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ARTICLES

Blake’s Resolution to the War Between Science and Philosophy

By Harry White

As our understanding of Blake has progressed from madman to mystic to visionary artist, there is still a widespread tendency to read him as holding "anti-scientific views," expressing "strong anti-scientific sentiments," and being unflagging in his "exploration of anti-scientific doctrines." It is said that "Blake did not love science, even feared and despised it," even though he himself objected to "those who pretend to despise the labours of Art & Science, which [he believed] alone are the labours of the Gospel...[adding that] to Labour in Knowledge, is to Build up Jerusalem; and to Despise Knowledge, is to Despise Jerusalem & her Builders" (Jerusalem 77, E 232). Indeed, Blake claimed for scientific work what he never said about religion or morals: "Arts & Sciences," he wrote, "are the Destruction of Tyrannies or Bad Governments" (annotations to Reynolds, E 636). If Blake hated and feared science, how explain the fact that he believed "The Primeval State of Man, was Wisdom, Art, and Science" (Jerusalem 3, E 146) and that the very last line of The Four Zoas proclaims a future wherein the "dark Religions are departed & sweet Science reigns"? For after all is said and done, "What is the Life of Man but Art & Science?" (Jerusalem 77, E 232).

Blake did not fear that the "power of scientific thought" might "replace imagination," nor did he attack the "debilitating influences" of "analytical philosophy... and empirical science," for it was not scientific thought, but "Abstract Philosophy" which he said was "warring in enmity against Imagination" (Jerusalem 5:58, E 148) and doing so in opposition to both art and science. Believing that the power of scientific thought actually derived from the imagination, the "true faculty of knowing" (All Religions are One, E 1), Blake felt that "Bacons Philosophy has Destroyed all Art & Science" (annotations to Reynolds, E 656; my italics); he showed how the theoretical systems Bacon and other natural philosophers created were no different from traditional systems of thought in their general disregard for the evidence of human experience.

In 1936, A. J. Ayer’s influential Language, Truth, and Logic was published. Ayer’s aim, we are told, was "to liberate science and common sense from philosophy, to free it from ‘system builders’. There is no source of truth, Ayer argued, but experience." It is high time we recognized that that can serve as a pretty good description of what Blake attempted almost one hundred and fifty years earlier and, for his time, with greater daring and originality: "Striving with Systems to deliver Individuals from those Systems" by showing how "Knowledge is not by deduction but Immediate by Perception or Sense at once" and can therefore be acquired only through "the faculty which experiences" (Jerusalem 11:5, E 154; annotations to Berkeley, E 664; All Religions are One, E 1).

Blake set "Downright Plain Truth" against "Reasoning [which] is Nothing" and said in opposition to those who contended that "Truth should be Confined to Mathematical Demonstration" that any man could "Know Truth at Sight" (annotations to Watson, E 618; annotations to Reynolds, E 659). Clearly Blake wished above all else to give expression to his visionary imagination, but he also felt compelled to address the radical changes philosophy was undergoing ("Urizen who was Faith & Certainty is changed to Doubt," and the "idiot Reasoner [now] laughs at the Man of Imagination" [Four Zoas 27:15, E 318; Milton 32:6, E 131]), and he was informed and insightful enough to turn the tables on the new philosophers and show how it was they and not men of imagination who were propounding truths that were unreal. A significant and important portion of Blake’s writings was devoted to a critical analysis of what he identified as "Truth the result of Reasoning" (annotations to Bacon, E 621). Blake sought to clarify the differences between rational truth and empirical knowledge, which he understood to be any and all knowledge gained immediately through experience and which encompassed everything from a grain of sand to worlds of imagination.

Berkeley had dismissed "philosophers [who] distrust their senses, and doubt the existence... of everything they see or feel [and who ...] are forced to own we cannot attain to any self-evident... knowledge of the existence of sensible things." Similarly Blake ridiculed anyone "who doubts from what he sees" and called him a knife who inquired "into the truth of a self evident thing" (Auguries of Innocence 107, E 492; annotations to Watson, E 613-14). He insisted that there could not be any doubt regarding the self-evident truths of human experience—the worlds of sensation, feeling, and imagination that we all experience but which rational philosophy called into question: "Did Jesus teach Doubt or did he / Give any lessons of Philosophy[?]" No, because "Rational Truth is not the Truth of Christ but of Pilate" (Everlasting Gospel p. 48, part of an abandoned section, E 525; annotations to Bacon, E 621).

1. See Toulmin.
2. Weinberg 101.
3. Schor er 49.
7. Emery 23.
8. Rogers 120.
Only a fool or an idiot would doubt anything men experience, but to doubt the abstractions and generalizations of speculative philosophy was another matter altogether. "That the things I see with my eyes and touch with my hands do ... really exist, I make not the least question," Berkeley wrote. "The only thing whose existence we deny is that which philosophers call matter ...." As we will see, there were many more "things" Blake denied, for he encouraged everyone to doubt the reality of all truths of reason as well as those figures of authority who took advantage of the abstract non-entities philosophers created to enslave the vulgar (see Marriage of Heaven and Hell 11. E 38). There is no inconsistency between Blake's acceptance of every image of truth men can possibly envision and his skeptical attitude with respect to the truths of reason, nor should we be misled by his aphoristic approach into thinking he "gives low priority to detailed investigation of logics other than his own." His critiques, where they occur, are never extended, but the details are there, scattered throughout his writings, and just need to be pulled together.

This paper, then, will attempt to situate much of Blake's writing where I believe it properly belongs, not alongside the complaints of opponents of science, but in line with the great British tradition of empirical-analytic philosophy represented by thinkers like Berkeley or Ayer, who questioned the conclusions of speculative philosophy and insisted that experience remains the only basis for all our knowledge, and next to many leading scientists who, like Blake, looked with skepticism at certain influential but unwarranted philosophical assumptions respecting classical physics. I will also attempt to show how Blake sketched an alternative view of science based on our actual experience of living forms, which anticipated the great scientific revolution that occurred not long after he ceased writing.

The Material World

Causal determinism was arguably the most important creation of the new philosophy, and Blake knew that it had been shown utterly to lack any basis in experience. His contention that "a Natural Cause only seems" (Milton 26:45, E 124) may at first seem weakly dismissive, but as Thomas Reid had noted in 1788, "Natural philosophers ... have never discovered the efficient cause of any one phenomenon ...." Both statements are perfectly in keeping with Hume's still troublesome critique of causality. The particular powers, by which all natural operations are performed never appear to the senses .... In reality, there is no part of matter, that does ever, by its sensible qualities, discover any power or energy .... [T]he power of [or] force which actuates the whole machine, is entirely concealed from us ...."

It is no sure sign of mystification or anti-scientific prejudice on Blake's part to say, as he did, that we have no experience of any thing being the cause of any other thing. Hume for one had already said it, and Karl Pearson, one of the first major contributors to theoretical statistics, would later note that the "law of causation ... is a useful concept, but in no sense a reality," while Niels Bohr believed the advent of atomic physics required "a final renunciation of the classical ideal of causality." However, well before statistical analysis undermined the concept of causality, Newton himself wrote to Richard Bentley regarding the greatest of all causes, "You speak of gravity as being essential & inherent in matter, pray do not ascribe that notion to me, for ye cause of gravity is what I do not pretend to know ..." (17 Jan. 1692/93).

Blake did not wish to escape from "Humean skepticism" with its doubts regarding "the idea of causation"; rather, he employed such skepticism to expose the difficulties surrounding causal determinism. When he wrote that "There is no Such Thing as a ... Natural Cause" (annotations to Bacon, E 626), he, like Hume before him and others after them, was merely stating that the term natural cause does not refer to any thing that we know to exist. A natural cause is a non-entity which only seems to exist—just one example of "a Delusion / Of Ulto" in which people commonly mistake what "only seems" for what actually exists (see Milton 26:45-46, E 124). "We deceive ourselves," Reid observed, "if we conceive, that we can point out the real efficient cause" of any "phenomenon that falls within the compass of natural philosophy." The "grandest discovery ever made in natural philosophy, was that of the law of gravitation .... But the author of this discovery was perfectly aware, that he discovered no real cause, but only the law or rule, according to which the unknown cause operates" (my italics).

As Bertrand Russell put it, the "reason why physics has ceased to look for causes is that, in fact, there are no such things." Russell was of course referring to twentieth-century physics, but in fact scientists in Blake's time had already methodically avoided looking for causes. Blake thus understood Newton's aims and accomplishments correctly, since Newton himself wrote in his great work, "I here design to give a mathematical notion of these forces, without considering their

12. Reid 47.

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physical causes and seats."20 His Opticks also makes it clear that science gives us the "general Laws of Nature," even "though their Causes be not yet discover'd"; Newton never scrupled "to propose Principles of Motion" and "leave their Causes to be found out."21 His researches were perfectly in keeping with the revolutionary change Galileo brought to scientific study. As Galileo wrote in his Dialogues Concerning Two New Sciences (1638), the purpose of science is "to investigate and to demonstrate ... the properties of [things like] accelerated motion," but it is not really worthwhile "to obtain a proper solution of the problem discussed by philosophers, namely, what causes the acceleration."22 Thus, when Blake contended that scientists have not discovered true or ultimate causes, he was not charging them with having failed in their purpose. Galileo, Newton, and others had already pointed out that scientific investigation does not propose to resolve what are in fact philosophical problems. Philosophers who puzzle over causes should not be thought of as doing the work of science; above all, as Blake repeatedly pointed out, philosophers should not claim what leading scientists had specifically denied, that natural philosophy had in fact solved philosophic issues regarding things like ultimate causes. Blake thus understood the responsibility for the war that was raging between philosophy and science to rest with the philosophers, and he sought to end it by showing that what he and others objected to had nothing to do with actual scientific work (such as the kind, as we shall see, he showed Los engaged in), but with the misguided claims philosophers (like Urizen) made for their own rational systems of thought.

Laplace would title his great work Celestial Mechanics (1799-1825), but Newton understood himself to be writing about mathematical principles of philosophy and insisted that "we cannot yet prove by Experiments that all the Phaenomena in Nature can be solved by mere Mechanical Causes."23 Most, however, did understand Newton's work to be providing physical explanations, so Blake had to remind his readers that the reliability of Newton's mathematical principles could not be taken as valid proof of the actual existence of mechanical causes. (Indeed, to this day there is no proof that any such mechanisms as force, inertia, cause or gravity really do exist in nature.) Blake's denial of any proof or knowledge of a physical reality of mechanical causes contradicted those philosophers like Locke who thought it necessary to assume the existence of mechanical causes, but that denial did not contradict the design of Newton's work or Newton's characterization of it as not revealing true causes (verae causae).

Against the view of science that was becoming popular in his day, but not contrary to the view of scientists like Galileo or Newton, Blake repeatedly described scientific formulations as "creations," "fictions," "allegories," "abstractions," or "non-entities," which oftentimes led to delusions respecting a physical reality of mechanical determinism. He proposed and dramatized the idea that, as Hawking would remark, a scientific "theory ... exists only in our minds and does not have any other reality ...."24 And he anticipated Einstein's observation that the "tremendous practical success of [Newton's] doctrines... may well have prevented him and the physicists of the eighteenth and nineteenth centuries from recognizing the fictitious character of the foundations of his system."25 A scientist, Einstein generally noted, is apt to treat "the products of his imagination ... not as the creations of his thoughts but as given realities."26 This, according to Max Planck, was "a fundamental mistake" of classical physics, the belief that it furnished "a direct glimpse into the real happenings of things."27 Niels Bohr went so far as to state that it is "wrong to think that the task of physics is to find out how Nature is."28

In line with those scientists from Newton to Hawking who either refuse to speculate on the ontological status of the terms they successfully employ or deny the validity of their formulas with respect to some reality beyond thought, Blake understood that natural philosophy, or what we might nowadays call theoretical physics, functioned and could function well enough by describing what seems without having to commit the fundamental mistake of proclaiming it had discovered what is. Eden is just such a state of mind, in which one recognizes that what appears to be without is actually within, whereas Ulro is the opposite state, based upon the delusive ontology fostered by classical physics in Ulro, "What seems to Be: Is To those to whom / It seems to Be, & is productive of the most dreadful / Consequences to those to whom it seems to Be" (Jerusalem 32:51-53, E 179). As Blake made clear to Crabb Robinson, atheistic materialism was the most dreadful consequence of mistaking what seems to be for what is: "Bacon, Locke & Newton are the three great teachers of Atheism ... Every thing is Atheism which assumes the reality of the natural & unspiritual world."29 By defining atheism as belief in the reality of a natural world, Blake identified himself as neither an opponent of science nor a traditional theist, but specifically as someone opposed to belief in scientific realism.

Blake's anti-realist position with respect to scientific theories is evident in the way he employed a simple word like thing to distinguish what exists from what doesn't: "every thing,..." he wrote, "exists," and so "everything possible to be believ'd is an image of truth," and "Mental Things are alone Real," but on the other hand, "What is General Nature is there Such a Thing" and "There is no Such Thing as a ... Natural Cause for any Thing in any Way" (Jerusalem 13:66, E 158; Marriage 8:38, E 37; Vision of the Last Judgment, E 565; annotations to Reyn-

24. Hawking, Brief History 10.
27. Planck, "Scientist's Picture" 95.
28. Quoted in Norris 44.
29. Quoted in Bentley 414.

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olds, E 648; annotations to Bacon, E 626). In 1685 the physicist and chemist Robert Boyle had questioned “whether nature be a thing or a name,” whether “it be a real existent being, or a notional entity somewhat of kin to ... fictitious terms” (my italics). Reid later contended that “Nature is the name we give to the efficient cause of innumerable effects which fall daily under our observation,” and he, like Boyle and Blake, also called it “a fiction.” Among English-speaking writers, the term is still being used to describe scientific theories. In 1973, Hugh Everett (the scientist who originated the many-worlds interpretation of quantum mechanics) wrote that, like “any other theory,” the “constructs of classical physics are ... fictions of our own minds.”

At the time Blake wrote, the success of science had been well established even as philosophers debated (as many to this day still do) whether its formulas were human creations or discoveries of real, material entities. If nothing else, the fact that these philosophic issues remained unresolved in the midst of tremendous scientific advance proved that science could maintain itself without having to succumb to the “delusion of Ulro” (see Milton 29:16, E 127) with all its accompanying “unreal forms” (Four Zoas 28:2, E 318). It did not have to presume that its formulations were anything other than what Blake said they were, fictional creations of the rational faculty and not existing entities dwelling in some obscure place. In sum, Blake adopted a then-familiar instrumentalist or functionalist approach to scientific theories, accepting their usefulness, but denying the validity of the philosophic conclusions derived from them. It is the approach Berkeley, for one, insisted on throughout his writings. The “natural philosopher,” he wrote, ought not to pretend to “explain things by corporeal causes.” Rather, the “knowledge of nature” consists in making “sure and well-grounded predictions”; these “observations and experiments” are real because “they are of use to mankind.”

An instrumentalist approach was regularly adopted not only by scientists like Boyle, but especially by the astronomers (who were the first modern scientists). Thus Bacon could write that Copernicus, Ptolemy, and Tycho Brahe did not mean to say by their theories that “the things they allege, are actually true, but only that they are convenient hypotheses for calculations ...” As the introduction to Copernicus’ De Revolutionibus states, the astronomer does not think up causes and hypotheses “in order to persuade anyone of their truth but only in order that they may provide a correct basis for calculation.” As Galileo knew and testified at his trial, such was the church’s position, that “since the opinion of Copernicus, taken absolutely, contradicted Holy Scripture, it could not be held or defended, but ... it might be taken and used hypothetically,” and he tried to claim that his own Dialogues Concerning the Two Chief World Systems likewise did not hold or defend any opinion regarding the actual motion of the earth or the stability of the sun. Thus, by the time Blake wrote, the distinction between factual truths and hypothetical fictions (as they were sometimes called) was firmly in place at the center of the philosophic controversy dividing realists from skeptics regarding scientific proofs. When Blake called scientific theories fictions or scientific laws false appearances to make the case that neither should be taken to be factually true, he was clearly siding with the skeptics, among whom, it should be noted, were a number of leading scientists; he never denied the reality of these theories for the reason the churchmen insisted upon, that they are contradicted by biblical cosmology. Blake denied their validity on purely empirical grounds, because experience does not confirm the existence of the things they allege.

