

# SCIENCE, SPRITS, AND SPECULATION: EDGAR ALLAN POE AND THE METAPHYSICAL BATTLE BETWEEN EMPIRICAL AND SUPERNATURAL

ANNIKA G. RUNDBERG BUNNEY

*ABSTRACT: From 1827 to 1849, Edgar Allan Poe wrote volumes of work that inadvertently documented his downward emotional spiral and internal struggle between wanting to believe fully in the spiritual or the empirical. By analyzing a selection of his works alongside his history, it can be seen that his writing reflects his internal metaphysical struggle. Unable to come to terms with the empirical reality of loss, Poe frequently weaves supernatural features into the worlds he creates, attempting to reconcile the unalterable facts of the natural world with the metaphysical hopefulness of spirituality.*

*Keywords: Edgar Allan Poe, Empirical, Spiritual, Supernatural, Poetry, Story, Writing, History*

## Introduction

Known for his macabre and often tragic works, Edgar Allan Poe was a master of weaving together the fantastical and the real. From his famous poem “The Raven” to the lesser-known work “The Colloquy of Monos and Una,” Poe invariably draws upon supernatural elements to explore life and death in his storytelling. He uses mystery, monstrosity, and the flaws of mankind to manipulate readers’ understandings of the worlds he creates and continually references. He pulls elements of his environment into his narratives and alters them to fit his needs at the time. Poe’s own life adds to the mystery, as parts of his biography are lost to the ages. As a thinker, much of his writing echoes his ever-shifting mindset as a man tortured by his own circumstances in an upheaved world. By contrasting analysis of both his writing and his life, light can be shed onto his literary habits and repeated allusions to his intellectual struggle between believing in the empirical or scientific elements of the world and relying on the supernatural or spiritual perceptions of the world.

## A Biography of Poe

Edgar Allan Poe (1809-1849), born during the beginning of the American Industrial Revolution, had a tumultuous life. Many of the themes in his biography are reflected in his writing, with death and loss being the most prominent. With empirical medical studies on the rise, his misfortune was somewhat uncharacteristic of the time, and this likely led him to find frustration with the scientific process. He seemed to want to believe the empirical facts, but Poe’s own life pushed against the narrative of medical progress. He first suffered loss at the age of three when his parents, both professional actors, died, leaving him alone in Boston, Massachusetts. Not much is recorded about how this loss affected him, but it can be recognized that it left a lasting impression on him. After becoming the foster child of Frances Allan, whose name he eventually added to his own, Poe spent the rest of his childhood in Virginia, only leaving to attend the University of Virginia in Charlottesville. Academically, he did well but succumbed to the allure of gambling and drinking. In a little under a year, Poe racked

up large gambling debts, which his foster father Allan refused to pay. This irreparably damaged their relationship, and Poe eventually moved back to Boston where he enlisted in the United States Army in 1827. This is also the time when his documented writing journey began, and his works started to be published (Poets.org). Due to his frequent movement and lack of steadiness in his employment, his works – dissimilar to one another and covering a wide variety of topics – reflect this inconsistency of both his own life and the world around him.

Poe lived during one of the most turbulent eras of American history. During the 1800s, the United States was turned on its head, with science giving rise to new developments that ultimately rewrote society's standards of living and beliefs. The supernatural or the spiritual began to become outdated as science answered difficult questions around topics such as death, illness, and the natural order of the world. The empirical – an observable, documentable source of information – dominated, and American society began to apply this new knowledge to anything it could. Historian Jeff Horn describes the American Industrial Revolution's success as hinging on the invention of machinery with interchangeable parts, creating a uniformity both for workers and the parts produced. These machines could make "...metal parts for products ranging from clocks, to cash registers, to typewriters, to reapers, to locomotives, and finally to automobiles" (Horn, 4). These machines effectively superseded the human aspect of everyday creation, making products safer, cheaper, and easier to replace. Despite the novel inventions, some were still wary of the repetitive and exacting nature that overtook the individuality of handmade technologies. The new empirical data gathered as more technology was implemented was also applied to medicine, especially as more sanitariums and hospitals were being built in conjunction with an increase in diseases like widespread tuberculosis. Still, with declining mortality and higher health standards leading to increased fertility, there was

a social boom that brought the need for more infrastructure and urbanization (Horn, xxiv). This development pushed the supernatural – traditional stories, beliefs, and ways of living – to the wayside. The natural world overtook the supernatural, becoming the focus of academics and laymen alike, with new research coming to light seemingly every day.

