

William Blake's Newton as Innovative Iconography

Caleb Noel

Abstract

Scott Berkun's 2010 bestselling book "The Myths of Innovation" casts the famed scientist Isaac Newton as one of many great thinkers who solved dilemmas no one else saw as problems. During his life, Newton established the idea that mathematical laws rather than spiritual intervention frame the world around us. Berkun uses William Blake's 1795 print Newton in relation to the scientist's innovative prowess, and in doing so, casts the print as an icon of innovation. This use of Newton is surprising, since Blake created it as a mockery of Newtonian theory. This paper will explore how Newton was transformed into an icon of innovation despite Blake's intended meaning. It will look at Blake's unique form of spirituality in relation to his innovative engraving process, as well as Eduardo Paolozzi's 1995 sculpture Newton. After William Blake and how the work has helped to frame the original print in its innovative role.

In Scott Berkun's 2010 best-selling book *The Myths of Innovation*, engraver and poet William Blake's print *Newton* (Fig. 1) appears in the chapter entitled "Problems and Solutions." In the book, Berkun categorizes Isaac Newton as part of a history of scientists, thinkers, and entrepreneurs who took on challenges those before them had never attempted. In essence, Newton and his peers hoped to research and solve a complication that had so little research behind it no one had endeavored to find a solution.



Figure 1 William Blake, *Newton*, 1795-1805, color print, ink and watercolor on paper. Tate Gallery, London.

"No one," Berkun quips, "asked Galileo to explain the solar system, Engelbart to invent the mouse, or Bell to create the telephone."¹ He goes on to say the ability to frame a problem and to find a solution requires creative thinking and is thereby a necessary tool of innovation. Berkun exhibits knowledge that Blake found Newton's attempts to "solve everything through science and alchemy" as "misguided," but he also states that Blake's representation of Newton casts him as a "lost hero."² Berkun's use of Blake's print in conjunction with these statements solidifies *Newton's* role in a modern day context as an innovator.

In a similar way, Scottish artist Eduardo Paolozzi's appropriation of Blake's image of Newton for his 1995 commission for the British Library (Fig. 2), an image I will return to, was meant to emphasize Newton as a forward thinking, modern problem-solver through Paolozzi's contemporary designs and the work's location in front of a large public building. Ironically, Blake was no foreigner to innovation. Indeed, he invented a revolutionary etching process that, while time consuming, saved money for his

¹ Scott Berkun, *The Myths of Innovation* (Canada: O'Reilly Media, Inc., 2010), 129.

² *Ibid*, 128.

commercial illustration of books early on. *Newton* and the other large color prints were also created with another innovation, this time his engraving process was known simply as color printing. However, he never identified with Newton. This fact was mostly ignored by the previously-mentioned contemporary uses of Blake's engraving of the scientist, as part of a series of twelve prints about the evolution of spirituality. In this paper, I will explore Blake's image of



Figure 2 Eduardo Paolozzi, *Newton, After William Blake*, 1995, Bronze Sculpture. British Library, London.

Newton as the artist's skeptical response to Newton's scientific ideas and consider why it has become a popular icon of innovation regardless of Blake's viewpoints.

In 1795, Blake embarked on creating a series of color prints many have used to define him as an artist of great spiritual thinking and devotion. In addition to *Newton*, Blake created eleven iconic works that deal with themes of religion including creationism, the fall from grace, and the persecution. These themes are explored in works such as *Elohim Creating Adam* (Fig. 3), which shows the god-like Elohim as he creates Adam, the first human being according to biblical text as well as *Satan Exulting over Eve* (Fig. 4)



Figure 3 William Blake, *Elohim Creating Adam*, 1795-1805, color print, ink and watercolor on paper. Tate Gallery, London.

where we see the initial fall of man from higher spiritual thinking



Figure 1 William Blake, *Satan Exulting Over Eve*, 1795-1805, color print, ink and watercolor on paper, J. Paul Getty Museum, Los Angeles.

after Adam's wife Eve is tricked into disobeying God by the serpent-like devil. It is very curious, then, that an image of the secular scientist Isaac Newton made its way into the series.