Hume had demonstrated that the nature of mathematical principles and all other rational truths is that they are discoverable “without dependence on what is anywhere existent in the universe,” and Blake was utterly relentless in discrediting any and all claims that what he called “Truth the result of Reasoning” could and did exist anywhere in the universe, placing reason’s “unreal forms” in Ulro, “the Void Outside of Existence” (Milton 41:37, E 143). Blake’s response to the claims of natural philosophy was to draw a clear line of distinction between knowledge of existence and the logical relations of abstract ideas: “Self Evident Truth is one Thing and Truth the result of Reasoning is another Thing” (annotations to Bacon, E 621). He was very much an empiricist to the extent that he believed “the true faculty of knowing must be the faculty which experiences” and that “Knowledge is ... Immediate by Perception or Sense at once” (All Religions are One, E 1; annotations to Berkeley, E 664). While he recognized that there may be general truths of reason, he could not accept that there is “such a Thing” as “General Knowledge” since “All Knowledge [as distinguished from the general truths of reason] is Particular” because all things we experience are particular, and “Unless. You Consult. Particular. You Cannot. even Know or See ... any Thing ...” (annotations to Reynolds, E 648, 645). Taken together, the annotations to Berkeley and Reynolds give us a good idea of the limitations Blake sought to impose on knowledge. Simply put, knowledge is immediate and particular. Any deductions of the reasoning faculty, whether they are conducted prior to experience (pure speculative reasoning) or even after the immediate sense or perception of things (inductive reasoning), do not qualify as knowledge. They represent truths of reason, but such truths never give us knowledge of experience. (We will continue to examine Blake’s distinction between truth and knowledge throughout the upcoming discussion.)

30. Boyle 32.
31. Reid 34, 45.
32. Everett 133.
34. Quoted in Urbach 128.
35. Copernicus 7.
When Blake insisted that "Mental Things are alone Real," the crucial distinction is not fundamentally or simply between the mental and the physical, but between the reality of the things we know and see and the non-entities of which we have neither experience nor knowledge: "what is Called Corporeal Nobody Knows of its Dwelling Place ... Where is it but in the Mind of a Fool" (Vision of the Last Judgment, E 565)—a fool perhaps like John Locke, who accepted that there was something like material substance even though he admitted "that if anyone will examine himself concerning his notion of pure substance in general, he will find he has no other idea of it at all, but only a supposition of he knows not what .... [It] is plain, then, that the idea of corporeal substance in matter is ... remote from our conceptions and apprehensions ..."

Blake was thought by some to be a madman for his fantastic visions, and yet it was the sober John Locke who admitted that corporeal substance was he knew not what and still foolishly supposed it to exist even though he had no idea of it. But, said Blake, "Deduct from a rose its redness. from a lily its whiteness from a diamond its hardness from a sponge its softness from an oak its height from a daisy its lowness ... & then we shall return to Chaos" (annotations to LaVater, E 595). Ernst Mach would make similar deductions so that he too might eliminate all unwarranted metaphysical assumptions from science: "By omitting now this, now that sensory element ..., we can easily jump to the conclusion that, even if we eliminated all the elements, there would always be something left. We imagine ... a carrier of qualities, a substance of the object .... This idea has no foundation in the [sensory] elements; it is purely a product of creative fantasy,"

Berkeley had insisted on that very point, that science does not need to suppose a material know-not-what in order to work. It was, he said, generally supposed that "whatever advances have been made ... in the study of nature do all proceed on the supposition that corporeal substance or matter doth really exist," but he answered this by saying that "there is not any one phenomenon explained on that supposition which may not as well be explained without it ...." In fact, Newton himself had already dismissed material explanations as necessary to the design of his work. Since such explanations aren't required—or as Pearson later put it, "matter ... is a metaphysical entity ... meaningless for science ..."—it would be wrong to assume that Blake's denial of materialism meant he opposed science itself. Rather, what he proposed was a positivist correction to the new philosophy of science, if we understand positivism in the way the physicist, Pierre Duhem, understood it in 1905: "Our interpretation of physical theory is ... essentially positivist in its origins .... [T]he doctrines which proclaimed that everything in the material world reduced to matter and motion are metaphysical."

Although Comte is credited with coining the term positivism, Hume arguably originated the approach in philosophy so that by 1788, at the onset of Blake's great creative decade, philosophers like Thomas Reid could employ positivist thinking to prevent conclusions he, like Blake, also called "atheistic": "Natural philosophers, when they think accurately, ... and when they pretend to show the cause of any phenomenon of nature, they mean by the cause, a law of nature of which that phenomenon is a necessary consequence." To "discover the laws of nature" is all that Newton "attempted, and all that he thought attainable"—and, we might add, all that Galileo thought "worthwhile" in scientific investigation.

Much of what Blake wrote needed to be placed in the context of what Heisenberg identified as "the starting point for the empiricist philosophy ... and positivism" which was first formulated in response to the "difficulty of metaphysical realism"—the assumption, which Blake repeatedly attacked, that scientific formulations represent things that really have independent existence. The empiricists and positivists reacted (as did Blake) to "classical physics [which] started from the belief—or should one say the illusion?—that we could describe the world ... without any reference to ourselves." As Eugene Wigner noted, the "very study of the external world led to the conclusion that the content of the consciousness is an ultimate reality." Paradoxically, the belief in a material world soon produced the "principal argument against materialism ... [which is] that our knowledge of the external world is the content of our consciousness ...."

In Blake's day, Berkeley attributed endless difficulties to the metaphysics of the natural philosophers. "All this scepticism," he noted, "follows from our supposing ... things ... have a subsistence without the mind or unperceived." From the beginnings of modern science to our own day, numerous scientists and philosophers have taken the position that certain laws of science, however usefully they function, do not reveal the ultimate truths of existence: Newton would adopt it to protect his theological beliefs, as Galileo did to protect himself from the Inquisition. Kant so he could maintain his free rational will, Duhem for his Catholicism, and Einstein so that God would not play dice with the universe. Blake took an anti-realist approach to science precisely because he too wished to protect his own visions of truth from any possible encroachment by natural philosophy; whatever his motivation or whatever his beliefs, Blake's critique of natural philosophy remains quite sound and is consistent with the assessment of many important and knowledgeable thinkers from his time to the present. He, like others, was led to the conclusion that what science

38. Locke 294-96.
40. Berkeley, Treatise 539.
41. Pearson 278-79.
42. Duhem 279.
43. Reid 46.
44. Heisenberg 83, 35.
45. Wigner 172, 176-77.
46. Berkeley, Treatise 553.
studied was nothing if not the content of consciousness, because the natural philosophers claimed that they had acquired knowledge of an objective reality as it existed external to the minds of men. "[A]ll you behold," Blake said, "tho' it appears Without it is Within" (Jerusalem 71:18, E 225). Statements like "Where man is not nature is barren" (Marriage 1068, E 38) attack the very supposition that science had discovered and was describing the natural world as it actually existed before men ever came to know it.

By the turn of the century, a number of leading scientists were coming round to expressing very "Blakean" views on science. In 1920 Arthur Eddington wrote, where "science has progressed the farthest, the mind has but regained from nature that which the mind has put into nature."7 In 1892 Pearson would explain how "the laws of science are inherent in ourselves ..... They are "products of the human mind rather than factors of the external world ..... The law of gravitation is not so much the discovery of Newton ..... as his invention ....." A century before, Blake regularly placed the creation of the material world after the fall to demonstrate that the natural world with its "gloves of attraction" was a hypothetical fiction that had no reality—if it did not exist and was not thought to exist—before (fallen) men created it. To assume that gravity existed prior to Newton's formulation of the laws of gravity was a foolish and unnecessary supposition; by showing that all of creation is just that, a creation of the minds of men, Blake attacked the metaphysics of materialism to reveal that what philosophers identify as corporeal substance does not appear in sense experience, but it is often a "false appearance which appears to the reasoner ....." Its supposed appearance is based on a "Fallacy & its Existence an Imposture Where is the Existence Out of Mind or Thought" (Milton 29:15, E 127; Vision of the Last Judgment, E 565).

It was clear to Blake that material substance and natural cause, the two elements supposed to be the foundation of the sciences of his day, did not appear to the mind of any man—not even Newton's or Locke's. Ault, however, says that Blake "accepts necessity as an undeniable aspect of the 'physical' world, even though this necessity is in a real sense fictitious."8 Maybe we should turn the wording around and say that the physical world is a product of the belief in necessity; otherwise, we might miss Blake's very important point that what was thought to be the physical world was mostly a fiction (a "creative fantasy," as Mach called it) created by the power of scientific reasoning. Blake did not accept necessity as an aspect of the physical or any other world. He agreed with Berkeley and Hume that no such thing as causal necessity could be known to exist (and, as we shall see, he showed how ideas about it were not logically sound either). We have "no experience [that] can teach us what necessarily must be," wrote Reid.9 In works like The First Book of Urizen, Blake showed that necessity was actually an a priori assumption that so impressed would-be scientists that they, like Urizen, needlessly "sought for" a world that would justify their deterministic theories. Urizen literally creates a physical world that will validate his unfounded conviction that principles of rational determinism actually do describe reality. "Single vision & Newton's sleep" (letter to Butts, 22 Nov. 1802, E 722) create formulas, terms, and phrases, such as corporeal substance, and then idiot reasoners like Urizen erroneously assume that the creations of natural philosophy denote real entities, despite the fact that there is no empirical evidence for their existence from any realm of experience.

Urizen's mistake represents the rationalist's fallacy of presuming that there has to be a physical world that validates the idealized abstractions natural philosophy creates, even though neither reason, observation nor experiment can discover any such world. That is why Blake depicted Urizen as creating it. The rise of empiricism is the distinguishing feature of modern science, but Urizen is not an empiricist, not even a bad or mistaken one. That is not the problem as Blake understood it. As his name implies. Urizen is a figure devoted to reason rather than to that which can be observed through experience, and Blake depicted him as a philosophic rationalist fraudulently pretending to be doing empirical, scientific research. Urizen holds as a matter of rational faith that the world is a fixed one of solid obstruction, and, lo and behold, that is what he claims to discover, when in fact what he does is literally create the entire fiction of a physical world of causal necessity to justify his theories—a delusory world of solid obstruction not at all grounded in observation, but erected in defiance of all the variety, change and movement he has observed and cannot tolerate. Urizen's so-called explorations have actually been predetermined so that he will "discover" only what conforms to reason. His observations are, as we now say, theory laden. That in itself does not have to be a problem, so long as one is willing "to have the foundations of his knowledge changed by new experience,"10 to acknowledge evidence that might disconfirm, refute or falsify his theories (cf. Karl Popper's theory of falsification). However, what Urizen does is tamper with the evidence. The world he sees is composed of fire, wind, torrents and waves; that is what Urizen observes, but he binds and holds back these elements—suppresses the evidence—in order to create a world of "solid obstruction" that will falsely appear to confirm his notion of what the world ought to be like (Urizen chap. II, E 71-72). That what Urizen observes, or thinks he observes, is a world composed of the four basic elements of ancient Greek thought might show how outdated his theory of reality is, which in turn would suggest that all theories (such as, for example, Newton's gravity acting at a distance in absolute space and time) will eventually be revised

47. Eddington, "New Law" 247.
48. Pearson 110, 36, 86.
49. Ault 92.
50. Reid 39.
51. Heisenberg 140.

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or become dated with the advent of new theories (more on this in a moment).

Newton admittedly published his mathematical truths concerning force or inertia without evidence of their existence, and Urizen is like Newton insofar as he will not permit his "self-closed" truths of reason to be modified in any way by knowledge of existence, but he tends to go beyond Newton, or at least to ignore several of Newton's warnings, by claiming that his rational abstractions denote actual physical causes. He does so by creating a delusory existence of non-entities to fit theories that are not only without empirical foundation, but are also, in fact, disconfirmed by what he knows of the world. Newton had repeatedly warned that "hypotheses ought to be applied only in the explanation of the properties of things, and not made use of in determining them ..." (to Oldenburg, 10 June 1672; Correspondence 1: 169), and Blake showed how Urizen's theories do not attempt to explain what he has observed, but are used to determine the properties of a delusion: the physical world of solid obstruction he creates. Urizen does not follow Newton's advice of proceeding "upon the Evidence" and stopping where "Evidence is wanting."55 Blake showed him committing the cardinal sin of any researcher or experimenter when he manufactures evidence rather than collecting it.

Yet Blake realized that despite its warnings to stick to phenomena, Newton himself was mistaken if he thought his theories actually did proceed upon the evidence. In his famous statement, hypotheses non fingo, Newton had contended that he framed no hypotheses. The trouble with hypotheses, he said, is that they "are not deduced from the phenomena" and therefore they "have no place in experimental philosophy. In this philosophy, particular propositions are inferred from the phenomena, and afterwards rendered general by induction."56 By the time Blake began writing, Hume had shown (and, as we shall see, Blake well understood) how inductive generalizations and therefore the formulations that had become basic to physics could not be reasonably derived from any number of experiences or observations. As Einstein put it, physical concepts "cannot be distilled ... from experience by an inductive method, but can only be obtained by free invention."57 They "are free creations of the human mind and are not, however it may seem, uniquely determined by the external world."58 Newton's Mathematical Principles of Natural Philosophy in fact presented a logical system that synthesized the theories of men like Kepler and Galileo and was conceived for the most part while Newton pondered by himself. His reputation for having a mind "Voyaging through strange seas of Thought, alone" (as Wordsworth characterized him in The Prelude 3:63) was well known in Blake's day. The approach Blake had Urizen take in The First Book of Urizen is therefore as much parody as satire, revealing how Urizen—and by implication, Newton—working alone, withdrawn, self-closed, all repelling, hidden, and set apart, frames hypotheses without conducting any experiments or consulting particular phenomena. What Urizen, like Newton, has "written in solitude" are pure creations of the reasoning faculty which were neither derived from nor tested against any observation or experience. Urizen's creative endeavors are meant to reveal that Newton's formulas were, in fact, freely created hypotheses framed by his reasoning power and not generalizations that proceeded or could proceed from anything he or anyone else could or did observe. Blake believed and portrayed through Urizen's methods what John Maynard Keynes later sensed about Newton: "His experiments," Keynes wrote, "were always, I suspect, a means, not of discovery, but always of verifying what he knew already."59

What Blake confronted with respect to Newton's Mathematical Principles was the great philosophic mystery of modern science. Centuries after Newton's mathematical principles were put forth, even a Nobel Prize-winning physicist like Richard Feynman had to admit, "Why nature is mathematical ... is a mystery."60 Blake's answer was that nature is mathematical because it is the creation of the process whereby "mathematical power / [gives] a body to Falsehood" (Jerusalem 12:12-13, E 155). He knew that science worked, and to some extent he knew how it worked, but he, like everyone else, did not know why it worked. As Shelley, following Hume, explained the problem in his "Mont Blanc," the power animating all that we know to exist dwells apart from human experience. This much, however, was certain for Blake: the mathematical proof of any scientific hypothesis should not be mistaken for evidence of what really exists. As Einstein noted, "Propositions arrived at purely by logical means [what Blake called the truths of reason] are completely empty as regards reality"61—as Blake himself realized, consigning scientific propositions to a dark void empty of any real forms and calling it Ulro. In addition, Blake maintained, as did Boyle and Reid, that all scientific theories remained fictions, including those that had been confirmed by experiment to be established as scientific law—they remained no different from scientific hypotheses in terms of explaining the true nature of reality. As the mathematician and physicist Leonhard Euler (1707-83) wrote: "to learn the true causes of phenomena is not allowed to us, nevertheless ... a certain fictive hypothesis may suffice for explaining many phenomena."62 The theories describing—usually in mathematical terms—certain regularities pertaining to existing things are constantly changing and are even falsified: "Reason ... is not the Same it shall be when we know More" (annotations to Reynolds, E 659); "Establishment of Truth depends on destruction of Falsehood

52. Newton, "Account" 163.
53. Newton, Principles 547.
54. Einstein, "Physics and Reality" 322.
55. Einstein and Infeld 31.
56. Keynes 541.
57. Feynman 24.
58. Quoted in Hawking, Shoulders of Giants 397.
59. Quoted in Kline 2:739.
continually" (Jerusalem 55:65, E 205). However, our experience of these things remains the same: "Imagination is a Representation of what Eternally Exists. Really & Unchangeably" (Vision of the Last Judgment, E 554). That is the case because "The Imagination is not a State; it is the Human Existence itself / ... / Whatever can be Created can be Annihilated" (Millian 32:32-36, E 132); scientific theories as well as scientific laws are forever being created and annihilated. In antiquity, Empedocles reasoned that the world was composed of four basic elements; in Blake's day the universe was thought to be like a clock, operating according to Newton's conception of absolute time and space; soon after it became like a steam engine, with the advent of thermodynamics; nowadays, the same universe which we experience in the same way because it really hasn't changed is said to be a computer transmitting information as part of Einstein's space-time continuum. Many philosophers of Blake's time, but not that many scientists, confidently asserted the novel claim that science had finally provided the answer respecting the ultimate nature of reality. Blake's response to that claim was to point out what many scientists believed, that there was no scientific evidence for it. The stunning progress of modern science and the rapidity with which theories change have resulted in continual and, for many, disturbing reappraisals of the nature of reality. Blake believed that any philosophic reevaluation was unnecessary, because scientific progress didn't require it, and unwarranted, because even though scientific theories and philosophical explanations do change, our experience of reality does not.