In the 1800s, the natural world was being reexamined as science progressed to overwrite itself. As this turnover occurred, the antebellum South of the United States also began to break free from its status quo, igniting the raging politics of the Civil War. Having been a soldier, Poe had insights into the political landscape that those both outside of and higher up in the military had. While he served during a time of peace, he was taught about the horrors of war and fighting, as well as the bureaucratic battles that take place during such an event. As U.S. Army historian Clayton Newell explains, even before the Civil War, the United States Army was viewed primarily as "a necessary evil at best" (7). The massive losses of life resulting from the decisions of those who never saw a battlefield ate at Poe, who was no stranger to loss. According to the U.S. Army's Chief Historian, Richard Stewart, there were more than 600,000 deaths in just the years that were officially considered a part of the Civil War, but like most civil wars, the tension and fighting long preceded the formal beginning of the political battles (5). It was these losses that likely led Poe to more thoroughly explore the possibilities beyond life and death – beyond mere mortals fighting over ideologies and politics. In his poem "Spirits of the Dead," which Poe wrote in 1827 during his military posting, he considers life after death and the journey from the plane of mortality to the heavens. He advises the dead to "Be silent in that solitude, / Which is not loneliness..." (Poe, 26). He explains that the dead will not be truly alone, for after death, they will join everyone who has died before them. Later in his life, the references to loss drastically increase as his world becomes darker, incorporating more

mythologies and classic literary references he learned though his stints in higher education.

As a way to expand his understanding of the empirical and literary worlds through academia, Poe attempted to continue his education at the United States Military Academy, but again had to leave due to a lack of financial support. Because of this, he began to write and sell more of his work. Some of these pieces included short stories and poems such as “Imitation” (1827), “Mysterious Star” (1831), and “A Tale of Jerusalem” (1832). His work focused on short stories and poems, with themes of adventure, exploration, and questioning of the empirical world. In 1835, he became the editor of the *Southern Literary Messenger*. One year later in 1836, he married his young cousin Virginia, sometimes attributed as being one of his muses (Poets.org).

Virginia’s story is similarly muddled to Poe’s, the documentation of her life greatly lacking. However, it is known that they began a friendly relationship during a period in which Poe temporarily lived with his aunt, Maria Clemm, and her daughter, Virginia. During this time, Poe wrote and published two volumes of poetry. When Poe finally married her several years after his tenancy with her family, she was only thirteen years old while he was twenty-seven. It is believed that Poe altered her age to be eighteen on their marriage certificate (Johnston). Poe was continuously writing throughout their relationship, some of his writing focusing on the playfulness of the relationship with his young wife and the imaginary adventures on which he wanted to take her.

After he was married, Poe became known for his scathing criticism of his fellow authors. His book reviews are especially well-known for their shortness and heavy criticisms of fellow writers. He earned the nickname “The Tomahawk Man” from his vicious reviews, his style easily recognizable during the era. Author Brett Zimmerman adds, “...Poe’s reputation for

critical severity had become so widespread that he even found himself being blamed for scathing reviews he did not write” (86). His book review format – the critical eye on contemporaries – garnered its own following, likely due to the entertainment provided by “literary wars” ignited by Poe’s aggressive nature. His mentality throughout adulthood contributed to this aggression: “...he lived his adult life feeling like a man of genius surrounded by dolts, boors, pretenders, toadies, sycophants...these unworthies often did get undeserved praise while Poe, whose brilliance deserved so much better, struggled, if not in obscurity, certainly in poverty” (Zimmerman, 91). Feeling oppressed by the ever-changing society in which he lived and those who lived within it, Poe held back no sharp quips or ranting criticisms in his critiques. He was bitter over the lack of recognition, and with his work at journals and newspapers becoming more strained, Poe began to slip into writing more personal stories and poetry about his frustration, dismay, and overall melancholy. Slowly, his work devolved into focusing on his misfortunes and the feeling of being betrayed by science and the empirical world while simultaneously cursing the supernatural for not presenting him with any kind of miraculous solution.

