causes to the efficient cause (BL 1: 116). We should note here that since Coleridge names the final cause of physiology with Saumarez’s help as the development of intelligence, the goal of intelligibility prefigures, but does not deliver, God as the final cause of a rational universe and the origin of the teleology of life. He would go on to argue in his Theory of Life that the principle had to access the conditions of the thing’s very possibility (35–36). Above all, what matters is that knowledge “will be known by its fruits . . . and by the insight[s] into the nature of the facts it is meant to illustrate” (35). By framing the insights that result from knowledge as the confirmation of the value of that knowledge, Coleridge renders knowledge a process that must be continuously reaffirmed rather than an end product.

The key then is to be able to apprehend phenomena as the form of laws, because that apprehension will lend the most insight. In the Biographia, he argues, “The highest perfection of natural philosophy would consist in the perfect spiritualization of all the laws of nature into laws of intuition and intellect. The Phaenomena (the material) must wholly disappear, and the laws alone (the formal) must remain. Thence it comes that in nature itself the more the principle of law breaks forth, the more does the husk drop off, the phaenomena themselves become more spiritual and at length cease altogether in our consciousness” (BL 1: 256). Here Coleridge regards materiality in terms of phenomenality, but phenomenality is
only as good as it gives access to the laws alone, which ultimately point to, but do not manifest, the divine. The phenomena, after all, cease “in our consciousness,” not in the world. Where in his physiology manuscript he turns to the nisus to move from one level to another and back again, here he implies that, seen rightly, nature is a version of intellect and being is a version of truth, with form being the common ground between the two and the only possible object of knowledge. Crucially, however, form is bracketed as an appearance, and Coleridge frames his speculations as hypotheses. The problem is whether this higher perfection is reachable, and we should note that the passage is bracketed by the conditional verb “would,” once again putting the brakes on ontology. Whether law stands on the side of the subjective or the objective, however, is another matter, and Coleridge stipulates that the law must be pursued from both vantage points.

Step 3 demands a turn to intuition or spontaneity. Although Coleridge insists our knowledge gives us access to phenomena and not things, that does not prevent him from including things in his system and turning to intuitions as a sign of access to the final causes behind those things. When he elaborates upon a distinction between the notional and actual, he makes clear that although the actual cannot be known, his verb is “contemplated,” and one might say imagined. The actual thereby becomes a posit. Coleridge explains himself this way: “When we have formed a scheme or outline of these two different kinds of force [say, attraction and repulsion or the basis of matter], and of their different results by the process of discursive reasoning, it will then remain for us to elevate the Thesis from the notional to the actual, by contemplating intuitively this one power with its two inherent indestructible yet counteracting forces, and the results or generations to which their interpenetration gives existence, in the living principle and in the process of our own self-consciousness” (BL 1: 299). Note his rigid adherence to the differences between thought and things; and the fact that this statement occurs in chapter 13, “On the Imagination,” suggests that this divide is crucial to understanding what the imagination is supposed to do and what it should be prevented from doing. On one side is the work of mind: schemes we have formed, outlines, discursive reasoning, the notional, and intuitive contemplation. On the other side is the need to elevate the mere notional into something called the “actual” and existence: thought alone is insufficient without the ability to consider existence. And yet, because these variants of thought all contribute to the possibility of our cognizing existence and make our experience of things possible, they contribute to actuality, which can, in turn, be seen in the forms of the living principle and self-consciousness. “We,” after all, are what elevate, and as a result all the ensuing nouns refer to forms of our elevation. Coleridge thus repeatedly
brackets knowledge of things as thoughts, and, by extension, the proper role of imagination is to remind us of how its powers of synthesis get us in touch with an actual in the form of a posit that must be felt or “intuited” in terms of existence. When Coleridge combines the immediacy of intuition with contemplation, he insists on active imaginative synthesis of both subjective and objective sides, as well as the need for intuition to offset an otherwise sterile rationalism. He includes a translation of Kant’s argument that we must remember that the noncoincidence of the sensual and intellectual is a limitation of the human senses, and not a claim about the inherent limits of things (BL 1: 289). Nonetheless, a rush to ontological conclusions would be a mistake.