Now we are beginning to see that Blake not only attacked the errors of the new philosophy, but also confronted problems respecting the scientific method itself. Before examining his critique of the method, we might summarize Blake's objections to the new philosophy. They have to do with his understanding of the nature of knowledge, truth and falsehood, and they involve key concepts he employed throughout his writings.

For Blake there were basically two kinds of truth: truths of existence and truths of reason.

The truths of existence are of two kinds: there are first of all self-evident truths. They are what Blake also called downright plain truths. They are undeniable, and no one can doubt them. Every man knows them on plain sight (like the hardness of diamonds or the redness of a rose).

Secondly, there are the contraries, those various irreconcilable differences among individuals. A contrary is an existing quality or characteristic opposed to some other existing quality or characteristic, but not logically negating or falsifying it because no contrary can possibly contradict any other. While it is true with respect to the contraries that ancient and modern "accounts of polar metaphysics ... were readily available" to Blake,"it is also true that philosophers like Hume were showing how the "contrary of every matter of fact is still possible; because it can never imply a contradiction, and is conceived by the mind with the same facility and distinctness ..." 61 As Newton observed, "Those things which men understand by ... contradictory phrases may be sometimes really in nature without any contradiction at all" (to Bentley, 25 Feb. 1692/93; Correspondence 3: 254). When Blake similarly noted that "Contraries mutually Exist" or that "Contraries are equally True" (Jerusalem 17:33, E 162; Milton 30:1, E 129), he aimed to point out that nothing which actually does exist necessarily contradicts by its existence or its qualities anything else that exists. That is why, when Blake listed a number of what were for him erroneous conceptions—that energy is alone from the body, for example—he insisted that "the following Contraries to these are True"—that man has no body distinct from his soul, for example (Marriage 4, E 34). That both sets of beliefs concern matters of fact, even if the first set is composed of what Blake thought were erroneous beliefs, means that the contrary conception is possible—many do conceive the body as distinct from the soul—and there is no logical contradiction between them.

One of the fundamental rules of logic is the law of non-contradiction, which says that if you conjure a proposition and its negation the result is a contradiction and the statement is necessarily false. However, Blake understood that this and other rules of logic cannot and should not be applied to matters of fact and existence which can never be logically "contradictory." To hold "all Wisdom! To consist in the agreements & disagree[me]nts of Ideas" (Jerusalem 70:7-8, E 224) does little more than foolishly reduce "the variety of nature to the abstract idea" (see Reynolds in annotations to Reynolds, E 649). No abstract rational system can ever fully and accurately describe the reality we observe, consisting of downright plain truths and, taken together, the contraries of these various minute particulars. What this means for science (as we shall see) is that however many observations we make, we can never arrive at demonstrable certainty with respect to any laws we formulate regarding matters of fact and existence.

To speak as Fisher does of Blake's objection to "systems of knowledge"62 is not quite right because Blake denied there ever could be systematic knowledge of human experience. Nor is it likely, as Bloom claims, that Blake allowed for a need, under conditions where reason has been corrupted, for a "systematic vision of all existence."63 Blake was relentless in attacking what he understood to be a fundamental error of corrupt reason: the presumption that anyone's system was valid for all existence—or for all persons. He insisted that all systems are created precisely because they have to be, since they have little or no basis in what we know to exist.

61. Hume, Enquiry 598.
63. Bloom, Commentary 931.
What concerned Blake might be better identified as systems of truth, and what he objected to was the mistaken belief that these rational systems were actually providing systematic knowledge of all existence. The various systems of philosophic, religious or scientific truth which the reasoning power creates are true or false by virtue of the fact that they are logical or illogical, coherent or incoherent—whether, as Blake wrote, the ideas in them are in agreement or disagreement; logical agreement within a system does not mean that it is therefore true in the sense that it corresponds to the things we experience. The problem Blake had with Urizen was not that he is rational, but that he believes existence must conform to the laws the reasoning power formulates—the “one Law” he would impose on everyone and everything (see Urizen 4:40, E 72). Those things which we do experience, the minute particulars that any scientist seeking knowledge of the world must consult, exist either individually as plain truths or in relation to each other as contraries, and insofar as contraries can mutually exist and be equally true, they can’t possibly contradict each other. There is no logical relation among the minute particulars we experience—individually, of course, it is impossible, and collectively we know them to exist together in no rational or logical way. Thus, despite what scientists or priests or kings claim, not only can there be no knowledge beyond what men experience for the simple reason that nothing can be known to exist if it does not exist within human experience, but also the things we do experience, from the guinea sun to the heavenly host of angels (Vision of the Last Judgment, E 565-66), simply do not add up in any systematic way. By the same token, because there is no logical agreement or disagreement among the various and contrary facts we do observe, any rational system that does achieve demonstrable certainty does so by virtue of the fact that it fails fully to take into account the variety of different particulars we experience.

The truths of reason are also of two kinds. They correspond to what are commonly understood in philosophy as deductive a priori and inductive a posteriori truths.

The first result in what Blake identified as creations, fictions, allegories, abstractions and non-entities; so long as these truths of pure deductive reasoning are recognized as fictional non-entities, Blake had no problem with them. The error Blake repeatedly challenged involved what linguistic philosophers now call a “category mistake”—mistaking one kind of category (abstract non-entities) for another (existing entities); for Blake the mistake usually occurred whenever the reasoning power misinterpreted its creations, such as corporeal substance or Nobodaddy, as existing entities. Those truths of reason that are mistaken to be part of existence, Blake called negations. A negation is a “false appearance which appears to the reasoner” (Milton 29:15, E 127) and is created whenever the reasoning faculty mistakes or misrepresents the creation of rational abstractions for the discovery of real entities. “Negations Exist Not” (Jerusalem 17:34, E 162). They are abstract non-entities which are oftentimes erroneously presumed to provide us with objectively true knowledge of existence. That misunderstanding is what turns a truth of reason into an untrue, false, erroneous, delusive negation. Negations negate self-evident truths by ignoring, dismissing, denying or suppressing them, replacing life’s minute particulars with mathematical formulas and fictitious mechanical laws. That is what the new philosophy did whenever it failed to understand that its “mathematical symbols [do not] represent ... entities of the external world ....”

Yet ever since its inception, philosophy has been in the business of reifying its abstractions, of giving what Blake called “a body to Falsehood” and inventing some often remote, transcendent place where these falsehoods supposedly exist, but as Moritz Schlick remarked, “There is ... no domain of ‘philosophical’ truths.” The embodied falsehoods of natural and other philosophies Blake called negations; the delusive domain outside of existence where they reside he named Ulro.

The a posteriori truths of reason Blake distinguished with the term the ratio. The ratio is a product of inductive reasoning which results not in the creation of fictions, but in generalizations drawn from experience. Reason, so defined, is “the ratio of all we have already known,” a “Ratio / Of The Things of Memory,” which functions to “compare & judge of what [one] has already perceiv’d” (There is No Natural Religion, E 2; Jerusalem 74:11-12, E 229; There is No Natural Religion, E 2). At one point Los identifies the difference between the two methods when he rejects inductive reasoning in favor of pure, a priori rationalism: “I will not Reason & Compare,” he says, “my business is to Create” (Jerusalem 10:21, E 153); as we shall see, creation in Blake usually refers to a purely rational and not necessarily an imaginative process.

Because the ratio derives from experience, Blake did not question its validity—its correspondence to the things we know and see—in the way he did the creations of a priori reasoning. Rather, his doubts concerned its reliability as a predictor of future experience. This was Blake’s fundamental challenge to the scientific method, to Bacon’s contention that one could derive “the most general axioms” from “the senses and particulars.” When Blake said that the ratio “is not the same that it shall be when we know more” (There is No Natural Religion, E 2), he denied that knowledge derived from past experience can be retained as axioms for future knowledge. By claiming that knowledge of the unknown could reasonably be arrived at on the basis of already acquired knowledge, the new philosophy put itself in the wholly illogical position of supposing it could deduce knowledge of all existence before it had experienced all of its existence. Blake contended to the contrary that from “already acquired knowledge Man could not acquire more” (All Religions are One, E 1). If science is to progress, the ratio of what we know must not be established so as to fix, circumscribe and limit all further knowledge. Scientific progress cannot be based, as Bacon claimed,
on past experience. The acquisition of new knowledge comes through new experience (which is the only means by which knowledge can be acquired); coming to know more must inevitably change what we understand by the ratio.

Blake understood that the progress of science, which he argued for in opposition to those “Sciences [which] were fixed” (Four Zoas 73:21, E 350), requires that we not keep traversing old lands like a mill horse going round in circles, and that by remaining open to new experiences what we believe about science for should not be the confirmation of fixed systems of thought, which is what all systems of thought tend to look for. Rather, we must be prepared to reject cherished theories as false in the light of any new evidence we find. In science, “the rise, acceptance and fall of theories is an everyday occurrence” and “in a day ... [a] hardly-won position is assailed and made untenable .... Therefore, the experimenter cannot afford to close his eyes to a new discovery.” As Blake put it, “Science cannot exist ... / ... in generalizing Demonstrations of the Rational Power. / ... Establishment of Truth depends on destruction of Falsity continually” (Jerusalem 55:62-65, E 205).

The most glaring problem respecting the ratio is therefore not that it is a limited reflection of experience, but that when the rational and mathematic powers operate without regard for imaginative experience, they come to a standstill, preventing the discovery of new information by fixing the ratio of all past experience as a permanent and closed system of thought: “The Spectre is the Reasoning Power in Man; & when separated / From Imagination, and closing itself as in steel, in a Ratio / Of The Things of Memory, It thence frames Laws & Moralities / To destroy Imagination!” (Jerusalem 74:10-13, E 229). Therefore, if “it were not for the Poetic or Prophetic character, [which Blake identified as the faculty that experiences] the Philosophic & Experimental would soon be at the ratio of all things & stand still, unable to do other than repeat the same dull round over again” (There is No Natural Religion, E 3). Blake was willing to accept what he called the ratio to the extent that it did not prohibit the acquisition of new knowledge based on new experience: “the Reason is a State / Created to be Annihilated & a new Ratio Created” (Milton 32:34-35, E 132). In response to those who gave primacy in natural philosophy to the rational power and the supposedly permanent systems it created, Blake offered a description of how reason could function within a genuinely empirical and progressive science. He described it this way (for the first time in response to Reynolds’ contention that “reason is something invariable”): “Reason or A Ratio of All We have Known is not the Same it shall be when we know More” (annotations to Reynolds, E 659).

Furthermore, in accordance with his belief that knowledge is of the things we sense and that philosophy was destroying science, Blake evaluated the “Philosophic & Experimental” components of science quite differently: when Blake wrote that “the true method of knowledge is experiment” involving our “experiences” (All Religions are One, E 1), he was of course ironic, but the point of his irony has to do with his use of the definite article. What Blake could not tolerate was the implication that “Science such as is Weighed or Measured” was of superior value to all other methods of knowledge (annotations to Reynolds, E 659)—that it was the only true method. While he opposed the delusions of abstract reason themselves, when considering experimentalism he targeted those individuals who dismissed as incredible or doubtful all images of truth that could not be proved by experimentation; his opposition was to those “Who teach Doubt & Experiment” on the assumption that men cannot “believe without Experiment” (Jerusalem 54:18, 22; E 203, 204).

Thanks to the work of critics like Northrop Frye, much has been written about the different visionary states in Blake, but to say that Blake understood that “the abstract reasoner attempts to give independent reality to the qualities of the things he sees” or that he finds that “the tree is more real to the wise man than it is to the fool” overlooks perhaps the most important categorical distinction Blake made, which was not between levels of perception and vision, but between the fictions we create and what is eternally true in human experience. All visionary states, however limited, are real, and so are all the things they include: “A fool sees not the same tree that a wise man sees,” and he sees it maybe as “only a Green thing that stands in the way” (Marriage 7:8, E 35; letter to Trusler, 23 Aug. 1799, E 702), but it is still a thing he sees. Though “he sees all things thro’ narrow chinks of his cavern” (Marriage 14, E 39), everything the fool sees and knows in his world of experience, while it may be less rich, cannot be any less real. It is not the fool (or the experimenter) but the abstract reasoner who deals in unrealities. The fool’s tree is a real thing. Nobodaddy and material substance are not. They are delusions created by priests and philosophers, but no one has created the fool’s tree for him and then demanded that he believe what he does not see.

Blake described the material world as a creation to emphasize that he understood it to be largely a creation of; that is to say a product of, the reasoning power. Before the advent of natural philosophy "Earth was not: nor globes of attraction" (Urizen 3:36, E 71)—they were not thought to exist before Urizen, following Newton’s principles of universal gravity, created that “delusion of Ulro” of “a Globe rolling thro Voidness” (Milton 29:16, E 127). To say that for “Blake, to create [truth] is to find it”? turns completely upside down Blake’s central contention that “Error is Created Truth is Eternal” and ignores the fact that what he exposed throughout his writings was “Error or Creation” (Vision of the Last Judgment, E 565). Systems are created by an Aquinas or a Newton, but not eternal truth.

67. Born 57.
68. Planck, “Dynamical Laws” 90.

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Blake responded to the "idiot Reasoner" who laughed "at the Man of Imagination" (Milton 32:6, E 131) by insisting over and again that the reasoning faculty creates fictitious non-entities whereas the imagination deals with existing realities: "All Things Exist in the Human Imagination"; "Imagination [is] the real & eternal World"; "Eternal Realities ... Exist in the Human Imagination" (Jerusalem 69:25, E 223; 77, E 231; Vision of the Last Judgment, E 562). Because the things in the imagination have existed eternally, prior to any imaginative act, Blake tended to describe the imaginative process not in terms of creation, but as an act of sensing, seeing, representing and copying: "This World Is a World of Imagination & Vision I see Everything I paint In This World .... Imagination ... is Spiritual Sensation"; "Imagination is a Representation of what Eternally Exists. Really & Unchangeably"; "Copiers of Imagination are Correct" (letter to Trusler, 23 Aug. 1799, E 702-03; Vision of the Last Judgment, E 554; Public Address 59, E 575).

In Blake's writings, the term creation tends to be associated with what does not really exist, with abstractions, allegories, systems, and non-entities, and with what is not true, with delusions and falsehoods; and with the greatest delusion of all, the Nobodaddy who created this entire world out of nothing.

Blake's scheme of things, the man who reasons a posteriori from the qualities of the things he sees is operating from the real world of experience, whereas the abstract reasoner is operating a priori, in "a Void, outside of Existence" with "the unreal forms of Ulros night" (Jerusalem 1:1, E 144; Four Zoas 282, E 318). By describing Ulro as a dark delusive void and those who enter it as being in a state of sleep (see, for example, Four Zoas 85:21, E 360; Milton 29:16, E 127; 37:16, E 137; Jerusalem 4:1, E 146), Blake was indicating that those who fall into Ulro have dropped out of human existence into a state where they are not conscious and/or have no experience or vision of anything. Shelley thought "the deep truth is imageless" (Prometheus Unbound 2.4.116), but Blake thought that nothing could be said to be true which men could not imagine in some definite form: "it is impossible to think without images" (annotations to Lavater, E 600). The state of Ulro, being imageless, contains nothing for anyone to imagine and believe in, and anyone who does believe he has seen or discovered anything there is deceiving himself with false appearances. Ulro is therefore categorically different from the states of consciousness or vision, identified as Eden, Beulah, and Experience. The products of it are unlike the tree of either the wise man or the fool. The latter are images true to human perception and vision, whereas in Ulro there is only darkness and void. Filling this void are the pure creations and delusions of the reasoning power, such as the fictitious creations of Newton's sleep (gravity, force, or inertia) which exist neither in eternity nor experience, and the "false appearance which appears to the reasoner," like those images we think we see while asleep, as "when a man dreams, he reflects not that his body sleeps" (Milton 15:1, E 109).

The problem with Frye's description of what he identified as the abstract reasoner is that while it does describe a posteriori reasoning, it fails to take into account that, first of all, Blake typically described the abstract reasoner as operating a priori and without concern for the real qualities or characteristics of anything he or anyone else actually sees, and that, secondly, he recognized that inductive generalizations drawn from experience involved a different type of reasoning with different problems.

Blake's most insightful analysis of the fallacy of inductivism comes in There is No Natural Religion and All Religions are One. In defense of empiricism, Blake insisted that knowledge can be acquired only through experience and not at all by the deductions of the reasoning power. The powers of reason, being analytic and circular, are limited to analyzing already acquired knowledge and cannot possibly synthesize new knowledge: "Man by his reasoning power can only compare & judge of what he has already perceived. From a perception of only 3 senses or 3 elements none could deduce a fourth or fifth" (There is No Natural Religion, E 2; Shelley similarly contrasted reason and imagination at the beginning of his Defence of Poetry).