The misfortune in Poe’s life and the world surrounding him did not cease. His most devastating tragedy struck in late 1847 when his wife, Virginia, died from what is believed to have been tuberculosis (Poets.org). It was in this year that his most famous works were published, including “The Tell-Tale Heart,” “Lenore,” and “The Mask of the Red Death: *A Fantasy*.” His bouts with depression and alcoholism worsened after Virginia’s death, and his writing began to turn from a broad exploration of topics to a focus on the demise of beautiful women. This era of his writing is often referred to as being what provided him his standing as an established American writer, even though he sold and published his renowned poem “The Raven” for only \$9 (World History Edu). Until his death,

Poe continually drew upon these deathly themes as well as feminine frailty and mortality, driving a narrator to madness and heartbreak. It is to this image that academics often return in their studies due to its dark allure.

According to the National Park Service and the Edgar Allan Poe National Historic Site, Poe's death is still debated and is the greatest mystery he left behind. By 1849, despite the fact Poe's depression and alcoholism had become severe, he still accepted an editing job in Philadelphia. On September 27, 1849, Poe left Richmond and inexplicably stopped in Baltimore, where he would die several days later (Poets.org). Not much is known about the events following September 27th. Cooping, a type of voter fraud involving a person being forced through intoxication or drugging to cast several votes, is proposed as a main cause of death, with the substances used being a catalyst for his body to collapse. On October 3rd, he was found collapsed on the steps of the State House, wearing clothes belonging to another man, barely alive. While it was never discovered whose clothes he was wearing or what medical emergency caused his body to fail, it was surmised that he may have been in Baltimore with the intention of voting, as it was an election year. With what credible information has been preserved, cooping is a logical explanation for his death: he was in a disguise, clearly under the influence of some substance, and was near a polling place. However, other theories, such as rabies and complications from being mugged, still persist. No firm evidence exists to confirm his method of death, but it was recorded that he spoke to imaginary figures, including a woman he referred to as his "wife," as he rambled on in fervor before his inevitable and torturous demise (National Park Service). Despite the events leading up to his death being unclear and otherwise unknown, it is evident that his internal metaphysical battles blended into his consciousness. His last acts of life involved a dissolution between imagination and reality.

## Examining Poe's Works

While the beginning of Poe's literary explorations cannot be pinpointed, there are a few major milestones in his writing career including early poetry, newspaper articles, a lone novel, short stories, and his later poetry for which he is famous today.

One of Poe's early poems, "Tamerlane," published in 1827, focuses on a Turkic conqueror and his fictionalized journeys. It can be found accompanied by Poe's footnotes, where he discusses his research and process. It is clear he had begun to experiment with the manipulation of reality, although not to a supernatural degree. Instead, he decides his character – the titular Tamerlane – should be a friar and not the son of a shepherd as he historically was suggested to be. Poe says, "It does not pass the bounds of possibility – quite sufficient for my purposes – and I have at least good authority on my side for such innovations" (38). The reality was not enough for his story. A solitary shepherd's son did not conjure as much allure as a "holy friar" to whom a lost soul could turn. This reflects Poe's own need, as a young man alone, to find a guiding figure in his life. As an author, he bent reality to fit his needs at the time. Poe also imbued some of his own emotional and intellectual states into his work, and "Tamerlane" is no different. In the middle of the poem, he states, "For I was not as I had been; / The child of Nature, without care, / Or thought, save of the passing scene. –" (Poe, 29). While the poem is about the conqueror Tamerlane, these lines call out to a distraught Poe, caught between empirical realities and spiritual beliefs. He felt he could no longer avoid the need to be intellectually involved in the world around him. As an adult, he was informed of scientific discovery and progress, yet he tried to hold onto his childhood, as traumatic as it was. It is in this poem that Poe appears to begin his understanding that, regardless of the world around him, he was the master of his own writing, and he could alter anything he wanted. The worlds he created were

based in reality, but he quickly discovered that they need not stay that way.

In struggling to mesh the scientific and the supernatural, many of Poe's works find themselves with a haunting tone, especially his later writing. This is achieved through a manipulation of reality, as Poe plays with the dark beauty of the natural world in conjunction with his seeming fascination with the macabre supernatural. His many references to dark waters churning on rocky shores and the pitch-black of the night preoccupy much of his later works, yet the presence of the supernatural reaching beyond his earthly realm is still present. Author Bettina Knapp explains, "Poe's tales take place both within and without the rational objective world" (3). While he draws on the world around him, he also creates his own from it.