Coleridge’s famous definition of the imagination thus functions like a Kantian idea whose goal is not ontology but insight, and true insight can rarely be had with lawless speculation. Among numerous others, James Engell, Trevor Levere, and Pamela Edwards have influentially argued that Coleridge thought ideas and laws were constitutive and therefore partake of the life and being of the world (Engell 340; Levere, Poetry Realized 98–102; P. Edwards 146), but this is to leave behind all of Coleridge’s epistemological concerns, along with his recognition that even if he believed ideas and laws were constitutive, science had to have means of evaluating claims of constitution. Coleridge thereby not only brackets much of his remarks about the imagination as speculation but also keeps the imagination within the law by insisting on the limits to it. In keeping with a kind of Kantian modesty about what we can know, the stance of being and that of truth are just that: stances, and these stances are dynamic. Too, consider how he deploys essence when speaking about imagination. “It is essential vital,” Coleridge proclaims, “even as all objects (as objects) are essentially fixed and dead” (BL 1: 304). How can the imagination be both essentially vital and dead? It is therefore the stance from which one views the imagination that keeps it conforming to reason and laws even as the poet recognizes the subjective and objective as stances.

To wit, Coleridge refrains from making claims about the agency of the imagination but rather stipulates that he “holds” and “considers” this agency, thus bringing it in line with something that he has apprehended; and thus purposiveness or agency or vitality are always potentially the ideas necessary for human understanding. By having the subject look at part of the subject, being has the potential to become knowing. Readers thus can evaluate what his apprehension accomplishes and whether it provides intelligibility. The categories of “primary” and “secondary” are his likewise his categories. The “primary” he “hold[s] to be the living Power and prime Agent of all human Perception, and as a repetition in the finite mind of the eternal act of creation in the infinite I am” (BL 1: 304). On
the one hand, imagination is the agent of all perception, and the framing of this statement allows for the will because the imagination is not allowed to remain merely passive. On the other hand, it is a pattern, a repetition, that allows correlations between the finite mind and God. Whatever truth the imagination holds is only as good as the claims about its being, as its being is framed in terms of an overall physiological quest for individuation, one itself driven by the need for physiology to permit the development of mind and imagination. Perception and creation are mutually implicated, designating the possible ground of where being and truth may be correlated but not made into an identity because the figure synthesizing them is a “repetition,” which exists only in the perceiver and insists upon temporality. It is the reader’s responsibility to decide what the meaning of these correlations are, but one must neither assume them to be an identity nor take for granted that identity is impossible. Again, a repetition is not an identity.

With regard to the secondary imagination, note that Coleridge defines it first in terms of an echo, which again insists upon the role of the active perceiver and prevents claims of identity. He famously writes, “The secondary I consider as an echo of the former, co-existing with the conscious will, yet still identical with the primary in the kind of its agency, and differing only in degree, and in the mode of its operation” (BL 1: 304). All these stipulations are taxonomic categories from the stance of the perceiver (hence Coleridge’s simile), and now the question becomes, what do these designations offer? Coleridge claims coexistence, meaning that one is not the cause of the other, and he remains highly aware of the acts of substitution necessary to imply coherence. To grasp the significance of Coleridge’s distinction between kind and degree, we should recall his warnings about how not to define life. He criticizes one definition because it “confounds the Law of Life, or the primary and universal form of vital agency, with the conception, Animals. For the kind, it substitutes the representative of its degrees and modifications” (TOL 26). Instead, Coleridge stipulates, “The first and most important office of science, physical and physiological, is to contemplate the power in kind, abstracted from the degree” (ibid.). To do that, one needs comparisons across species to arrive at a possible law. Nonetheless, this law must be the outcome of struggle, with imagination learning to work spontaneously with reason as it apprehends phenomena as laws. And, as reason turns to taxonomy, Coleridge submits, one must evaluate whether the will has been given its possible due.