Blake disagreed with the famed scientist's worldview that was increasingly changing to a more secular viewpoint. Newton transformed many societal norms throughout his career, the most important were his theories, in the words of literary critic

Northrope Frye, "the universe is a vast collection of particles held together automatically by an unconscious power" [and that] "intelligence and imagination are accidental sports from this."³ Blake disagreed with these arguments, feeling that "to accept the reality of the natural world is automatically to be plunged into despair and paranoia about the status of the self."⁴ Newton's establishment of the idea that the universe is a collection of scientific happenings rather than metaphysical ones was completely rejected by Blake, although to anyone who has viewed the artist's rendering of Newton, this may seem surprising. The elegant, unassuming print depicts Isaac Newton as a young, bright, muscular thinker who works on a scroll in front of him. However, this seemingly straightforward image of Newton belies Blake's dismissal of the scientist as a great innovator. Studies of *Newton* and Blake's own writings on the scientist have led to the general consensus that Blake created this print as a mockery of a man whom he felt propagated narrow minded ideals, leading to the assumption of *Newton's* role in the series is that of the fallen man who lives without religious conviction.

³ Northrope Frye, *Fearful Symmetry: A Study of William Blake* (Boston: Beacon Press, 1965), 255.

⁴ Laura Quinney, *William Blake on Self and Soul* (Massachusetts: Harvard University Press, 2009), 51.

There are a few clues in the iconography of *Newton* that visually communicate Blake's disapproval of the scientist. To begin, scholars cannot seem to agree on its setting. Blake scholar G.E. Bentley Jr. believes the scientist to be crouching at the bottom of the sea,⁵ while 18th-century British-art professor David Bindman believes him to be crouching in a cave.⁶ Regardless of the true location, both scenes depict the scientist in a dark world cut off from further existence, spiritual or otherwise. The scroll supplements this concept because it comes directly from Newton and unfurls in front of him. In the scene, imagination and thinking come directly from within the famed scientist's mind rather than divine inspiration, a further indication Newton is removed from incorporeal thought and exclusively tethered to the physical realm. The compass is particularly important to the viewer's understanding of Newton due to its use in an earlier Blake print, *The Ancient of Days* (Fig. 5), acts as the frontispiece for Blake's book *Europe, a Prophecy*. Here, the artist depicts the god-like creation figure Urizen, who holds a compass over a dark void below. This image comes from one of Blake's visions connected to a verse in the book of Proverbs containing the phrase "when he set a compass upon the face of the earth," an account referring to God's creation of the world. Given that the compass is a tool of divine creation, imagination, and inspiration, one might question its use in *Newton* (Fig. 1). Blake is not suggesting a god-like connection between the two figures. Rather,



Figure 5 William Blake, *The Ancient of Days*, Frontispiece from *Europe A Prophecy*, 1794, Relief etching, hand-colored print. British Museum, London.

⁵ Bentley J.R., *The Stranger from Paradise*, 159.

⁶ *Cambridge Companion*, 91.

when taking into account the dark landscape and the scroll leaving Newton's mind, the compass is transformed into an earthly, mechanical device measuring the world as Newton sees it.

The final puzzle piece comes from the positioning of Newton as he sits upon the rock. Although the contours of Newton's body are clear, overall his figure looks like a rocky outcrop attached to the large coral or stone base on which the scientist sits. The body is crouched down, with the scientist's upper body positioned horizontal to the scroll, holding the compass to the surface. For many, this pose might symbolize concentration or attention to detail. However, body positioning holds extensive power in Blake's iconography, but not in the ways one might think. In this regard, a fellow artist and mentor, Henri Fuseli, influenced Blake. Fuseli shared with Blake the idea of positioning the body as a coil that is either restricted and closed or free and open.⁷ According to Fuseli, the coiling of the body represents "violent emotion," and a retreating into one's self.⁸ A noted example of Fuseli's "coil theory" appears in his work, *The Cave of Despair* (Fig. 6). The work depicts a scene from English poet Edmund Spenser's *The Faerie Queene* where a character known as the Red Cross Knight enters the cave of despair to defeat the squalid old man for whom the cave is named.⁹ In this pen-and-ink