One example comes not from his personal writing, but from an article written for the *New York Sun* on April 13, 1844. Commonly referred to as "The Balloon Hoax," Poe wrote a column whose title reads "Astounding News! By Express Via Norfolk! The Atlantic Crossed in Three Days! Signal Triumph of Mr. Monck Mason's Flying Machine!!!" (The Edgar Allan Poe Society of Baltimore). In the article, Poe imagines a plausible invention of a flying machine which can cross the Atlantic Ocean in

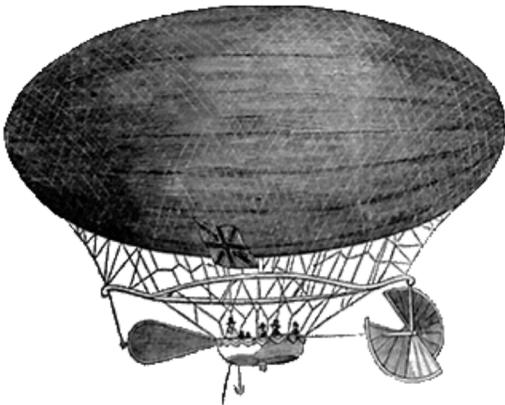


Figure SEQ Figure \\* ARABIC 1. Model of the Victoria, the flying balloon machine Poe created for his falsified article (Edgar Allan Poe Society of Baltimore).

just three days. He relates the incredible balloon to the English inventor and engineer Sir George Cayley, a credible and very real authority on flight. Poe's choice in referencing him was certainly not unplanned. Sir Cayley was a prominent academic in the 1800s and is often considered the father of aeronautics, a prolific inventor of flight-based machine blueprints (Gray). By using reliable and known sources to help bolster his own credibility, Poe was able to create narratives that slipped through the cracks of the traditional storytelling methods. He included diagrams (Figure 1) and specific measurements of the imaginary machine's components to add a further level of credibility, as imagery reinforcing the imaginary was important to him. On April 15, 1844, the balloon statement was retracted. According to The Edgar Allan Poe Society of Baltimore, the author of the retraction is unknown, but it was likely to have been Poe himself. He asserts the possibility of an imaginary event, drawing upon a blend of empirical and fantastical elements. In the conclusion of the retraction, the unnamed author states, "The description of the Balloon and the voyage was written with a minuteness and scientific ability calculated to obtain credit everywhere, and was read with great pleasure and satisfaction. We by no means think such a project is impossible" (The Edgar Allan Poe Society of Baltimore). Whether or not the retraction was written by Poe, it is clear the story was bought by readers, who fell for the ruse due to how detailed it was. However, the invention was one of Poe's imagination, a concept of a possibility he worked to sell as a believable tale. This manipulation of reality developed throughout his writing career, although it was usually accompanied by a struggle between relying on what he knew to be true – the empirical – and that which he'd been originally taught to be true – the spiritual.

Finding himself caught between science and supernatural, Poe became an authorly inventor, creating fantastical scenarios that were believed not only because of his specificity, but because

the world was in an era of industrial development. Great minds were constantly churning out new ideas, and Poe was no different. He worked from within, his writing drawing upon thinkers of the time, his own imagination, and general worldly observations.

...Poe was a thinking type who felt most comfortable in the abstract, impersonal, rational sphere. Mentally, he was forever exploring, learning, inquiring into the known and the unknown. He read omnivorously: poetry, fiction, scientific and mathematical treatises, mystical and metaphysical tracts...The universe was for Poe a living organism, a single form that, when manifested, acquired multiplicity (Knapp, 6).

He devoured content which fueled his writing and instability. He fought with the empirical facts laid out but struggled to reconcile these facts with the observations of his life. The devouring of content tormented Poe, and he continued writing as further exploration of these ideas in conjunction with his own imagination. As an author, he was able to follow his own interests and curiosities, including the impacts of death both on the deceased and those left behind. The empirical and spiritual battled within his mind, and he was so distracted by the internal metaphysical conflict, that he spent more time thinking alone than living in his environment. He created his own environments, sometimes fully fleshed-out within his writing, in which he could think and experiment.