Blake hit upon the fundamental problem with the inductive method, which is that however large the sample, no finite number of known sensations or elements we consult can ever guarantee with certainty the general conclusion that all sensations or elements of that kind which we encounter in the future will without exception appear or act in exactly the same way. Seeing a hundred or a thousand white lambs is no demonstration of the generalization that all lambs are white. Tomorrow we could encounter a black lamb—or maybe be surprised by a white tiger. "The induction cannot be perfect till every simple idea that can enter into the human mind be examined .... No man can pretend to have made this examination of all our simple ideas without exception; and, therefore, no man can ... assure us, that [his] conclusion holds without any exception." Or, as Blake put it, our perception of two or three elements cannot guarantee what our perception of a fourth or fifth will be like. Without seeing or consulting the latter we cannot rationally "deduce" it from the former in the way that we can deduce that Socrates is mortal if all men are. Newton himself pointed out that arguing by "Induction [can] be no Demonstration of general Conclusions," but, more generally, Hume noted how all inquiries regarding matters of "fact and existence ... are evidently incapable of demonstration"; however, many ignored these warnings and readily assumed the certainty of general conclusions regarding matters of fact and existence. Blake had to remind his readers that it would be "ignorance to view a small portion & think that All, / And call it Demonstration: blind to all the simple rules of life" (Jerusalem 65:27-28, E 216). In his annotations to Reynolds, he noted that demonstration is certainly an object of reason an-

71. Reid 26.
72. Newton, Opticks 404.
73. Hume, Enquiry 688.
notations to Reynolds, E 659), but inductive generalizations from experience, unlike the conclusions of deductive reasoning, cannot reasonably rise to the level of demonstrations. A scientific method that "takes portions of existence and fancies that the whole" (Marriage 16, E 40) remains wholly illogical and cannot reasonably prove or demonstrate anything with any certainty.

The problem of induction has been called the problem of the uncertain future, which Hume put this way: all "our experimental conclusions proceed upon the supposition that the future will be conformable to the past .... If there be any suspicion that the course of nature may change ... all experience becomes useless, and can give rise to no inference or conclusion." The problem one faces is that if nature changes, then from "already acquired knowledge Man could not acquire more": Blake showed how Urizen's unscientific method gets around the difficulty of induction through the creation of a "world of solid obstruction" in which the course of nature does not change: "all futurity [is] bound in his vast chain / And the Sciences were fix'd" (Four Zoas 73:20-21, E 350), and so are the inhabitants of Urizen's world: "Beasts & Birds & Fishes, & Plants & Minerals / Here fix'd into a frozen bulk" (Milton 34:53-54, E 135). The only way induction can be logically guaranteed is if the future will in all particulars conform to the past. Then and only then can the ratio of all we have already known demonstrate with absolute certainty all that we will ever come to know. Urizen is shown creating a world that is bound, frozen and fixed because he realizes that it is only on condition that there will be no change in the world or its inhabitants that he can insure for all time the general validity of inductive reasoning and causal determinism. Urizen's world is reason's and not science's world—a world in which human experience is frozen and scientific progress cannot possibly occur.

To represent certain axioms of science "as things given independently of our senses" did "not necessarily damage science," but it "easily led into the error of believing that these notions, whose origin is forgotten, are necessary and unalterable accompaniments of our thinking ...." Much of Blake's effort was directed against the erroneous philosophical conclusion that the axioms of science originate independently of our thinking, but he also recognized that true science cannot work the way he described Urizen practicing it, not because scientists mistake the source of their inventions (that is a philosophical, not a scientific, error), but because they presume that "reason is something invariable" and go about "Fixing their Systems, permanent: by mathematic power" (Jerusalem 12:12, E 155). If we truly desire to know more, we cannot accept a Urizenic pseudo-science of stubbornly invariable rationalism established without regard for observed and observable features of human experience.

The Living World

In Blake's day important thinkers began seeking, through what Comte called social physics (physique sociale), universal laws of social behavior, and they tried to eliminate personal characteristics in the quest for the ideal of a mean average man (Quetelet's l'homme moyen). Since "the French Revolution," Blake observed, "Englishmen are all Intermeasurable One by Another Certainly a happy state of Agreement to which I for One do not Agree" (letter to Cumberland, 12 April 1827, E 783). Much of his writing needs to be seen as reacting to a type of radicalism that would model society on the physical sciences, in the hope that each "Individual" within society would appropriate to himself "Universal Characteristics" and "Universal Attributes" (Jerusalem 90:28-33, E 250) so that every member of society, like every object in the material world, would be intermeasurable with every other. Indeed, The First Book of Urizen presents one of the first satires on social engineering, showing how Urizen, as both natural philosopher and primeval priest, bases his laws of society on the same principles of fixity and uniformity that he has imposed on the physical world.

The idea that human behavior could be measured in the way physicists measured the material world was not limited to radical Enlightenment thinkers. Following the success of Newtonian physics, many, believing that "natural and moral evidence ... are of the same nature, and [are] derived from the same principles," wished to establish a science of human nature modeled after the physical sciences. Although the Newtonian revolution looked for "universal laws ... [and] the ultimate truth of everything as embodied in these laws ..." it overlooked the problem that though there are regularities in the living world, "most of these regularities are not universal and without exception ...." Ignored the fact that "Man varies from Man" and triumphed because it erroneously "supposes all Men alike" and believed there could be "One Law for the Lion & Ox" (annotations to Reynolds, E 665; annotations to Bacon, E 621; Marriage 24, E 44).

Denying the existence of the world without exceptions that natural philosophy had created, Blake showed how its laws remained "blind to all the simple rules of life" (Jerusalem 65:28, E 216) because they ignored those "minutely organized Particulars" and individual variations that were self-evident to any honestly observant individual and foolishly "reduced the variety of nature to ... abstract idea[s]" (see Reynolds in annotations to Reynolds, E 649). Blake's numerous comparisons between the living worlds of men and animals do not represent merely a poet's simile or metaphor, but an answer to the Newtonian revolution of his day. When men were looking to the regularities of celestial mechanics to comprehend human behavior, Blake did something quite unusual for his

74. Hume, Enquiry 606.
75. Einstein, "Physics and Reality" 299.
76. Hume, Enquiry 640.
77. Mayr 27, 62.
time. He turned from the large-scale material world of physical objects to the minutely organized particulars of animal life to illustrate the kind of rules that might truly describe human behavior.

Specifically, Blake showed that the living world cannot be comprehended by the same laws natural philosophers employed to explain the material world they created, because every living thing acts in accordance with a variety of intentions, propensities, and purposes of its own that are not the effect of and therefore cannot be explained in terms of efficient, mechanistic causality. To say that from the time of Bacon on, "nobody before Darwin managed to anticipate," that "final causes could and would ... be employed very usefully in biology ..." is a pretty large claim. However, it is one that cannot be maintained after anyone considers the works of William Blake, for they repeatedly insist that all biological life needs to be understood in terms of final rather than efficient causes.

Moreover, since every living thing behaves in accordance with different purposes and not one any law, since the "apple tree never asks the beechnow he shall grow, nor the lion, the horse; how he shall take his prey" (Marriage 9:50, E 37), the simple rules of life, as distinguished from the complex rules of abstract philosophy, tell us that there can be no valid inductive generalizations regarding biological existence, such as, for example, the growth of plants or the eating habits of animals (unlike apple trees, beech trees grow only in southern England, and horses aren't predators). The "Emmet's Inch & Eagles Mile / Make Lame Philosophy to smile" (Auguries of Innocence 105-06, E 492), since one cannot conclude from observing a portion of existence, like the emmet's inch, what the rest of the world, like the eagle's mile, will be like. With statistics and the rules of chance and probability, the social sciences in the late eighteenth century and the biological sciences in the nineteenth and twentieth would successfully challenge the mechanistic determinism of classical physics, and with the advent of atomic physics even the physicists started playing dice with the universe. However, by the 1790s Blake was already illustrating how biological existence provided living proof that the determinism of Bacon, Newton and Locke was fundamentally flawed.

Blake's response to Newtonianism was thus a lot simpler, more direct and obvious than Donald Ault's elaborate and complex work, Visionary Physics, would lead us to believe. However intimate Blake was with Newtonian physics, he did not need to offer an intricately detailed refutation of it. All he felt he had to do to stop the new philosophy dead in its tracks was to remind his readers of what everyone well knew and what the philosophers chose to overlook: consider the living world of man and animals that we are all familiar with. Does it conform to Newtonian principles of natural philosophy? Not at all. So how can any system of scientific laws that does not explain life itself claim to be a fundamental and universal explanation comprehending all existence? Blake insisted over and again that the "Sciences of Urizen" triumphed "at the cost of every thing that breathes" (Four Zoas 102:22, E 375), and he did not have to create his own system to counter Newton's. The alternative universe he kept illustrating was no fictional creation, but something that had always existed: a living, breathing world that operated by its own internal causes, but that the natural philosophers refused to consult because it could not be explained in Newtonian terms.

The stranglehold that Newtonian formulations have had on modern thought may be measured by the fact that as late as 1944 a physicist like Erwin Schroedinger still had to remind his audience that the workings of living organisms "cannot be reduced to the laws of physics." Over a century and a half before that, Blake kept insisting that this kind of reductionism was more than just foolish. It was unscientific. In the living world, causality originates from within each thing and does not operate as some scientists presumed it to operate in the physical world, where every thing was being viewed as the cause of every other thing but never as its own cause: "Every thing in Eternity shines by its own Internal light" (Milton 10:16, E 104; my italics), and that light remains within us while we are in the world of experience. What the "Philosophy of Causes & Consequences" refused to recognize was that in the living world "Each thing is its own cause" and instead by "Demonstration" made "Accident" the "Substance & Principle" of human behavior (annotations to Lavater, E 601; Milton 29:35-36, E 128). In other words, Blake understood that a perfectly realistic explanation for the behavior of living things could be given in terms of teleology or purposive causality (as in Eden, where "Wheel within Wheel in freedom revolve," motivating from within and without hindrance from external forces) instead of efficient or mechanical causality (as in Experience, where natural philosophers find only "wheel without wheel, with cogstyrannic / Moving by compulsion each other" [Jerusalem 15:18-20, E 159]—the cogs here might refer to those of a clock and to the then popular clockwork view of the universe). In a teleological system, its behavior involves ... the expenditure of energy derived from a local source rather than from the environment. The teleological system is ... not gaaded by the environment," or, as Blake put it, a teleological system "is its own cause."

It is by the same mechanisms of sense perception carried on with the identical sense organs that the chicken and the hawk receive impressions from the physical world, but they do not respond in identical ways to the identical impressions as sensationist psychology would have us believe, because each is impelled not by natural causes external to it, but is guided by its own "internal light."

78. Urbach 101.
79. Schroedinger 81.
80. Beckner 134.
With what sense is it that the chicken shuns the ravenous hawk? 
With what sense does the tame pigeon measure out the expanse? 
With what sense does the bee form cells? have not the mouse & frog

Eyes and ears and sense of touch? yet are their habitations.
And their pursuits, as different as their forms and as their joys:
Ask the wild ass why he refuses burdens; and the meek camel
Why he loves man: is it because of eye ear mouth or skin
Or breathing nostrils? No. for these the wolf and tyger have.

(Visions of the Daughters of Albion 3:2-9, E 47)

One cannot apply a cause and effect determinism to study the actions of wolves or camels or men because the law of the living world is that for every action there is an opposite and unequal reaction. Strike a rock with another rock, and it will react pretty much like any other rock. Strike a chicken and a tiger with the same rock, and you will immediately notice the difference, but you will have to strike the chicken first. Lockeian psychology had overlooked what everyone obviously knew, that even the mind of a chicken is not originally a blank slate that will be shaped entirely by sense impressions.

Similarly, Blake argued that one could not arrive at “General Knowledge” of men based on the fact that they have identical sense organs: “Every Man has Eyes Nose & Mouth this Every Idiot knows but he who enters into & discriminates most minutely the Manners & Intentions the ... Characters in all their branches is the alone Wise or Sensible Man ...” (Vision of the Last Judgment, E 560). “Man varies from Man more than Animal from Animal of Different Species” (annotations to Reynolds, E 656) because the manner of each person’s behavior, even more than that of each animal, is the outcome of his various intentions (purposive causality) and not the effect of what every man similarly senses in the world he experiences (efficient causality). Because man is not “Naturally ... only a natural organ subject to Sense” (There is No Natural Religion, E 2), it is therefore not possible to predict according to environmental circumstances how various persons will behave under similar or identical conditions: “Want of Money & the Distress of A Thief can never be allledged as the Cause of his Thievery. for many honest people endure greater hard ships with Fortitude We must therefore seek the Cause elsewhere than in want of Money ...” (letter to Trusler, 23 Aug. 1799, E 702). The identity of sense organs, combined with the irregularity of behavior in men and animals, reveals that sense experience does not determine and therefore cannot possibly explain the actions of men or animals. The obvious differences in their behavior means that any science of living beings has to look to what is different about them to understand why they act the way they do: it has to understand their different “propensities,” “intentions” and “purSUITS.”

Ever since antiquity, scientists had searched for the laws of the universe because of their faith in a God who was both creator and lawgiver. Newtonianism seemed to be the ultimate vindication of that search and the faith that inspired it, and the natural religion of the Enlightenment put the capstone on this almighty edifice. “Look round the world: ... you will find it to be nothing but one great machine, subdivided into an infinite number of lesser machines” each accurately adjusted to one another, all of which proves “at once the existence of a Deity, and his similarity to human mind and intelligence.” With the Age of Reason, the endeavor of natural philosophers to create a solid universe of fixed laws culminated with such a pervasive intensity, affecting all aspects of thought—Urizenic thinking took over everything, suppressed all thought, vision, imagination, passion—that Blake felt the falsity of it all would soon become clear: Los sees “the finger of God ... / ... / Fixing their Systems, permanent: by mathematical power / Giving a body to Falshood that it may be cast off for ever” (Jerusalem 12:10-13, E 155).

Indeed in 1831, twenty-seven years after Blake printed those words and just four years after he died, the Beagle set sail. It is impossible to tell exactly how Blake would have responded to Darwin’s great work, much of which he no doubt would have found repugnant. However, we do know that he had no trouble defending Paine against Bishop Watson’s attack on his Age of Reason, a work with which Blake certainly had much disagreement, and he readily interpreted the Bible in his infernal way so as to overlook what was disagreeable and highlight what he favored, so there is good reason to suppose that he also would have extracted from Darwin whatever suited his purposes. There is much that would have delighted Blake, who thought “the Creator of this World is a very Cruel Being” (Vision of the Last Judgment, E 565).

When Blake inquired “Did he who made the Lamb make thee?” he knew that it is not credible to say that God made the lamb and not the tyger; the implication being that there is no moral plan according to which God made only what the religious call good qualities (lamb-like meekness) and did not also create and even smile upon what they call evil (tyger-like wrath). We are not “put on earth” to fulfill any providential design or plan, such as, for example, learning as slaves “to bear the beams of [God’s] love” (“Little Black Boy,” E 9). Priests who proclaim that the “Gods had ordered such things” merely take advantage of the vulgar (see Marriage 11, E 38), for in truth no God preordained, planned or created anything.

Perhaps, then, the best answer to the question regarding the making of tygers and lambs is not that God made both, but that no distant hand or eye created either. Blake thoroughly rejected the Genesis account of creation, along with its Creator God. He was an anti-creationist who held that “Eternity Exists and All things in Eternity” and found the supposition that all was once “Solitude & Chaos” to be “the most pernicious Idea” (Vision of the Last Judgment, E 563). He therefore might very well have loved much that Darwin achieved after he returned from his momentous voyage. Darwin destroyed not only the Creator God, but also “conceptions that had reigned in the philosophy of nature and knowledge for two thousand years [which] ... rested on the assumption of the fixed and final ... 81. Hume, Dialogues 701.
Blake's realization that "All Knowledge is Particular," that "Unless. You Consult: Particulars. You Cannot. even KNOW or See ... any Thing ..." and that "Science cannot exist but in minutely organized Particulars / And not in generalizing Demonstrations of the Rational Power" (Jerusalem 55:62-63, E 205) derived in large part from his understanding of the behavior of men and animals. These insights could very well have served as guidelines for the research methods Darwin employed. Certainly no scientist before Darwin consulted minutely organized particulars, every inch and mile of creation, more than he did. Darwin's painstaking research into the living world of plants and animals did not lead him to reduce the variety of nature to fixities and uniformities, as all those Urizenic scientists before him did. His writings are filled with terms Blake used or would certainly have appreciated—words like individual differences and variations—and he showed how and why minute particulars are organized the way they are. Darwin's work was the hammer of Los that destroyed the Urizenic error that had been misleading scientists for millennia.