Figure 6 Henry Fuseli, *The Cave of Despair*, 1769, pen and black ink with brown and grey wash. Art Institute of Chicago.

portrayal, the brave knight boldly enters the cave, sword at the ready, with a maiden on his arm. The negative space surrounds the knight acts as the only source of light, giving him an angelic disposition. Despair sits in the dark foreground, his body crouched inward as he feeds on a corpse. The angelic knight stands tall in light, while despair sits in darkness and fear. In relation to *Newton*, the scientist clearly takes on the role of despair, curled up in darkness. The coiling of Newton's body is a symbol of his shortsightedness, and Blake most likely was connecting this coiling to his understanding of Newton as a man who closed himself off from religious enlightenment in favor of

⁷ Ibid, 92-3.

⁸ Ibid, 92.

⁹ William L. Pressly, *The Artist as Original Genius* (Massachusetts: Rosemont Publishing and Printing Corporation, 2007), 96.

theories and practices he believed happened merely as accidents of nature. After careful evaluation of Blake's work, it is easy to see how visual analysis alone might have led to modern misinterpretations of the work.

In order to make further sense of how Blake's print has become an icon of innovation in contemporary examples such as Berkun's book and Paolozzi's sculpture, it is helpful to review key aspects of his life and spiritual journey. Born on November 28th, 1757, in the Parish of St. James in England, Blake and his family's religious practices were surprisingly non-denominational, with records showing that the family visited very few churches together.¹⁰ However, archival evidence has shown the engraver's parents had participated in a conference related to the Swendenborgian doctrine in 1789, leading some scholars to assume that Blake may have been raised under this orthodoxy.¹¹ Named after its founder, Emanuel Swedenborg, the faith involved a belief that the Bible should be taken figuratively along with a desire for a "Spiritual Millennium" to occur - one that would remove the oppression of Christianity and lead to true spiritual enlightenment.¹² Even though Blake denounced this and all other forms of public religion, he never fully denounced the teachings. In fact, Blake developed his own faith in the wake of his brother's tragic death in 1787. After this devastating loss, Blake claimed to have experienced visions that removed him from the physical world and he began to use in his prints and writings. The most important carryover from this discipline in regards to his print *Newton* is its concept of "Spiritual Millennium" Blake craved. According to the artist, Newton prevented this millennium from occurring by way of science, and he portrays Newton as an obstacle in more than just his print. A passage from Blake's book *Europe, a Prophecy* from 1790 describes Newton as blowing the trumpet that begins the apocalypse.¹³ The artist was clearly unwilling to accept the role the sciences were beginning to play in society, and he did not plan on staying silent about it. In fact, it is well known that his religious and social posture was out of protest rather than submission.¹⁴

Blake desired a transcendent spirituality that allowed for a direct connection to the divine and extended beyond organized religion, and he was not alone. In 1790, the

¹⁰ G.E. Bentley J.R., *The Stranger from Paradise: A Biography of William Blake* (Connecticut: Yale University Press, 2001), 1.

¹¹ Magnus Ankarsjo, *William Blake and Religion: A New Critical View* (North Carolina: McFarland & Company, Inc. Publishers, 2009), 46.

¹² Ankarsjo, *William Blake and Religion*, 21.

¹³ Frye, *Fearful Symmetry*, 254.

¹⁴ *Cambridge Companion*, 150.

religious upheaval of the Catholic Church, as well as the challenges to the interpretation of the Bible itself, had many major supporters, including Blake. Feeling that religious devotion was a personal matter, the engraver even went so far as to state each man may become a priest or a king in his own home.¹⁵ Blake felt challenging the authority of church leaders on their claim to authority over the Bible was still not enough to create the desired state of pure spirituality. According to author Robert Ryan, “[Blake] saw religious error as so profoundly ingrained in the human psyche that disestablishment of one corrupt form of it would not begin to effect the radical change that was needed. True reformation would require a mental apocalypse more unsettling than any earthquake or revolution that had so far attracted the attention of the millenarians.”¹⁶ Blake felt that a mental apocalypse was necessitated by the state church’s corruption of Christianity, also referred to as deism, the belief that God created man only to abandon us.