One such environment was a novel he wrote in 1838, entitled *The Narrative of Arthur Gordon Pym of Nantucket*. It is a tale that weaves imagination and fact through the uncertainties of existence and divine intervention. The story follows Pym, a man out for adventure, as he explores the vastness of the uncharted ocean and untrekked mountains. His misadventures also include many supernatural encounters, such as a ship manned only by corpses, the

land whose inhabitants have never seen the color white, or the labyrinth with no known architects, though none are quite as mysterious as the “white figure.” Toward the end of Pym’s story, an unexplained white figure appears, and Poe never addresses its presence. This figure draws much attention due to its oddity, a creature that appears just before Pym’s narrative is suddenly ended. Author John Tresch, in his study of *The Narrative of Arthur Gordon Pym of Nantucket*, connects typography and historical revision to Poe’s writing, finding parallels between the white space on the page and the inexplicable white figure. “...perhaps we are meant to see the white figure as the outward representation – for the characters, or for us – of the unrepresentable: a mystical experience, or an encounter with divine truth...” (18-19). Perhaps it is less than that – a literal reference to the blank spaces on white pages, playing with typographical form and the limits of the printing press. Having worked with the printing press before, Poe was aware of its capabilities. Perhaps, instead, it is Poe’s representation of death in the empirical world – a mysterious event that ends the narrative of all those with whom it comes in contact.

However, despite his many references to the supernatural throughout his writing career, Poe also considered the natural world as an explanation for what once had been attributed to the divine. Author James Hutchisson approaches Poe’s work with a more cynical eye, focusing on scientific possibilities for references to supernatural or mysterious elements left to the imagination of the reader. “...Poe had a working knowledge of Scottish physicist Sir David Brewster’s *Letters on Natural Magic* (1831), in which Brewster describes dozens of optical illusions. He [Brewster] debunks these illusions, which were formerly attributed to the supernatural, by explaining how reflection, refraction, and the physiology of the eye work together to produce otherworldly effects” (Hutchisson, 119). Poe, an avid reader, believed in the rigor and methodology of science, but he

did not participate in gathering the empirical data. He was interested more in the results of science, the physical representation that empirical studies had been executed and conclusions had been drawn. It is seen from Poe's writing, especially earlier on in his career, that he often dabbled in scientific theory, as it was a prominent topic during his time. In a poem he wrote in 1829, entitled "Sonnet – To Science," he struggles to find harmony between scientific discovery and cultural tradition. "Science! true daughter of Old Time thou art! Who alterest all things with thy piercing eyes. / Why prey'st thou thus upon the poet's heart, / Vulture, whose wings are dull realities? /How should he love thee? or how deem thee wise" (43). Even in his writing, Poe struggled to reconcile scientific discovery with his own imagination and stories prominent in Western culture, especially mythologies and traditional tales passed down through the generations. "Sonnet – To Science" is a more explicit exploration of this struggle, and Poe, standing steadfastly as a poet, addresses science as a creature that goes to harm the imagination and the mythological. Yet, he was not afraid to acknowledge the intellectual changes occurring in the culture around him. The academic world was rearranging itself, science imposing itself upon the supernatural, erasing it, and upheaving the stability on which thinkers of the time had previously relied. From the Industrial Revolution to the Civil War, science and society were drastically changing, and those living in American society needed to change with them. While many adapted without much issue, Poe struggled to follow suit, and his later writings prove to be solid evidence of this.

Taking a close look at "The Raven," one of his later works that reflected the downward turn of his psyche, it can be seen how Poe began to create more writing encapsulating his own mental state. Essayist Dennis Eddings observes, "The narrator...follows a progression seen in many of Poe's tales where the abdication of reason in favor of the dark side of the imagination is ultimately destructive" (161).

Poe was slowly falling victim to his depressive episodes, both his characters and himself destroying their ties to reality through wishing for some supernatural intervention to their misery. "The Raven" features a man alone, his loved one lost to death, asking questions to a creature whose answer he already knows. In an empirical mind, would have deduced the answer and ceased his questioning, but in desperation or insanity, he continues to ask questions of the talking Raven. Poe's inability to come to terms with the physical death of his beloved wife and the empirical fact that her body would decompose and be lost forever, he attempted to turn to the spiritual but struggled to ignore the progression of scientific discovery. This internal conflict led Poe to continue his downward spiral into emotional turmoil and overall misery. Even with final works, some of which focused on writing processes rather than presented any mystical and melancholic tales, he could not find balance.