We should then note that his distinctions between two kinds of imaginations, the primary and the secondary, demand twoness, which in turn demand two acts of abstraction into laws, one for each kind. Abstraction is where the will can do its work and where phenomena can become law. Abstraction is further where the
determinism of any seeming mechanism can be overcome. The primary means that the acts of perception and creation be abstracted into a form of synthesis. The secondary requires a different degree and mode of operation than the primary and is an echo of the former. He thus insists upon making the imagination both singular and plural, with “echo” insisting at least upon a temporal delay with regard to the secondary imagination. The abstraction of two kinds, which are perhaps more relations of degrees than kinds, imposes a dialectic between degree and kind that has the potential to enact a synthesis whereby difference is allowed to retain some difference. As J. Fisher Solomon puts it, “Do we not then have here a certain power with its own differentiating capacity which is never ‘outside’ it, a neither singular not plural ‘being’ that we might equally call ‘power and difference?’” (148). If the power indicates a universalizing capacity for law, difference underscores our inability to know the law outside of the empirical phenomena that would seem to indicate it. Hence Coleridge’s insistent preservation of difference. And hence Coleridge’s recognition that the imagination “struggles to idealize and to unify” (BL 1: 304); only by remembering that struggle do we recognize that the perception of unity is the ongoing work of imagination. Crucially, this does not bankrupt that unity because the imagination participates within physiological laws that point to potential future unity and higher meaning.

From the stance of his apprehension, then, Coleridge sees imagination “dissolve, diffuse, dissipate, in order to recreate,” and in all these present-tense verbs he highlights process so the imagination remains vital and does not become a passive object. He ends the definition by referring to the fact that “all objects (as objects) are essentially fixed and dead” (BL 1: 304), thereby advertising that his stance preserves the possibility of the power of the will but does not guarantee the efficacy of it. Above all, Coleridge frames the imagination from the standpoint of a subject looking at it, and whatever intelligibility results from this act of looking speaks more to the active apprehension of it than the object itself, but the active apprehension of imagination does not paper over the object. In sum, then, the very definition of imagination models the kind of cooperation of reason and imagination, truth and being, that the Biographia seeks to put into place, a cooperation where the limits of understanding are always paramount and existence is never allowed to be a predicate, except as a state of becoming. Physiology not only gave him models for finding this cooperation but also made clear the stakes for minting imaginative phantoms. The fact that it remains just a model underscores the capacity of imagination to work with reason and reminds readers of the need to both perform and evaluate it. Surprisingly, the speculative physiology of the time explains how that might happen.
Attention to Coleridge’s physiological understanding of imagination thus up-ends a number of influential critical assumptions about it and demands a more nuanced sense of what both Romantic science and the Romantic imagination were about. If critics like Jerome Christensen have embraced a deconstructive theory of language that gives us a Coleridge both who fails to be unified by his theory of imagination and who is entrapped by marginal and discursive practices that enable a machinery of language to destroy anything like the will, attention to physiology provides a much more modest Coleridge who is worried less about ontology than he is about developing a system that both makes the intelligibility of nature possible and helps develop the mind by understanding the imagination’s proper role. That proper role is contingent upon the poet’s insistence upon difference. Coleridge asserted that the office of the imagination was to “struggle to idealize and to unify” (BL 1: 304), and thus deconstruction misunderstands Coleridge’s project. The central question is hardly the degree to which language can assist in this process. Nor is the issue whether the imagination empirically unifies anything. Coleridge’s worry, by contrast, is the extent to which imagination will grow to enable both the apprehension of reason and final causes along with the operationalization of reason and imagination. The historicist project has unhelpfully taken on board both the deconstructive suspicion of the imagination and an understanding of ideology as language masking itself as nature, which allows it to tar imagination with the same brush as ideology. These assumptions do not account for how Coleridge learns from physiology to define imagination fittingly in terms of a postulate that invites action, and how he turns to organicism as a heuristic so that its spontaneous intuitions create the conditions for the full development of intellect. Such organicism could be proven to be a law only once one had a clear sense of the phenomena it enabled one to bring to order. The Romantic imagination could not afford not to work with science and thus must cooperate with reason. It therefore is far more modestly framed and rational than criticism acknowledges.

Physiology, thus, does nothing less than model for Coleridge what cooperation between imagination and reason looks like. Imagination will usurp reason’s place if it invents entities that have no possibility of actuality and mistakes what happens as a result of our abilities to apprehend things as properties of the thing. Yet, because imagination and vitalism, like genius, work consciously and unconsciously, Coleridge learns from physiology how to correlate phenomena with laws so that he can have either a posit that results in a moral system or a hypothesis that can perform meaningful work instead of sending us on wild goose chases, thereby substituting fantasy for creativity.