The word deist was initially used to describe seventeenth-century religious scholars who looked to define the concept of a “supreme being” in a more enlightened way. To do this, they turned to Newton’s idea of a “perfectly-defined universe,” one where the social hierarchy of man is defined by an orbit of the universe that was predetermined by a detached deity.¹⁷ Through this idea, the Church had no problem in accepting, in the words of its critics, its own “unholy uses of the poor, the subordination of women” and “the abridgment of political liberty” as inevitable.¹⁸

The social acceptance of Newtonian beliefs by organized religion shows the origin of Blake’s anger toward Newton. His anger also manifested itself in the inclusion of John Locke and Francis Bacon with Isaac Newton, portraying them as the three-headed dog Cerberus that guards the gates of hell in another of his books from 1790, *The Marriage of Heaven and Hell*. Frye suggests that Blake unconvincingly established the Bacon/ Locke/ Newton Cerberus in their roles as deists, with the artist neglecting to note Newton’s own faith (which was quite strong) as well as his “interest in apocalyptic thought which deserved something better...than the ridicule Blake seems to give it.”¹⁹ In my own research, I was unable to find any mention of the Cerberus figure as Frye suggested; however, Newton and John Locke do make an appearance in the short poem "The Song

¹⁵ *The Cambridge Companion to William Blake* (United Kingdom: Press Syndicate of the University of Cambridge, 2003), 24.

¹⁶ *Ibid.*

¹⁷ *Ibid.*, 153.

¹⁸ *Ibid.*, 150.

¹⁹ Frye, *Fearful Symmetry*, 187-8.

of Los" from 1795, in which they are cast as antiheroes who are handed control over the laws and religion of the world by a weeping Urizen.²⁰

Furthermore, scientific historian A. Rupert Hall plainly states that Newton was not a deist due to his belief in Jesus Christ's existence on this earth.²¹ Blake failed to realize that, despite his scientific assertions, Isaac Newton was not without faith. In fact, if Blake had delved further into the writings of Newton, he would have seen a man who had a belief in the existence of both God and Jesus Christ. An unspecified manuscript by Newton shows his belief in black and white: "God made and governs the world invisibly... and by the same power by which he gave life at first to every species of animals, he is able to revive the dead, and hath revived Jesus Christ our redeemer, who hath gone into the heavens to receive a kingdom..."²² Newton was strictly against the traditional view of God as a punisher of men and viewed "trend(s) of Western Christianity through the early ages" as having been "buttressed by fraud."²³ These statements show a defined spirituality, one of God's peace and mercy. Whether or not Blake knew of Newton's religious doctrine, he demonized him nevertheless, and Blake's attack of Newton feels misdirected, with the *Newton* print taking on the physical manifestation of a much larger social issue and Blake's own desire for religious upheaval. Given Blake's narrow-minded view of the scientist, Newton's role at the forefront of innovative thinking, and the creation of the *Newton* print during a time of religious questioning, it is unsurprising that the print has become an icon of the innovations that surrounded its creation.

In addition to his misguided attack of Newton, Blake's eccentricities and lack of commercial success has contributed to *Newton's* modern-day role. After an exhibit of artworks in 1809 at his childhood home during which he claimed superiority to Caravaggio, Blake was brushed off by his only critic as a "lunatic."²⁴ The superiority that Blake felt despite his lack of sales only hindered his commissions further, effectively silencing him and removing his chances of achieving future success. For about 10 years, Blake was unable to work in the art world, causing his further withdrawal. This silent period is crucial to understanding why Blake's *Newton* could become a voice of innovation after his passing. During this 10-year stretch, Blake began to see the peace in

²⁰ William Blake, *William Blake: The Complete Illuminated Books*, (London: Thames and Hudson, 2009), 197.