In April of 1846, Poe penned an essay entitled "The Philosophy of Composition" where, after receiving an inquisitive note from Charles Dickens, he describes his method of writing "The Raven" and correlates it to his overall process. Unlike his previous dabbling with science, where he focused on content and results, Poe spent much time in his later years mulling over scientific methods. As with much of his life, these empirical aspects bled into his writing. In his essay, he states, "...the work proceeded, step by step, to its completion with the precision and rigid consequence of a mathematical problem" (Poe, 1081). Poe applies the empirical method, a decisive step-by-step process, to the more fluid art of poetry. However, this balance between rigidity and flexibility created the originality for which he is still revered today. "My first object (as usual) was originality," Poe explains, "The extent to which this has been neglected, in versification, is one of the most unaccountable things in the world" (1085). His originality stemmed from his ability to think in two minds: the empirical and the fantastical. He

struggled with his own writing process, clearly wanting to indulge in the illogical and artistic tendencies of his imagination but also wanting to stay a rational man. He longed to allow himself complete creative control over his own works, but the oppressive presence of science and technological progress seemed to weigh heavily on his tortured mind. So, there he was, writing a highly structured poem about a talking corvid. He clings to his rigidity with the form and draws in the supernatural with his content. Even as he reviews his own work in a clinical manner, breaking it down to the basest parts, he is convincing no one but himself of the method to his madness.

## Conclusion

The tension between the natural and spiritual worlds made Poe's work alluring. It will continue to be studied as a great example of Romantic literature and pioneering of new writing forms, his work capturing a multitude of styles, emotional changes, and intellectual threads. Struggling to find balance contributed to the creation of his style and tone, as well as dictated the way in which he conducted himself.

Poe encapsulates in his works those polarities which hounded him: the empirical and spiritual worlds. These seemingly incompatible domains are meticulously structured in his tales: each is wrought in great detail, and each searches through the rubble of the lives he brings to his readers for insights, for ways to right a wrong, to balance the warped, harmonize conflict, and discover truth (Knapp, 205).

His work reflects how his state of mind slowly became darker and more introspective, the comparative cheerfulness of his youth dissolving into the melancholy of adulthood. His attempts to balance empirical discovery and internally warped perspectives of life, death, and everything in between resulted in classic American writing that lives on his legacy.

As a pioneer of many forms, Poe's work appears to have been driven by his insatiable need to explore and experiment, to explain the unexplainable, and to create stability in his own world. The intellectual communities surrounding him were constantly changing, new information blending and clashing as it fought for dominance. Poe's writing reflected this, his struggles with the metaphysical are prominent in his works, especially after Virginia's death in 1836. Poe's constant need to reconcile the natural and spiritual worlds forced him to create his own where the supernatural was the normalcy while empirical methodology persisted.

## References

- Eddings, Dennis W. "Mad Ravings or Sound Thinking?: "The Philosophy of Composition" and Poe's Parodic Raven." Hutchisson, James M. *Edgar Allan Poe: Beyond Gothicism*. University of Delaware Press, 2011. 161-171.
- Gray, Carroll. *Sir George Cayley*. 2003. 11 Dec. 2020. <<http://www.flyingmachines.org/cayl.html>>.
- Horn, Jeff. *The Industrial Revolution: History, Documents, and Key Questions*. Santa Barbara: ACB-CLIO, LLC., 2016.
- Hutchisson, James M. *Edgar Allan Poe: Beyond Gothicism*. Plymouth: University of Delaware Press, The Rowan & Littlefield Publishing Group, Inc., 2011.
- Johnston, Makenna. *Edgar Allan Poe: A Brief Biography*. 27 Oct. 2020. 11 Dec. 2020. <<https://4thwalldramaturgy.byu.edu/edgar-allan-poe-a-brief-biography>>.
- Knapp, Bettina L. *Edgar Allan Poe*. New York: F. Ungar Publishing Co., 1984.
- National Park Service. *The Mystery of Edgar Allan Poe's Death*. n.d. 8 Dec. 2020. <<https://www.nps.gov/articles/poe-death.htm>>.

Newell, Clayton R. *The Regular Army Before the Civil War 1845-1860*. Washington, D.C.: Center of Military History, United States Army, 2014.

Poe, Edgar Allan. *The Unabridged Works of Edgar Allan Poe*. Philadelphia: Courage Books, 1983.

Poets.org. *Edgar Allan Poe*. n.d. 8 Dec. 2020. <<https://poets.org/poet/edgar-allan-poe>>.

Stewart, Richard W. "Introduction." Newell, Clayton R. *The Regular Army Before the Civil War 1845-1860*. Washington, D.C.: Center of Military History, United States Army, 2014. 5-6.

The Edgar Allan Poe Society of Baltimore. *The Balloon Hoax*. 26 May 2017. 8 December 2020. <<https://www.eapoe.org/works/tales/ballhxa.htm>>.

Tresch, John. "The Compositor's Reversal: Typography, Science, and Creation in Poe's "Narrative of Authur Gordon Pym"." *History and Theory* 56 (2018): 8-31.