Blake was one of the very few prior to Darwin who understood the error of fixity and finality. He hammered away at perhaps the fundamental mistake of all pre-Darwinian thinking as it affected science, as well as society's moral and religious beliefs. He recognized just why there was so much secrecy surrounding God's "words and laws"—because there were no universal, preestablished laws that religion could discover. They were merely priestly inventions. Once natural philosophers similarly claimed to have discovered fixed and final abstract laws, Blake noted that these laws were equally fictitious creations and not the stuff of real science. For Blake, true science must give us knowledge of those minutely organized images of truth that we all experience, and if it does not, then the so-called new philosophy is just the same old philosophy all over again.

"The labours of Art & Science"

Nowadays we tend to divide art and science into different cultures—their studies are located in different parts of most universities. However, Blake's contemporaries considered science to be a branch of philosophy. Blake responded by seeking to differentiate both art and science, which he viewed as related endeavors, from all philosophy, including natural philosophy. The phrase "art and science" appears over seventeen times in his writings (too many times to list—five appear in the first two paragraphs of this essay—so the reader interested in all of them should consult David Erdman's Blake Concordance). As Blake understood it, science, along with art, was one of the intellectual gifts of humanity; its aims were to be distinguished not only from natural philosophy, but also from all moral and religious concerns, since those who "trouble Religion with Questions concerning Good & Evil" and all such "Knowledges or Reasonings" despise and hinder "Imaginative Art & Science & all Intellectual Gifts all the Gifts of the Holy Ghost" (Vision of the Last Judgment, E 554). For Blake, what has marked the two warring cultures of Western civilization have been the attempts of moralists and theologians to hinder the work of artists and scientists, with the dark religions and abstract philosophy (the frequent handmaiden of religion) opposing art and science. "Laws & Moralties / ... destroy Imagination" (Jerusalem 74:12-13, E 229). Throughout his writings, Blake called for the liberation of both art and science from their traditional hindrances.

What kind of science could he possibly have been thinking of? And who was practicing it? As Blake saw it, science is one of the eternal arts of humanity, and from science every earthly occupation derives: "in Eternity the Four Arts: Poetry, Painting, Music, / And Architecture which is Science: are the Four Faces of Man. / Not so in Time & Space: there ... only / Science remains ... & by means of Science, the Three / Become apparent in Time & Space, in the Three Professions / Poetry in Religion: Music, Law: Painting, in Physic & Surgery: / That Man may live upon Earth ..., / And from these Three, Science derives every Occupation of Men. / ... Science is divided" and "Some Sons of Los" build "porches of iron & silver" while "Others; Cabinets richly fabricate" and "the Artist [takes] his clay / ... to mould artful a model for golden ornaments" (Milton 27:55-28:15, E 125-26).

These are the words of a professional artisan who represented the poetic genius not as someone sitting on an old grey stone for the length of half a day or invoking inspiration from the wind (cf. Wordsworth's "Expostulation and Reply" and Shelley's "Ode to the West Wind"), but as Los, the smithy continuously working at and giving concrete form to his art and not off generalizing about abstractions as Urizen does. As science has become increasingly specialized and theoretical, Blake's description might first strike us as out of date, but when attempting to understand what he meant by the art of science, we should recall that Leonardo practiced science and Goethe worked at it in Blake's day. Later still, Borodin was a chemist, Chekhov a physician, and Kafka an excellent lawyer. In a lecture at the Royal Institution (given on 16 June 1836), Constable contended, "Painting is a science ... a branch of natural philosophy, of which pictures are but experiments." Not an opinion Blake would entirely have agreed with, because he sought to distinguish art and science from philosophy, but it shows that other artists in Blake's day also considered art and science to be allied disciplines.

Moreover, as science developed it continued to go in the direction Blake wished to move it, divorcing itself from speculative philosophy and its concerns and claims, but not necessarily from the occupations of the artist. At the end of the twentieth century, the paleontologist Stephen Jay Gould of...
ffered his opinion as to the nature of science and how it differs from philosophy: "Maybe philosophers do sit in their armchairs and think about the nature of reality," he said. "But I don't think most practicing scientists do, I think they just get on with their work." The physicist Freeman Dyson agrees that "science has more in common with art than it has with philosophy." At the end of the eighteenth century, Blake struggled to establish a view of science as a practical discipline completely separate from the concerns and claims of philosophy. By the end of the twentieth century, his assessment has become the one accepted by a number of scientists and philosophers.

In the West, the only science worth speaking of prior to the scientific revolution of the Renaissance occurred in ancient Greece, and it pretty much died there, in part because it was largely something studied by an aristocratic class of philosophers who had little or no interest in its practical applications and who would not have understood what Berkeley meant when he wrote that the "study of nature" serves to frame "artificial things for the use and ornament of life." Significantly Blake's poetic genius, Los, is a member of the working class for whom science and art is an occupation he labors at and not simply something that he sits thinking about at his leisure. He is the perfect embodiment of Berkeley's description of the nature and purpose of real science, as distinguished from the musings of natural philosophers:

the end of speculation [should] be practice, or the improvement or regulation of our lives and actions; yet those, who are most addicted to speculative studies, seem as generally of another mind .... [Men] of leisure ... lay themselves out in fruitless disquisitions, without descending to the practical parts of life, or informing themselves in the more necessary and important parts of knowledge."

Modern science is distinguished by its insistence on empirical observation and proof, and that advancement in learning is due, to an extent not fully appreciated, to the interests and work of a class of ordinary artisans, among whom were the painters, silversmiths and blacksmiths, ironworkers and cabinetmakers Blake listed as doing the work of science. To take a few examples from many: in 1698 an English merchant, Thomas Savery, patented a steam device for clearing water from coal mines; an instrument maker, James Watt, perfected the engine; and in 1824, a French military engineer, Sadi Carnot, published a treatise on the steam engine, Reflections on the Motive Power of Fire, all of which eventually made the science of thermodynamics possible, as the science of aerodynamics was advanced by two brothers who ran a bicycle shop in Dayton, Ohio. It is of no small significance that Galileo, often considered the father of modern science, placed his last and most important scientific dialogue (Concerning Two New Sciences) in a shipyard.

Examining the rise of empiricism in his Mathematical Thought from Ancient to Modern Times, Morris Kline noted: "While reformers of science urged the return to nature ..., practically oriented artisans, engineers, and painters[!] were actually obtaining the hard facts of experience." They "deal with particulars, rather than generalities ("To Generalize is to be an Idiot"); "Science cannot exist but in minutely organized Particulars / And not in generalizing Demonstrations of the Rational Power" (annotations to Reynolds, E 641; Jerusalem 55:62-63, E 205), and they added to science instead of defining it ...." The "pure empiricism of the artisans," working with "mechanical ideas and properties of materials" provided "new physical insights [that] were impressive." Indeed, one of those artisans not only wrote about science but also demonstrated how art and science actually work together—how every occupation of man derives from and involves real scientific work. Experimenting with copper, gum arabic, and acid, he made his own impressive discovery. In 1792 I met with a printer and happened to ask him if he knew the work of William Blake. He could hardly sit still. "Oh, William Blake!" he exclaimed. "That is printing of the 21st century!"

In the end, I hope this essay has shown that, for all that's been written to explain and celebrate Blake as a mystic or visionary, he was a child of the Enlightenment who sought, as did the finest thinkers of the age, to free men from their numerous "mind-forg'd manacles" ("London," E 27) which served only to hinder art and science, whose work he believed formed the basis of any good society. He, like other Enlightenment figures, sought to reevaluate those eternal verities that custom, tradition and law required men to believe in, and to redefine what individuals can sense to be true and what they know is not; in the process he defined for himself and others a quite modern version of truth which, in the best spirit of the Enlightenment, was at once accepting, tolerant and critically very astute. Blake examined ancient and modern conceptions of the truths of reason to show that rational truths were neither true nor false with respect to all those images of truth we experience, and anyone who claimed that they were true in that sense was speaking falsely, since there was no foundation in experience for any such belief or claim. On the other hand, everything that humans do experience is true, has to be true, and cannot possibly be untrue; no one, no philosopher, nor king or priest, has any right to reject or condemn anything humans experience as being false or wrong, for "everything that lives is holy!" (Visions of the Daughters of Albion 8:10, E 51).

83. Gould 80.
84. Dyson 139.
86. Berkeley, Dialogues 103.


Galilei, Galileo. Dialogues Concerning Two New Sciences.

Hawking, Shoulders of Giants 399-626.


Keynes, John Maynard. "Newton, the Man." Weaver 1: 539-47.


Planck, Max. "Dynamical Laws and Statistical Laws." Weaver 1: 90-100.


MINUTE PARTICULAR

Blake and the Sheffield Iris

BY DAVID GROVES

The Sheffield Iris was a weekly eight-page newspaper, founded in 1794 by the poet and reformer James Montgomery (1771-1854). Its enlightened political views gave the Iris an influence far beyond the English manufacturing city of Sheffield. Although Montgomery's role as editor ended in 1825, he continued to take an interest in the paper, and to contribute occasional pieces to it.1

When the second volume of Allan Cunningham's Lives of the Most Eminent British Painters, Sculptors, and Architects appeared in 1830, it was reviewed in the Iris, with special attention to Cunningham's chapter on Blake. The anonymous review has never been reprinted or mentioned in print, until now:

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NUMBER X. of this interesting work, which we have on a previous occasion introduced to our readers, is just published, and comprises the lives of seven painters—West, Barry, Blake, Opie, Morland, Bird, and Fuseli, with likenesses, more or less highly finished, of each. To say, that the memoirs contained in this neat volume—the second of "British Painters, Sculptures [sic], and Architects," are from the fascinating pen of Allan Cunningham, and the far-famed depot of Albemarle-street, leaves nothing else to be added in the way of praise. What a singular being was William Blake! A painter, an engraver, a poet, and a visionary,—in the last character perhaps little less singular than Swedenborg [sic] himself. "To describe" says the biographer "the conversations which Blake held in prose with demons, and in verse with angels, would fill volumes, and an ordinary gallery could not contain all the heads which he drew of his visionary visitors. That all this was real, he himself most sincerely believed; nay, so infectious was his enthusiasm, that some acute and sensible persons who heard him expatiate, shook their heads, and hinted that he was an extraordinary man, and that there might be something in the matter." The spirits, however, who thus obeyed the artist's bidding, came not to reveal any secrets, save the secrets of their own countenances—in short they came as might be expected at the call of a painter—to have their portraits taken! and many of the likenesses of these spiritual sitters did poor Blake delineate, from the heroic Wallace to the "ghost of a flea!" Instead of transcribing the narrative of these unearthly vagaries, we shall copy the brief account of the enthusiast's procedure and luck in a transaction incident to the greater part of mankind: but in which few engage so inconsiderately, and fewer still, when that is the case, with such exemplary good fortune:

(The two paragraphs that follow are the ninth and tenth paragraphs of Cunningham's chapter on Blake, from the first edition of the Lives.3 The only substantive change is the spelling of the names of Blake's wife as [alternatively] "Katharine Boucher" and "Catharine Boucher." Blake was in fact 24, not 26, when he married.)

2. Anon., Sheffield Iris 9 February 1830: 4. The opening words, "NUMBER X. of this interesting work," refer to the "Family Library" series, of which number ten was the second of Cunningham's six-volume Lives. "Albemarle-street" was the location of Cunningham's London publisher, John Murray. "Swedenborg" was of course the mystic Emanuel Swedenborg.

3. The second edition of Cunningham's life of Blake is reprinted in Bentley 476-507.
A (Self?) Portrait of William Blake

BY ROBERT N. ESSECK

The monochrome wash drawing (illus. 1) at the center of this essay has had an interesting career since it first came to public notice in 1974. No one has seriously doubted that it is a portrait of William Blake, but its authorship has remained an open question. The first reasonably definite attribution, proposed by a distinguished art historian, has received less than universal assent. Perhaps this mystery, coupled with the hypnotic and hieratic character of the drawing, has contributed to its becoming one of the most reproduced, and hence most familiar, representations of Blake's visage. My purpose here is to argue that this work is a self-portrait, a view that has been noted in several earlier publications but not presented in detail. My proposal is clearly self-serving, since I own the drawing. Consequently, I have hesitated to publish my views on the portrait's attribution for over 30 years. It is time to come clean. I trust that my arguments will be judged on their merits rather than their source.

The detailed "review of previous research," once standard in scholarly articles, has in recent times been honored in the breach. I'll return to that antiquated genre to set my opinions in context. This overview of almost everything that, to my knowledge, has been written about the portrait may also provide some general insights into the vagaries of reception history, the rhetoric of attribution, and the relationship between material facts and the connoisseur's eye.

The drawing came to light in Christie's London auction catalogue of 5 March 1974. Accompanied by a black and white illustration, lot 77 was ascribed not to an individual, or even to the ever-productive "Anonymous," but to "Circle of William Blake" and titled "Portrait of the Artist." Anticipating an after-sale dispute over the identity of either the artist or the subject, Christie's cleverly hedged its bets. The "Circle" is expandable, and might even be extended well beyond Blake's lifetime, and there are of course men other than the artist and poet with the name "William Blake." The "Artist" portrayed might be anyone in that circle, not just the person at its center. In spite of Christie's quibbling rhetoric, I was immediately taken with the image and believed it to be a portrait of the engraver, artist, and poet William Blake, although at the time I had no idea as to its creator. The catalogue description included the following points: "on paper watermarked G. Pine 1802." The name of the paper manufacturer is incorrect, as I will discuss below, but the date is both correct and significant. Watermarks provide only a terminus a quo, but comparison with some known portraits of Blake convinced me that this work, with some idealization and added youthfulness, might well be datable to c. 1802-04, when the man was 44-47 years old. My interest, however, had little to do with reasoned arguments and facts. My immediate response, aesthetic and subjective, mastered other considerations. Even though my instincts were based only on the catalogue reproduction, having never seen the original, I commissioned the London firm of Baskett & Day to bid for me, and was successful at 800 guineas (then about $1930).

I was not the only Blake enthusiast interested in the drawing. Sir Geoffrey Keynes was preparing his catalogue of portraits of William and Catherine Blake and contacted me about his work in progress. With Christie's help, Keynes had contacted its vendor, a "Mrs. Isaacs," not otherwise identified. Keynes informed me, in a letter of 4 April 1974, that he had written to Mrs. Isaacs, "who replied that her late husband had bought it at an unknown time & she could tell me nothing." The provenance trail had grown cold all too quickly.

Martin Butlin was the next person to contact me about my acquisition. With admirable industry, he wrote the first—and until the present effort the only—article specifically on the portrait, published in the journal Blake Studies in 1975 with the drawing reproduced on the front cover. Although brief, the essay is packed with information and a sophisticated argument for attribution. Butlin begins and ends with high praise for the drawing: it "is probably one of the most fascinating known representations of an artist [and] represents the 'Spiritual Form' of Blake and as such is his most striking portrayal" (101, 103). He is "immediately impressed by its Blakean qualities" (101), finds striking similarities between the portrait and Blake's Visionary Head of c. 1819-20, The Man Who Taught Blake Painting in His Dreams, and notes that this pencil drawing is "an idealised self-portrait" (102). These views might seem to lead to an attribution of the wash portrait to Blake, but Butlin takes a sharp turn away from that possibility, warning us "against the temptation to see the drawing as the work of Blake himself" (102). The parallels with The Man Who Taught Blake Painting in His Dreams were "most obvious" (102) to Butlin when he studied not Blake's original

This essay is dedicated to Dr. Elizabeth B. Bentley. I am grateful to Warren Carou, Alexander Gourlay, Sarah Jones, and Joseph Viscomi for their suggestions, and to John Sullivan and Devonne Tice of the Huntington Library for their assistance with electronic imaging.

1. I have been less restrained in conversations and correspondence with people who have requested photographs of the portrait.


but a replica tentatively attributed to John Linnell (illus. 2). Further, "the painterly treatment of the coat and kerchief" and, "in the face," the "somehow cold and brittle rather than bounding and alive" quality of the "otherwise Blakean line" lead Butlin to claim that Linnell is "the most likely author" of the portrait (102). Although he does not say as much directly, Butlin implies that Linnell based the portrait partly on The Man Who Taught Blake Painting in His Dreams, converting it into a portrait of the man whose features were already present in a stylized form in the Visionary Head. Given the watermark date, Linnell was using a rather old sheet of paper. As Butlin points out, however, "the length of time between the date of the watermarks in the sketchbook [i.e., the Smaller Blake-Varley Sketchbook], 1806, and Blake's use of it in 1819, is not much less than that between the watermark of this drawing, 1802, and the probable date when Linnell would have executed it, c. 1819-25" (102-03).8 One further feature associates the portrait with Linnell and John Varley, both of whom were involved in Blake's production of the Visionary Heads and the engravings of a select few in Varley's Treatise on Zodiakal Physiognomy (1828). "Linnell's involvement with Varley's Treatise is particularly significant in relation to the rough sketches on the back of the drawing [illus. 4], which have parallels in Varley's own work, including the drawings he made in the [Smaller] Blake-Varley Sketchbook before Blake used it for some of the Visionary Heads" (102).