²¹ A. Rupert Hall, *Isaac Newton: Adventurer in Thought* (United Kingdom: Press Syndicate of the University of Cambridge, 1992), 241.

²² *Ibid.*

²³ *Ibid.*, 240.

²⁴ *Ibid.*, 31.

God just as Newton had. In his creation of *Jerusalem*, his last long poem, Blake moved past his depression and enmity, writing instead on God's love.²⁵ In a message to the public, written just past the frontispiece of *Jerusalem*, Blake writes, "I...hope the reader will be with me, wholly one in Jesus our Lord, who is the God [of fire] and lord [of love]...I pretend not to holiness! Yet I pretend to love, to see, to converse with man."²⁶ His earlier protests that came from indignation had been replaced by a spiritual high from which he would never come down, not even in death. The combination of religious peace and its preceding silence allowed *Newton* to slide into its innovative role quite easily. Without Blake at the ready to defend his original intentions, *Newton* became the bright, young, muscular thinker he is embraced as today.

Blake's peaceful disposition clearly influences modern-day perceptions of Newton as an innovative icon, but it is Blake's own innovations that further expound this notion. In 1794, Blake created *Newton* and the other eleven color prints using an innovative engraving technique, which I will return to shortly. This was not the artist's only innovation, however, as he also created an etching technique in 1788 that was born out of a scientific process. This technique was quite special to the artist because as G.E. Bentley Jr. describes it, he "had no private income which would enable him to hire compositors and to publish books at his own expense."²⁷ Thus, he needed a cheap solution to his problem of supplying quick prints that would not drain his personal finances. Through what he described as a spiritual vision from his deceased brother in 1788, Blake achieved his eureka moment. By combining elements whose costs were minimal, Blake created an acid-impervious ink that allowed him to draw and write directly onto the same piece of copper. This etching process came to be known as illuminated printing, clearly an ode to the spiritual fire with which his vision came into his consciousness. His later innovation, the color printing engraving technique of 1794 used to create the *Newton* print, is shrouded in mystery. The prevailing theory is, similar to illuminated printing, Blake painted multiple colored inks directly onto the copper before running the sheet through the press. This process required multiple layers, each painted over the other at just the right moment.²⁸ Despite his own gift for problem-solving and experimentation, Blake claimed his initial eureka moment had come from a spiritual vision and, in doing so, credited faith rather than science for his innovations. This was

²⁵ Ibid.

²⁶ William Blake, *The Complete Poems*, edited by Alicia Ostriker, (Harmondsworth: Penguin Books, 1982), 636.

²⁷ Bentley, *The Stranger from Paradise*, 100.

²⁸ Joyce Townsend, ed, *William Blake: The Painter at Work*, (Princeton: Princeton University Press, 2004), 44.

not surprising, as he believed external spiritual forces moved him to create much of his work.

By extension, *Newton*, a secular print that mocked enlightenment ideals, was born from the same spiritual vision. What Blake failed to account for was the effect his supposed vision had on his print, *Newton*, and any subsequent pieces he created using this new printing technique. Since Blake truly believed in the power of his visions, all works created by this new process would be an extension of his spirituality and therefore, stood as icons of his faith. The enlightenment, the belief in the self as the only force of creativity, further transformed these icons, however, into symbols of a new faith, the faith in man and free thinking. *Newton* was the most affected by this change due to the fact Newton himself was an enlightenment figure. The other prints created by this technique, including the previously mentioned *Elohim Creating Adam* and *Satan Exulting over Eve* were based on biblical texts. Their status as icons of religious faith had been solidified long before Blake ever decided to portray them. *Newton*, however, was untouched by any scripture steeped in tradition. Regardless of Blake's intended message in relation to *Newton*, his attempt to illustrate the spiritual decline of man was more often read as a new type of icon, one of innovation and change.

Over 200 years after the creation of *Newton*, his status as an innovative icon can be clearly seen in Eduardo Paolozzi's 1995 sculpture, *Newton, After William Blake*. The work is a permanent installation that resides in front of the British Library in London and is said to have direct inspiration from Blake's original *Newton*. However, there are key differences that can be seen between them. Paolozzi's sculpture shows a radically modernized Isaac Newton with hair slicked back, glasses upon his face, and a mechanized body structure that includes strategically placed nuts and bolts. Additionally, the body and the pedestal upon which he sits appear to be constructed in separate pieces that are tied together by linear lines which further mechanizes the work. Most importantly, the sculpture sits outdoors, towering over its potential spectators. Together, the outdoor element and the work's twelve foot stature are symbolic of openness, clarity and dominance, while Blake's depiction closes Newton off from the world around him, symbolizing the exact opposite. Paolozzi ignores Blake's intentions and instead gives us an image of Newton as a scientific thinker whose discoveries changed our view of the world to one determined by mathematical laws rather than divine orchestration. Paolozzi's location of the sculpture in front of the British Library is also interesting because it positions Newton as an icon of the free thinking and innovation

that occurs in the building just a few feet away. When the piece was unveiled, critics were incensed over the artist's distorted reference to Blake's print, going so far as accusing the library and the artist of "indulging in ridicule." Paolozzi fired back, stating that his work merely "presented a subtle yet Michelangelesque vision of science's ambiguous role."²⁹ Paolozzi's piece was intended to be part of a series depicting other great intellectual heroes, but budget cutbacks and critical panning left the statue of Newton solitary. The cutbacks were severe enough that the existence of the Newtonian sculpture was completely funded by a "commercial sponsorship from a football pools consortium," suggesting budgetary cutbacks were most likely the sole reason the project did not move forward.³⁰ Still, the critical protest, similar to Blake's own protests, was ineffectual in the general public's understanding of the piece. Furthermore, the solidarity of Newton casts the scientist as not one of many great intellectuals but rather as the one and only intellectual worthy of immortalization in such a public space. The creation of Paolozzi's *Newton* reignited Blake's *Newton* to its iconic status and proves the piece is still socially impactful two centuries after its original creation.

The evidence surrounding *Newton* shows the print was destined to become an icon of innovation. Spirituality played a key role in its creation, a role that continued after the artist's passing. Blake was unaware of his transformative powers as an innovator, although *Newton* was the clear bi-product of them. Most importantly, the influence of *Newton* crops up in a variety of contemporary mediums that include both writing and sculpture. As we have seen, the artist's innovative processes and additional bodies of work defined *Newton's* path, transforming the print and the public's reception to it. Even critical panning of a modern day representation was not enough to reveal the print's original meaning to the masses. In closing, this print's transformation leads to a better cultural understanding of not only William Blake and Isaac Newton, but of faith, science, and *Newton's* role as an icon of innovation.

²⁹ Patricia Fara, "Isaac Newton Lived Here: Sites of Memory and Scientific Heritage." *The British Journal for the History of Science* 33, no. 4 (December 2000): 420.

³⁰ *Ibid*, 421.

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Figures

Figure 1. Newton. *William Blake*. 1795-1805. Tate Modern,
<http://www.tate.org.uk/art/artworks/blake-newton-n05058/text-catalogue-entry>

Figure 2. *Newton After William Blake*. Eduardo Paolozzi,
<http://upload.wikimedia.org/wikipedia/commons/9/9a/NewtonBlakePaolozzi1.jpg>

Figure 3. *Elohim Creating Adam*. William Blake. 1795-1805. Tate Modern,
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Figure 4. *Satan Exulting over Eve*. William Blake. 1795-1805. J. Paul Getty Museum,
<http://www.getty.edu/art/collection/objects/75/william-blake-satan-exulting-over-eve-british-1795/>

Figure 5. *Ancient of Days*. William Blake. 1794. British Museum,
<http://www.wikiart.org/en/william-blake/the-ancient-of-days-1794>

Figure 6. *Cave of Despair*. Henry Fuseli. 1769. Art Institute of Chicago,
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