I find Butlin's arguments more compelling for their cleverness, even brilliance, than for the evidence marshaled in their support. Indeed, the main reason for accepting the attribution to Linnell is Butlin's authority as a skilled art historian who has spent decades studying and cataloguing paintings and drawings by Blake and his circle. As a general rule, the educated eye of the connoisseur is primary; the evidentiary support comes later, not as an inductive method for leading the connoisseur to an opinion, but as a deductive strategy for convincing others that his views are correct. Thus it was with my decision to bid on the drawing, and thus I believe it was for Butlin. By placing The Man Who Taught Blake Painting in His Dreams as an intermediary between the author of the portrait and Blake's actual visage, Butlin can simultaneously accept the "Blakean qualities" of the drawing and resist an attribution to Blake himself. Unlike the counterproofs and replicas of Blake's Visionary Heads produced by Varley and Linnell, the portrait is not a line for line copy of any preexisting design. Given Butlin's perspective, the portrait is a complex amalgam of a work by Blake and the man's actual face—a face that had already influenced the drawing used as a model. Linnell pre-


6. Linnell did not meet Blake until the spring or early summer of 1818. By 24 June the two men were working together on an engraved portrait of James Upton (B.R. [2] 340-41).

8. The Exhibition of the Royal Academy, M.DCCCIX. The Forty-First (London: Printed by B. McMillan [for the Royal Academy, 1809]) 22, item 472, hung in the "Antique Academy" room (20). Fraser's address is given as "17, Woodstock street, Bond street" (141).


sumably submerged his own stylistic characteristics beneath Blake's in a pictorial equivalent of ventriloquism, for Butlin makes no mention of any Linnellian qualities in the drawing. The result is a double-likeness, one that captures both Blake's face and his own conception of that face. But is Butlin's theory too convoluted, too clever by half? I will return later to his observations, point by point.

Keynes' catalogue of portraits of Blake, containing an almost full-size black and white reproduction of the drawing, appeared only two years after Butlin's essay and is much indebted to it. After some hesitation, as indicated by the comment that the drawing is "highly finished by a skilled, though not certainly known, hand," Keynes assents to Butlin's view with the statements that "the most probable author is ... John Linnell" and that "it ... is quite certainly based on The Man Who Taught Blake Painting in His Dreams" (Keynes 24). Keynes adds two observations of his own. "The dress is the same as he [Blake] habitually wore," but the portrait "was not necessarily done in his lifetime" (Keynes 24-25). Consequently, in his catalogue entry on the drawing, Keynes dates it to "c. 1820-1830" (Keynes 140). He records the watermark, as cited in the auction catalogue, but makes no comment on its early date.

Neither Butlin in his essay nor Keynes in his catalogue mentions the possibility that the wash portrait of Blake is the untraced and otherwise unrecorded "Portrait of W. Blake" exhibited by "W. Fraser" at the Royal Academy in 1809.9 I raise the issue here merely to dismiss it—or at least put it aside until the concluding paragraphs of this essay. Very little is known about William Fraser other than his exhibition of works at the RA. There is no record of contact between him and Blake, the RA catalogue gives neither the medium nor the size of the work, and it is possible that the "W. Blake" he pictured is not the poet and artist (see note 2 for other candidates). In these circumstances, further speculation would serve little purpose.

The brevity of catalogue entries and illustration captions does not prevent those genres from being important chapters in the portrait's reception history. A black and white reproduction serves as the frontispiece to Bentley's Blake Books of 1977.9 The caption differs from Butlin and Keynes on two counts: "Anonymous Portrait of William Blake (1802?) aged about 45." Bentley has not accepted the attribution to Linnell, but has no alternative to suggest. He takes the watermark date as the probable, but questionable, date of execution, and believes that Blake looks about 45 years old in the portrait. If Bentley is correct about the sitter's age, then an attribution to Linnell can be maintained only if one assumes that he purposely portrayed Blake as a man much younger

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2. Blake, *The Man Who Taught Blake Painting in His Dreams, Replica Perhaps by John Linnell*. Pencil, 26.0 x 20.6 cm., based on Blake's original, datable to c. 1819-20, with right and left reversed. Inscribed by Linnell lower left, "The Portrait of a Man who instructed M'. Blake in Painting &c. in his Dreams," and lower right, "Imagination of a Man who". M' Blake has rec'd. instruction in Painting &c from." Butlin #755. Tate Collection, London. Blake's original drawing is in the Keynes Collection, Fitzwilliam Museum, Cambridge (Butlin #753); a counterproof—with right and left reversed and probably the basis for this replica—is also in the Tate Collection (Butlin #754).
Bentley begins cautiously, placing a question mark after both "Blake" (as the subject) and "Self-portrait," but these hesitations are allayed by what follows. "This strange portrait ... surely represents William Blake," for the coat, the "stock" or cravat, "the domed forehead, piercing eyes, arched eyebrows, and hair receding from a peak are very similar" to the 1807 portrait by Thomas Phillips, although that painting "shows a rounder chin, wider mouth, and greyer hair." Bentley also compares the monochrome wash portrait to John Flaxman's pencil sketch of Blake, dated 1804 on the verso, and finds that the two portraits are similar in "costume and hair peak," but that the pencil drawing shows an "older and more solid" Blake. Bentley concludes as follows: "The portrait was probably made by Blake when working on his portrait-miniatures about 1803. Notice the oval shape of the picture, traditional for miniatures .... The eyes, which to the self-portraitist are most conspicuous, are awesomely compelling. This is a portrait of Blake as he saw himself not with but through the eye."

In William Blake and the Language of Adam, I reproduced the portrait but made no attempt to dissent from Butlin's attribution. Rather, my interest was in claiming that the face of Adam in Adam Naming the Beasts (illus. 3) is an idealized self-portrait. I'll now reverse the direction of my argument and flesh out my earlier observations about the portrait drawing and its relationship to a painting indisputably from Blake's hand. There are of course differences between the two works, including the youthfulness of Adam and the more elongated cheek and jawline in the drawing. The hair is different, yet Adam's curly locks form a peak above his forehead, surround his head, and cover his ears much like the sparser hair in the portrait. The most striking similarities are the nose (particularly the bowed lower edges of the nostrils), eyes, eyebrows, and upper lip. Indeed, these features are almost identical in their stylization and an exaggerated symmetry unlikely to be found in any living face.

Several features in the portrait drawing are closer to Blake's Adam than to The Man Who Taught Blake Painting in His Dreams (illus. 2). Blake in the portrait and Adam share a

10. Mary Lynn Johnson and John E. Grant, eds., Blake's Poetry and Designs, Norton Critical Edition (New York: Norton, 1979). The caption is printed on the back cover. The portrait is not reproduced in the hardcover issue. The portrait is also attributed to an "Anonymous Artist," without reference to the date of execution or the age of the sitter, in [Gert Schift], William Blake, catalogue of the exhibition at the National Museum of Western Art, Tokyo, 22 September through 23 November 1990 (Tokyo: National Museum of Western Art, 1990) caption to the illustrated "Reference Work" facing p. 5. The portrait was not included in the exhibition.


3. Blake, *Adam Naming the Beasts*. Tempera painting, 75.0 x 62.2 cm., signed and dated 1810. Detail of Adam’s face, approx. 38.0 x 34.5 cm. Butlin #667. Pollok House, Glasgow; copyright © Glasgow City Council (Museums).
4. Portrait of William Blake, verso pencil sketch. This rough sketch, only about 4.5 x 9.0 cm., is just above the lower edge of the sheet, with a top/bottom orientation the same as the recto portrait. Collection of Robert N. Essick.

straight line between the lips; the mouth turns up in the Visionary Head. The eyebrows of the painting instructor rise at a slight curve from their inner termination, form a dramatic peak or angle a little more than halfway along their length, and then descend on a new curve toward their outer ends. In both the portrait drawing and the tempera, the eyebrows are a continuous curve throughout their entire span. Similarly, the upper eyelids of Adam and Blake lack the sudden angle of the instructor's upper lids just before they arch over the pupils. In the portrayals of Blake and Adam, the outer corners of the eyes, particularly the left eye in each case, are drawn out into a thin line. No such extensions appear in the Visionary Head. Finally, the faces in the portrait and the tempera lack the phrenological segmentations so apparent in the instructor's forehead. If the portraitist had used one of Blake's own works as a model, Adam Naming the Beasts would seem a better candidate than The Man Who Taught Blake Painting in His Dreams. Linnell may have seen the tempera while it was in the collection of Thomas Butts, but neither Butlin nor any other scholar has argued for its direct influence on the portrait. If the portraitist had used one of Blake's own works as a model, Adam Naming the Beasts would seem a better candidate than The Man Who Taught Blake Painting in His Dreams. Linnell may have seen the tempera while it was in the collection of Thomas Butts, but neither Butlin nor any other scholar has argued for its direct influence on the portrait.

One could go on and on with comparisons and contrasts among these three works (illus. 1-3). I trust it is already evident that such comparisons lead us not only to a common origin in Blake's own features, but also to a similar manner of conceiving of and idealizing the human countenance. It is difficult to believe that two different artists designed and executed the portrait and the tempera painting, particularly if there is no evidence that the portraitist used the tempera as a model. The stylistic parallels between the portrait drawing and Adam Naming the Beasts suggest the presence of Blake's hand as much as his face.

Butlin's one-sentence comment on the "rough sketches" (illus. 4) on the verso of the portrait is another attempt to link the object to the Linnell-Varley circle, and thus to the production of the Visionary Heads c. 1819-25. But just what is represented, so lightly and crudely, on the back of the portrait? There is a good deal of accidental soiling on the verso; in a black and white illustration, it is difficult to distinguish between these smudges and purposely created pencil strokes. Accordingly, in illus. 5 I have drawn over in black ink all lines which careful inspection of the original convinces me are in pencil. There is a single composition, not multiple "sketches." On the left are buildings, or a single structure with several bays including an arched entry. From this cluster stretches a colonnade, gradually diminished in size to show its extension into the distance on the right. Above the colonnade are a few lines suggestive of background hills; similar horizontals below the colonnade indicate a foreground landscape. On the far right are two standing figures, rigidly composed of simple verticals and a few lines to indicate heads and arms. Both would seem to be gowned. The figure on the left has its arms at its side, with the lower left arm and hand extended at a shallow angle;
5. *Portrait of William Blake*, verso pencil sketch (see illus. 4). The pencil lines have been traced in black ink to distinguish them from accidental smudges, thereby highlighting the drawn image.

The figure on the right may have its arms folded over its chest. Both figures seem disproportionately large in comparison to the structures—unless we imagine them standing well forward of even the nearest reaches of the building on the left. The artist has attempted linear perspective with mixed results.

Butlin does not specify which drawings by Varley in the Smaller Blake-Varley Sketchbook are similar to the verso drawing on the portrait. The only clear parallel I can find is a lightly drawn sketch on page 40, showing an archway with a castellated top, a building or wall extending to the left, a large castle rising above the arch, and, on the far right, a rectangular building with a tall, narrow door or window (illus. 6).


drawings are similar in motifs and the awkward management of a pencil. But is the sketchbook example really by Varley? The drawings indisputably by Varley in the sketchbook were executed in chalk or soft pencil. Both yielded rather thick lines. The sketch on page 40 was made with a harder, sharper pencil of the sort we also find in Blake’s Visionary Heads on other pages. Varley’s architectural drawings are on rectos; page 40 is of course a verso. Drawings by Varley in the sketchbook offer fewer parallels with the composition on page 40 than the battlemented walls behind a crowned figure on page 74 of the Smaller Blake-Varley Sketchbook and a hesitant sketch of battlements accompanying the Visionary Head of James Hepburn, 4th Earl of Bothwell, on pages 27-28 of the Larger Blake-Varley Sketchbook. Both of these sketches have been confidently attributed to Blake.22

Several works by Blake, particularly among his Job illustrations of c. 1805-06,23 offer motifs reminiscent of the verso sketch on the portrait. Many of the Job compositions feature Job and his wife as two large foreground figures, distant hills or mountains, and architectural elements (including columns and in one design an arch) in the middle distance. Pillar-like figures, such as the two in the verso sketch, can be found throughout Blake’s rougher pencil drawings. And was Varley ever quite so awkward, even in his mostihest doodles? To revise slightly one of Butlin’s own, only half-joking, methods for attributing a work to Blake, one can justifiably argue that a drawing too bad to be by, say, Linnell or Varley can nevertheless, other things being equal, be by Blake.24 An attribution of the portrait’s verso sketch to the man whose likeness commands the recto would not be unreasonable. Perhaps the

22. Butlin #692.74 (“A Standing King Holding a Sceptre, a Fortified Town Behind,” in the smaller sketchbook). For the attribution of the drawing in the larger sketchbook and a reproduction of both pages, see Christie’s auction catalogue, London, 21 March 1989, p. 23. The larger sketchbook is now in the collection of Alan Parker, London.

23. The so-called “Batts Set” of watercolors; see Butlin #550.
24. Martin Butlin, “Cataloguing William Blake,” in Blake In His Time: “With Blake, one can justifiably argue that a drawing too bad to be by, say, [John] Flaxman or [Thomas] Stothard can nevertheless, other things being equal, be by Blake” (81).
same ascription could be mooted for the composition on page 40 of the Smaller Blake-Varley Sketchbook without provoking guffaws. At the very least, the sketchbook drawing is a questionable touchstone for attributing the portrait's verso design to Varley.

The watermark recorded in Christie’s auction catalogue has heretofore been assumed to be accurate. Only the word “PINE” and the date are clearly visible because of dark washes to the left of that word. Careful inspection with a strong backing light reveals the full watermark to be “[E]DMEADS & PINE 1802,” with what must surely be the first letter of the first word trimmed off by the edge of the sheet. Blake used papers produced by Edmeads and Pine in many of his illuminated books printed in the 1790s. An “EDMEADS & PINE 1802” watermark appears in copies P and Q of Songs of Innocence, both printed in 1804; the same “EDMEADS & PINE 1802” watermark of the portrait appears in three proof impressions of plates from Jerusalem (possibly among those printed in 1807) in the Pierpoint Morgan Library, New York. The wove paper on which the portrait was drawn is a type Blake used frequently over many years.

In his essay on the portrait, Butlin warns us against assuming that the watermark establishes a date of composition by pointing out the gap between the 1806 watermark in the Smaller Blake-Varley Sketchbook and Blake’s first use of it c. 1819. That case is not quite equivalent, however, since Varley may have used the sketchbook many years earlier for his own drawings. The main issue, however, is not the watermark date of the portrait but the apparent age of the sitter. Although Blake, because of the fuller cheeks and chin, looks somewhat older in the Flaxman portraits of 1804 (see note 16), he looks a great deal older in Linnell’s 1820 portrait (illus. 7—compare to illus. 1). The hairline has receded considerably, the wrinkles increased. All of Linnell’s other portraits of Blake show a man at least as old.27 Linnell’s fine work also indicates his typically naturalistic way of conceiving of and rendering the human face, so distinctly different from the wash portrait. He gives us Blake’s physical face as he saw that face with his physical eyes at a specific moment in the sitter’s life, the head and light at specific angles. This face is set fully in time and space as we experience them in our daily lives. Nothing could be further in conception from a “Spiritual Form” (Butlin) seen “not with but through the eye” (Bentley). Even if The Man Who Taught Blake Painting in His Dreams served as his model, could Linnell so thoroughly hide any trace of his very different sensibility as a portraitist, and at the same time make Blake look far more youthful than he was when Linnell knew him?

According to several people who knew Blake, his eyes were his most prominent feature. For Frederick Tatham, Blake’s “Eye” was “most unusually large & glassy, with which he appeared to look into some other World” (BR [2] 684). Samuel Palmer was equally impressed: “His [Blake’s] eye was the finest I ever saw: brilliant, but not roving, clear and intent, yet susceptible; it flashed with genius, or melted in tenderness. It could also be terrible.”28 As Butlin, Keynes, and Bentley have noted, the wash portrait captures this reported intensity of Blake’s actual gaze. To such observations Bentley, in his caption in Stranger from Paradise, adds the idea that self-portraiture contributes to a concentration on the eyes. A survey of self-portraits from the Renaissance through the twentieth century supports Bentley’s claim, particularly in the case of full-frontal self-portraits.29 As the artist/subject studies his face in a mirror, the eyes open more widely than normal and intensify, becoming fixed on their own reflection. A striking example from the circle of Blake’s so-called “followers” is Samuel Palmer’s self-portrait now in the Ashmolean Museum, Oxford.30 The representation of the eyes in the wash portrait of Blake may be in part the product of how those eyes looked not to others—but to themselves in a mirror.

If we provisionally place the wash portrait in the context of Blake’s life a few years before and after the watermark date, when he was in his mid-40s, we find a context of work and thought in which self-portraiture seems more likely than at any other period in his life. During his years in Felpham under William Hayley’s often burdensome patronage, 1800-03, Blake was involved in the art of portraiture to a surprising extent. Even before Blake’s arrival, Hayley had commissioned him to engrave a portrait medallion of Hayley’s natural son, Thomas Alfonso, as an illustration for Hayley’s Essay on Sculpture, published in 1800. Once in Felpham, Blake soon began to execute a series of 18 tempera paintings, the so-called “Heads of the Poets,” to decorate Hayley’s library (Butlin #343, dated to c. 1800-03). Although these works are elongated

28. BR (2) 392. See also Alexander Gilchrist’s 1863 description of Blake’s eyes, very probably based on reports from those who knew him: “His eyes were fine—‘wonderful eyes; some one calls them; prominently set, but bright, spiritual, visionary; not restless or wild, but with a look of clear heavenly exultation’” (BR [2] 390).
29. They describe the “intense gaze” in the wash portrait (Butlin in Blake Studies 101), the “penetrating gaze” (Keynes 24 and 140), and the “piercing eyes” (Bentley, caption in Stranger from Paradise).
30. Among British artists, see, for example, the self-portraits by John Ruskin, Aubrey Beardsley, Stanley Spencer, Jacob Epstein, and David Hockney, all conveniently reproduced and discussed in The Artist by Himself: Self-Portrait Drawings from Youth to Old Age, ed. Joan Kinneir, intro. David Piper (New York: St. Martin’s P, 1980).
31. Dated to c. 1826 and reproduced in Raymond Lister, Catalogue Raisonné of the Works of Samuel Palmer (Cambridge: Cambridge UP, 1988) 55, #63. Several similarities between Palmer’s self-portrait and the Blake wash portrait might even lead one to speculate that Palmer saw and was influenced by the latter.
rectangles, the portraits themselves are set within circular or oval framing motifs. Blake’s engravings for Hayley’s Life, and Posthumous Writings of William Cowper, published in 1803-04, include three portraits.32 Preparatory to his execution of one of these, a portrait of Cowper after a pastel by George Romney, Blake carefully copied Romney’s work (illus. 8). As I briefly noted in the 1987 exhibition catalogue mentioned earlier, this pen and wash drawing exemplifies Blake’s habits when copying a portrait and offers some significant parallels with the wash portrait of Blake.

Blake’s portrait of Cowper is not a servile reproduction of Romney’s pastel.33 There are many slight differences, and the man looks slightly younger in Blake’s version, particularly around the eyes. In the original, the cloth at Cowper’s neck is tied with a small bow that hangs down in three folds. Blake has altered this considerably, enlarging the bow and giving it two “wings,” juxtaposed horizontally, that are similar to the bow in the wash portrait of Blake. As we would expect with any copy, the lines and contours of the face are more studied, and hence rigid, than in the original. Cowper has lost a touch of liveliness evident in the original. As is typical of most portraiture of the time, Romney’s drawing shows careful draftsmanship in the face, but a much looser handling of the costume. Blake has preserved—perhaps even inadvertently increased—this difference in his copy. Thus, his version of the Cowper portrait exemplifies the exact stylistic features in the wash portrait of Blake—the “somehow cold and brittle” quality of the “otherwise Blakean line … in the face,” and “the ‘painterly’ treatment of the coat and kerchief”—that Butlin (Blake Studies 102) found to be uncharacteristic of Blake’s work. It might be objected that these styles and their combination are present only when Blake is copying a portrait.


8 (top). Blake, Portrait of William Cowper after Romney. Pen and washes, approx. 18.8 x 14.7 cm. Inscribed by William Hayley, “William Cowper Esqr / Given by the Poet to his friend Hayley.” Butlin #351, where the drawing is dated to c. 1801 (the engraving of the same portrait is dated November 1802 in its imprint). As Butlin notes, Hayley’s inscription “would rule out Blake’s participation but presumably is the result of a later confusion with Romney’s original.” Lessing J. Rosenwald Collection, Library of Congress, Washington, DC.

9 (bottom). Blake, Miniature of Thomas Butts. Watercolor on ivory, oval, 8.4 x 6.3 cm. Butlin #376, where the painting is tentatively dated to “1801(?).” British Museum, London.
already reduced to the two dimensions of canvas or paper, rather than a living face in three dimensions. But a version of this same perceptual and compositional situation also pertains if Blake is copying his own face represented in a mirror.

In earlier publications, Bentley and I have independently related the wash portrait of Blake to his learning miniature portraiture. This context deserves more consideration. In a letter to Romney of 3 February 1801, Hayley states that he has "taught Him [Blake] he says to paint in Miniature, & in Truth he has made a very creditable Copy from yr admirable Portrait of the dear departed Bard [Cowper]." Hayley was himself not a miniaturist; as he implies in a letter to Romney of 21 April 1801 (BR [2] 106-07), Blake probably learned the rudiments of the art from Jeremiah Meyer, a friend of Hayley's and miniaturist to the Queen. Blake apparently began this new endeavor with enthusiasm: "my present engagements are in Miniature Painting Miniature is become a Goddess in my Eyes & my Friends in Sussex say that I Excell in the pursuit" (10 May 1801 letter to Thomas Butts, E 715). The miniatures Blake painted—at least nine in all, of which six are extant—are hardly masterpieces in the genre, but all follow its conventions dutifully. His portrait of Thomas Butts nicely exemplifies the lot (illus. 9). The oval shape and small size are of course standard, as are the detailed rendering of the face and broader brushwork on the costume. Even the looser handling of the hair is typical of late eighteenth- and early nineteenth-century miniatures. The face is executed, as in so many miniatures of the period, with very short, stipple-like strokes of a small, pointed brush.

By early 1803, Blake's growing disenchantment with Hayley and his assignments included a turn against portraiture. As he told his brother James, "he [Hayley] thinks to turn me into a Portrait Painter as he did Poor Romney, but this he nor all the devils in hell will never do" (letter of 30 Jan. 1803, E 725).

34. BR (2) 104. The "Copy" to which Hayley refers is probably one of Blake's two miniatures of Cowper (Butlin #355-54), or, just possibly, the wash portrait reproduced here (illus. 8).
35. This combination of techniques is typical of the influential miniatures of Richard Cosway (1742-1821), who "worked carefully with stipple in the features, but adopted a romantic sketchiness in his linear handling of hair, costumes and background ..." Quoted from Jim Murrell, "The Craft of the Miniaturist," in John Murdoch, Murrell, Patrick I. Noon, and Roy Strong, The English Miniature (New Haven: Yale UP, 1981) 19-20, where George Engleheart is also described as using similar styles. See also Murrell's comment that Ozias Humphry, who commissioned the "Small" and "Large" Books of Designs from Blake, "usually finished his miniatures with careful stippling" (19). According to Christopher Lloyd and Vanessa Remington, "the stippling process [in portrait miniatures] is, in fact, not unrelated to contemporary engraving techniques in seventeenth-century France" (Masterpieces in Little: Portrait Miniatures from the Collection of Her Majesty Queen Elizabeth II [London: Royal Collection Enterprises, 1996] 28). Blake was an expert stipple engraver; see, for example, his "Venus Dissuades Adonis from Hunting" after Cosway (1787) and his engraving of "Mirth" after his own design (first state, c. 1816-20). These and other works in stipple are described and reproduced in Essick, The Separate Plates of William Blake: A Catalogue (Princeton: Princeton UP, 1983).

In spite of this attitude, Blake continued to practice miniature painting, for he inscribed his miniature of Mrs. Butts "1809" (Butlin #377), and the portrait of Thomas Butts, Jr., probably also dates from that year (Butlin #378). Painting with stipple-like strokes also appears to have influenced the hand coloring of post-1800 printings of Blake's illuminated books. Alexander Gilchrist describes Blake's "finishing the plates like miniatures" in one such copy of Songs of Innocence and of Experience (BR [2] 207). In 1809, Blake claimed that his own "fresco" paintings are "properly Miniature, or Enamel Painting every thing in Fresco is as high finished as Miniature ..." As for portraiture in general, the many Visionary Heads of c. 1819-25 testify to Blake's continued interest in a special form of that art. Finally, we have Tatham's testimony that Blake's concluding act as an artist, in the last few hours of his life, was to draw a portrait of his beloved wife Catherine (BR [2] 682).

Returning to the wash portrait of Blake (illus. 1), we can find in it many characteristics of miniature, even if the size might seem to exclude it from that category.35 Bentely has pointed to its oval shape, so characteristic of miniatures. It is of course possible that someone cut it to an oval after the drawing left the artist's hands, but the shadow on the right and the framing of the costume make it difficult to imagine how the image could have looked anything other than awkward if extended to four corners. Blake's arms, for example, would reach almost to the elbows and be oddly cut off at that point. Even the direction of the soft lighting, coming from left to right, bespeaks miniaturist conventions.36 The most telling feature is the use of fine, stipple-like brushstrokes to represent the contours of Blake's face. As in the miniature of Butts (illus. 9), the hair and costume are handled more freely. The artist who produced the wash portrait was influenced by the styles and techniques of miniature portraiture that Blake had learned while in Felpham.

I trust that my observations and arguments to this point, coupled with the comments by Bentley and others I've summarized, can lead us all to agree that the Scottish verdict of "not proven" is an appropriate response to Butlin's attribution of the wash portrait to Linnell. I suspect, however, that many may find the same verdict justified in regard to my attribution to Blake. One feature of the portrait will tip the scales away from Linnell, Fraser, or anyone else other than Blake himself.

36. Advertisement for "Exhibition of Paintings in Fresco, Poetical and Historical Inventions" (E 527). See also Blake's annotation to Joshua Reynolds' Discourse: "Fresco Painting is Like Miniature Painting; a Wall is a Large ivory" (E 653).
37. In the nineteenth century, so-called "miniatures" tended to increase in size; see, for example, Robert Thorburn's 32.4 x 26.0 cm, stippled painting, Queen Victoria and Edward Prince of Wales of c. 1845. Even some earlier miniatures were only a little smaller than the Blake wash portrait—e.g., Richard Crosse's 17.4 x 13.3 cm, Mrs. Siddons of 1783. Both are reproduced in Murdoch et al.
38. See Lloyd and Remington: "Assuming the artist to be right-handed, the light was admitted from the left" (27).
To paint a self-portrait, one must look into a mirror (as I've already noted in passing, without attention to all the implications). It is of course possible for someone to paint a mirror image of another's face, but this is an exceedingly remote possibility in the present instance. A mirror image is subject to "bilateral inversion"—that is, the reversal of right and left. David Piper has described the situation adroitly:

At once, we are confronted by the conditioning agent which distinguished self-portraiture from the mainstream of portraiture, apart from the fact that the subject is the artist himself. That agent is the mirror, and it is easy to forget that, apart from any technical flaws there may be in any particular mirror, its reflection is not only not the object itself but a reproduction of its three-dimensional existence on a two-dimensional plane, but, further, that it reverses the object. Our own faces as we know them in daily life, are the wrong way round and no face, once it develops from childhood, is symmetrical. We do not "see ourselves as others see us."

39. Introduction to The Artist by Himself 12. Perhaps Piper overstates the two-dimensional qualities of a mirror image. It projects a sense of depth greater than a work on paper.

40. Blake's coat shows no bilateral inversion, for the left side overlaps the right side, as is standard for men's coats. I suspect that the costume was drawn freely, without any reference to a mirror reflection. If a self-portrait, Blake was probably not wearing his formal coat and cravat while composing the work. Some of the self-portraits reproduced by Kinneir show a reversal of the conventional overlapping of shirts or coats; others do not.

41. The casts in the Fitzwilliam Museum, Cambridge, and the National Portrait Gallery, London, appear to have been made from the original mold. Keynes illustrates the Fitzwilliam cast, plates 23a-b, and a facsimile mold-made from the National Portrait Gallery cast, plates 23c-d. The illustrations here (illus. 10-12) are photographs of another one of these second-generation facsimiles. None of these moldmaking and casting procedures reverses right and left. As Keynes notes, the Fitzwilliam cast "is unsigned and seems unfinished, the surface being rough and somewhat mottled. It is, so to speak, a 'proof' copy, or prototype" (133). The National Portrait Gallery cast "has a cleaner and smoother surface and is signed on the back of the neck representing Deville's finished intentions, such as he would have sold to his customers, though only one example is known to have survived" (133).


Can we find in the wash portrait of Blake, in spite of its stylized symmetry, any asymmetrical features that are inverted in comparison to other representations of his face? To answer that question, we will need a picture of Blake's face as free as possible from stylistic distortions. His life mask, mold-made in three dimensions by the phrenologist James S. Deville from Blake's head in the summer of 1823, offers the best possibilities (illus. 10). Such works create their own distortions, for the drying plaster has pulled down the corners of Blake's mouth, giving him a stern and pained expression, and flattened his nose a little. Straws or tubes of some sort were very probably inserted into Blake's nostrils so that he could breathe while the plaster dried. A life mask, however, does not create (or erase, in deference to vanity) wrinkles and creases, nor does it reverse asymmetries.

The life mask shows that Blake had a very symmetrical face. Only two right/left differences are clearly evident. I suspect that the use of breathing straws and the flattening of Blake's nose have flared his nostrils unnaturally, but this distortion helps reveal a difference in the "cut" or shape of the lower edge of each nostril (technically, the ala nasi) that could not have been created by the mold-making procedure. The right nostril (on the viewer's left) rises at a steeper angle from the tip of the nose than the left nostril (illus. 11, top). The right is more arched, and gives the appearance of being slightly higher than the left. A more prominent asymmetry is the deep crease in Blake's forehead that begins vertically, above his nose just left of center from the viewer's perspective, and then arches horizontally to our left (that is, over Blake's right eye) with
perhaps a much less visible branch to the right (illus. 12, left). Linnell pictures this same crease in his 1820 drawing of Blake (illus. 7), although with less precision than the life mask.

If we now turn back to the wash portrait, we can see these same features—but reversed. The artist has made the nostrils more symmetrical than the life mask reveals they actually were, just as he has almost certainly made the mouth, eyes, and eyebrows more symmetrical than we are likely to find in any living face. Further, the light coming in from the left side of the drawing casts Blake's left nostril in shadow. In spite of these stylistic features, we can still see that the angle at which the left nostril (on the viewer's right) rises from the tip of the nose is steeper than the same portion of the right nostril (illus. 11, bottom). Recall that this reverses the nostril asymmetry in the life mask (illus. 11, top). The forehead crease begins vertically just right of the center of Blake's nose and arches horizontally to our right—that is, over Blake's left eye in the wash portrait (illus. 12, right). Again, the reverse of the life mask (illus. 12, left). The artist who drew the wash portrait was looking at Blake's face in a mirror. That artist was William Blake.

The sojourn in Felpham and the decade following were for Blake years of psychological turmoil and introspection. Those experiences found expression in some of his greatest works, including Milton a Poem, with its meditations on the nature of the human self in all its conflicted complexity. His self-portrait emerged from this same context and is, quite literally, a self-reflection. It is a continuation of his long-standing interest in physiognomy, a supplement (as it were) to the "Heads of the Poets," and a prelude to (not a copy of) the Visionary Heads. Blake found a "Divine countenance in such men as Cowper and Milton" (letter to Hayley of 28 May 1804, E 750). Through an idealizing transformation of his own face, Blake attempts to articulate a similar union of the physical and the spiritual/imaginative (the two being one in Blake's thought). In "A Vision of the Last Judgment," he asks the viewers of his painting to "attend to the Hands & Feet to the Lineaments of the Countenances they are all descriptive of Character" (E 560). Through self-portraiture Blake attends to the character of his own countenance and thereby follows his advice in Milton: "Judge then of thy Own Self: thy Eternal Lineaments explore" (E 132). The self-portrait is Blake's most direct and personal attempt to "leave" for us his "destined lineaments permanent" even as the "generations of men run on in the tide of Time" (Milton, E 117).
REVIEWS

The Keys to the Gates


Reviewed by David Fuller

The Traveller in the Evening is concerned with Blake’s work after Jerusalem, when the modest patronage of John Linnell freed him from the need to earn his living by reproductive engraving. This work is highly diverse in form—engraved texts and engraved designs, woodcuts and watercolors, drawings, draft verses, and marginalia. It is also diverse in theme: an equivocal attitude to sexuality, an unequivocally negative attitude to institutions and to commerce, a withdrawal from politics, attacks on classical culture, the identification of religion and art, and interpretations of Christianity with analogies in Manichaean and Gnostic ideas. Professor Paley considers the individual works separately, but in four main sections—the illustrations of Virgil; Nebuchadnezzar; the illustrations of Dante; works connected with the Bible. He makes comparisons and contrasts, but with no undue attempt to impose coherence: he is ready to see contradictions, even within a single work. Paley’s first book (Energy and the Imagination, 1970) began the unpicking of an over-systematized Blake, and he continued this in several studies of individual works. The Traveller in the Evening extends the argument. It also reflects his long familiarity with every area of Blake’s oeuvre, and with the critical literature.

As a prelude to the illustrations of Virgil Paley discusses Blake’s reworking of For Children: The Gates of Paradise as For the Sexes. This sets the method for much of the book, proceeding plate by plate, weaving in scholarly information and critical commentary from previous interpreters. We find this again with the accounts of the Dante and Job illustrations, and it is immensely helpful simply to seeing what is in the designs, and considering what one might make of that. Blake’s changes to For Children Paley sees as producing a new work, with themes, conceptions and terminology quite distinct from those of the 1790s. It is relevant to parts of the later argument to notice that For the Sexes is therefore an example of the principle that interpretation depends in part on the viewer: Blake in age saw in his own earlier images—somewhat altered by additional work on the engravings—substantially different meanings. The woodcut illustrations for Robert Thornton’s Pastoral of Virgil raise another important topic: the possibility of critical illustration. Other works of this period indicate that Blake’s fundamental attitude to both Virgil and Thornton was antagonistic. Nevertheless, what he depicts in these woodcuts, as Paley shows, is derived directly from Ambrose Philips’s free translation of Virgil. Sometimes, as in his designs for other poets, Blake literalizes a metaphor; sometimes he emphasizes darker aspects of the poems, but always consistently with the texts. The illustrations incorporate no critique. What is so imaginative about them is not any special Blakean meanings but the way in which they invent the visionary landscape of Samuel Palmer.

Paley approaches one of the most characteristic works of Blake’s old age, Nebuchadnezzar, by considering what other eighteenth-century artists and critics saw in the famous statue on which it is based, and other engraved versions that Blake might have known or that influenced the tradition in which he was working. He stresses that Blake’s title was not Lacoceon (this appears nowhere on the plate, though of course Blake would assume anyone reading the plate would recognize its visual content), and connects the actual title with Blake’s idea of the Hebrew origins of classical art. The outward form of a (supposed) Hebrew original had been preserved in the Greek (supposed) copy, but its meaning had been completely misunderstood. Blake may have assigned the figures meanings from his own myth: "entwined by serpents, corresponds to Uriah; his sons are what The Four Zoas and Jerusalem describe as the limits of human opacity and contraction. Paley considers how best to represent the plate’s aphorisms typographically, with some criticism of the arrangement in David Erdman’s edition. He also explores the more gnomic aphorisms and their interconnections in thematic groups: on money, empire, and tax; on the nature of art; and on God, man, and the imagination. The fundamental aim of the plate, he argues, is to defend true—that is, Christian—art against commerce, militarism, and imperialism. In subverting one of the most famous sculptures of classical antiquity by the texts with which he surrounded it, Blake attacked the society in which he lived for its purely nominal allegiance to Christianity.

With the Dante illustrations there are much-discussed fundamental issues about interpretation—issues that bear more generally on the interpretation of Blake’s designs for other poets and for the Bible. Paley reports these, beginning from the argument of Albert S. Roe (Blake’s Illustrations to the Divine Comedy, 1953) that Blake constantly implies critical views of his subjects, and implies these by reference to his own mythology. This he rejects, but only within limits. I should confess an interest here, because I have written about this myself ("Blake and Dante," Art History journal, 1988). I argued that Blake’s critique—which is undoubted (it is spelled out in the clearest terms in texts on a few illustrations)—is never carried on by reference to his own mythology, but only by reference to publicly available sources, mainly the Bible and traditions of biblical interpretation, and that dissent embodied in the illustrations is at most both rare and self-explanatory. In the illustration of Paradiso 33, for example, the Bible is chained shut and Aristotle’s works lie open (Dante’s Christianity is
compromised by his classicism); Mary, as Queen of Heaven, is presented naked, gazing into a mirror, more Venus than Virgin (the place given to the Blessed Virgin in Roman Catholicism sublimates and so distorts the energies personified by Venus in Roman mythology). Blake might well have thought of this not so much as critique as what Ronald Paulson calls expression of the repressed text (“Blake’s Bible,” Book and Painting, 1982). Consider, for example, the erotic language (“disi ... ardo ... desiderio”) as the Virgin, in response to the prayer of St. Bernard, leads the pilgrim towards his final vision of the divine (Paradiso 33.46-48). There is a touch of Venus in Dante’s Virgin. Paley reports me arguing to this effect in general, and from time to time in detail, but he cannot go all the way with the idea that Blake is primarily a literal illustrator: here and there we are asked to see elements in the designs supposedly not arising from the poem which (Paley argues) should be given special Blakean meanings.

In considering this it is important to understand that an illustrator cannot always show the meanings of a text simply by transcribing textual detail into visual form. To take a simple example, Blake’s illustration of Purgatorio 27 shows the purging flames occupied by spirits who are not harmed by them. This is not what the poem describes, but in the poem the pilgrim, thinking of human bodies burned to death, is terrified of the flames. Virgil reassures him: they are not to be feared; they do not operate as fire does on earth. How is an illustrator to convey this reassurance? In peopling the flames with figures who rejoice in their pains, Blake departs from Dante’s description to show his meaning. Similarly, Blake’s Purgatory is cloudy, whereas Dante emphasizes a contrast between Purgatory and the darkness of Hell. When I wrote about this in 1988, I accepted Blake’s clouds as indicating doubts about Dante. I now wonder whether it is not more natural to take them as consistent with the poem: the pilgrim, his head marked with seven Ps, indicating the sins (peccata) still to be purged, does not yet see with the fullness that will be indicated by the radiant light of the Paradiso illustrations. Flaxman’s Purgatory (which Blake knew) has clouds: they carry no implications about Dante’s theology. If Blake’s clouds are taken as symbolic it is, I now think, more natural to interpret them as about the limited view not of the poet but of the pilgrim at this point in the poem. Blake also wants a fundamental visual distinction between Purgatory and Paradiso: the sequence passes from light occluded to light brilliant and clear. This is perhaps a case where the implications that an imaginative viewer of the illustrations really experiences—which Blake might take to be distinct from what the learned can reason out evidence for—are likely to depend on how that viewer understands Blake’s fundamental attitude to illustration.

A central example of a design not, in Paley’s view, illustrating Dante is that showing the entrance to Hell. This is not (as most art) a design illustrating a single canto: it is an epitome of Hell. Two giants on either side of Hell’s entrance are emblematic of two kinds of sinner, those who acquiesce and those who rebel. A figure above, with crown and censer, his costume marked with a Maltese cross and fleurs-de-lys, is a combined personification of Church and State, worshipping the Devil (with cloven hoof) who passes himself off as God. Paley rightly observes that Dante’s views on Church and State were opposite to Blake’s, that Dante believed in an ideal church and an ideal ruler. But is this to the point here? We are entering Hell. What will we find there is the worst of this world under punishment. Blake may have responded with special enthusiasm to Dante’s arraignments and denunciations of the corruption and worldliness of the Church, but his illustration of the vestibule of Hell is entirely consistent with what Inferno as a whole shows.

Beatrice Addressing Dante from the Car is central. Like other commentators, I have discussed this beautiful watercolor at length. I will try not to repeat myself. All the colors in Beatrice’s robes—white, green, and red (echoing the costumes of the Theological Virtues in the foreground)—are specified by Dante. There is also some blue, not specified by Dante, but blue (as Paley acknowledges) is the Virgin’s color, and Beatrice is associated with the Virgin throughout the poem: she is fulfilling the Virgin’s commission (Inferno 2); she will resume a seat in the Rose of which the Virgin is the apex (Paradiso 31). It is quite as important to Dante that Beatrice is associated with the Virgin as with the Theological Virtues, and Blake’s coloration brings this out. As for her griffon, which Paley sees as a “stuffed animal,” here we may directly compare visual impressions. I do not think the griffon a pictorial triumph, but I think it a pretty grand heraldic beast. The decisive indication for Paley is Beatrice’s veil. It associates her with the delusive beauty of the world of the senses: the properly cultivated viewer will think of Vala. But Dante gave Beatrice a veil. If Blake had been illustrating a poem of his own, and had dressed a female figure in a veil, then the fit reader should be prepared for a negative significance. But when he is illustrating a poem by somebody else, in which a woman is described as wearing a veil, and Blake shows her doing so, there is—or so it seems to me—no reason for assigning to that veil the meaning Blake would have given it if he had invented it.

Interpretation depends on detail—reading the poem and looking at the illustrations (as Blake advises) with love and wonder, and looking not only at their detail but also at their broad visual impact. Both the detail and the broad impact must finally be seen, however, in relation to a sense of what kind of illustrator Blake is. One of Blake’s aims as an illustrator is to help us read the text that is his subject with more full engagement and appreciation by presenting epitomes of that text in the new medium. Blake epitomizes, as one would expect from his aesthetic, not by aiming for a general impression, but by a selection of his source text’s particulars. The reader of a design needs to look carefully and dispassionately at how Blake does that before reading in any supposed Blakean critiques.

Blake thought Dante a truly great poet, and he regularly made a distinction between vision and fable—the distinction in his myth between Los and his Spectre: the faculties that
Imagine what is so eternally, and the aspects of the personality that subject vision to the conditions of time. All artists are subject to these. William Blake may have been a "mental prince," but he did not think of himself as other than infected by the conditions of time and space. In real life every Los has to resist his Spectre. It is only in apocalyptic myth that the Spectre can be tamed entirely. Another of Blake's aims as an illustrator was, as far as he was able, to free what is eternal in another poet's vision from what is temporal. On Blake's own account, to contradict his subject at the level of opinion would be to substitute the interpretations of one spectre for those of another. Blake the illustrator aims, insofar as he can, to release in the new medium what is visionary. When one looks in Blake's illustrations for expressions of the opinions he deduced from his own visions there is a danger, I think, of reducing him to a commentator who holds a candle in the sun.

One cannot read everything, or one would have no energy for thinking oneself. One cannot report more than a selection of what one reads without boring the reader. Still, I think Paley might have discussed Christopher Heppner's Reading Blake's Designs (1995). This bears on a major area of his subject, in its fine accounts of particular illustrations and of the traditions of visual expression within which Blake worked, and also in its formulation of general principles for the interpretation of Blake's illustrations of other poets and of the Bible: equal attention to the text illustrated and to the visual values of the illustration. If Paley fails in either aspect of this excellent formula, he does so in distinguished company.

Art and religion are one in these late works. Religion is not morality: it is a state of being. The Bible is the great code of art, but it needs an antithetical reading that purges it of the pious, respectable and obedient. Central is a new struggle with an old topic, the nature of Jesus, and his relation to the Father and the Law. In his account of The Everlasting Gospel Paley presents Blake as at his most Manichaean, showing a bifurcated universe of warring oppositions, and in parts a separation of matter and spirit that suggests Gnosticism. The poem is clearly unfinished, was in part hastily written, and is in some ways confusing, even chaotic. Nevertheless, Paley argues, Blake had long considered its issues: hasty and incomplete composition implies nothing about its gestation. He accordingly tussles with ambiguities to see how far the poem's confrontational paradoxes can be resolved into arguments that make overall sense, but the more some lines are pressed, the more they yield incoherence.

In seeking to reconcile opposed aspects of the divine, The Ghost of Abel ("To LORD BYRON in the Wilderness") represents a quite different view. Blake's unique invocation of Byron Paley also connects with Salomon Gessner's Der Tod Abels (1760; translated 1761 and frequently reprinted), primarily because this is concerned, as Byron is not, with forgiveness. He argues that Blake saw Byron as a kindred spirit, a fellow friend of liberty and foe of empire, and (like Voltaire and Paine, as Blake saw them) a better Christian than the defenders of orthodoxy who accused Cain of blasphemy. But Byron erred in accepting a doctrine of retribution. He needed to understand what was for Blake now the central idea of Christianity: unconditional forgiveness.

Much the most important of these late works connected with the Bible is the Illustrations of the Book of Job. Job is a quite different kind of text from the Divina Commedia. It offers more openings for the interpretive illustrator because the text itself is not wholly consistent in its address to the problems it raises about the suffering of the innocent in a universe supposedly governed by a benign deity. The standard Hebraic views on suffering of Job's friends are rejected, but no viable alternatives are endorsed by the book taken as a whole. God tells Job that, since he cannot answer questions about the structure and history of the universe, he has no right to ask the moral questions that God's wager with Satan has forced on him. Job is convinced, and is apparently satisfied in the frame narrative with new children and more donkeys. But Job knows less than the reader about the ground of his sufferings, and in any case most readers will reflect that, though more donkeys may make up for those lost, new children replace the dead at best within limits. An illustrator may be expected to indicate a view of the difficulties, as the Authorized Version translators did when they introduced a New Testament frame of reference ("I know that my Redeemer liveth") and the idea of a bodily resurrection, neither of which is present in the original.

Here, then, is a text requiring interpretation, and Paley identifies clearly the main areas in which Blake interprets. Job's wife, in the text a minor figure who briefly counsels cursing and despair, is exalted into a prominent supportive role, and this portrait of the female is extended in the added prominence of Job's daughters. Job learns a distinction, in line with New Testament theology, between observation of the letter and the spirit of the law. And, as in the Authorized Version, the Redeemer is introduced. Paley interprets the series as a whole as emphasizing the unity of Father, Son, and Holy Spirit, and of the divine and the human, with a positive role for women unusual in Blake's last works. As with the Dante illustrations, he proceeds plate by plate, with a clear account of each, and reports of the views of other interpreters. Opinion is reported with a winning openness to multiple possibilities. This good scholarly practice is in line with what many readers will want, perhaps conterminous even with what Blake himself required of the historian ("Tell me the Acts ... leave me to reason upon them as I please"). But I sometimes hear the voice of Blake's Isaiah demanding a firm persuasion. However much the viewer may wish to consider dispassionately the fullest range of possible meanings, he or she cannot finally withhold assent from delimited meanings. We are otherwise in a state of "Doubt which is Self Contradiction." I think Paley might more often have chosen between the alternatives his excellent scholarship offers, and, of course, explained why he opted for one meaning rather than another.

Since Paley usually reports a wide range of opinion, it is the more notable that he should ignore Kathleen Raine, surely a
major commentator on Blake, who devoted a whole book to the Job illustrations (The Human Face of God, 1982). In her account, Blake presents Job as a man whose self-righteousness alienates him from a God who is entirely benign. Her book is a detailed commentary on the Job illustrations, but it is also about the interpretation of Blake's whole oeuvre and its relevance to modern Western society and thought: it is an attack, through Blake, on materialist and humanist philosophies. Kathleen Raine herself regularly ignored commentators who did not agree with her, and may sometimes remark one of the angels who think of themselves as the only wise. Perhaps Paley is wise to respond in kind. But though Blake would not, I think, find the meanings Kathleen Raine adduced from the Job engravings those he intended, he would surely be interested that such meanings could be adduced by the creative intelligence of somebody who loved his work and to whom it was intensely meaningful. It is perhaps inevitable with critics whose values and whose understanding of their own experience are deeply involved with their reading of an author that it should be difficult for them to see where their author ends and they begin. The filtering that such involvement necessitates for the reader is the price to be paid for a kind of criticism that is peculiarly worth reading. I think a critic ought to enter into dialogue with this kind of creative response, at least to say in brief where and why it seems fundamentally wrong.

Paley's dealings with Northrop Frye indicate a related problem. Frye's account is mentioned, but only through fragments that give little idea of its fundamental drift. The synoptic mythographer in Frye, who could make pattern appear irrespective of particulars, gives an account not of the Job illustrations but rather of the reading of Job that might underlie them: Blake (Frye argues) must have seen Job as an epitome of the whole Bible from Genesis (fall) to Revelation (apocalypse and restoration). With the satisfaction of a deep mythic pattern in view, questions about innocent suffering recede in importance. Again, I think this at least partially wrong, because I take Blake to be more interested in moral questions and less in mythic patterns than Frye supposes. My doubt in relation to The Traveller in the Evening is whether one should extract from a view passing observations without explaining that they serve arguments quite different from one's own, and saying what one thinks of those arguments.

The illustrations of Job were not the last of Blake's dealings with the great code. Paley considers three footnotes. In his illuminated manuscript of Genesis, Blake creates his own meanings, by additions, omissions, and illustrations. Physical existence is entirely negative; the dominant issue is again forgiveness. In a series of sketches for the visionary and apocalyptic pseudigraphical Book of Enoch, the main element is that adumbrated in the Enoch chapters of Genesis: the sexual relations of the sons of God and the daughters of men. Sexuality is represented negatively, as entrapping and monstrous. Most interesting of these minor works are Blake's marginalia to Robert Thornton's translation and annotation of the Lord's Prayer. Paley gives persuasive reasons for thinking that
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