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Artificial Creation and The Ethics Of Innovation

Frankenstein as a Precursor To Modern Artificial Intelligence

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Dedication

In the Name of Allah, the Most Gracious, the Most Merciful. This thesis is humbly dedicated to Almighty Allah, the ultimate source of all knowledge, wisdom, and strength, whose infinite blessings and guidance sustained us through every challenge of this academic journey. We extend our deepest gratitude to our beloved parents and family, our enduring pillars of support, whose unconditional love, endless sacrifices, and profound prayers laid the foundation for our success. To our respected teachers and mentors, we owe a debt of gratitude for their invaluable guidance, immense patience, and intellectual inspiration, which continuously pushed our boundaries and shaped us into better researchers. Finally, this work is dedicated to our dearest friends, who walked alongside us through the highs and lows, offering the laughter, encouragement, and unwavering support that turned this demanding pursuit into an unforgettable chapter of our lives

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Abstract

This dissertation analyzes Mary Shelley's *Frankenstein* 1818; or, *The Modern Prometheus* as a prophetic lens for addressing the ethical and philosophical dilemmas posed by modern Artificial Intelligence (AI) and Artificial General Intelligence (AGI). It critiques scientific hubris through Victor Frankenstein's experiment, illustrating the evolving anxieties of creation and control from the Industrial Revolution to the digital era. The research situates the text within its historical context, linking mechanization and Luddite revolts to cultural concerns of alienation and labor displacement. Victor is portrayed as an example of Enlightenment rationalism, whose tragedy stems from the breakdown of responsibility after creating life. By applying John Locke's *tabula rasa* concept, the study argues that both Shelley's creature and modern algorithms are shaped by their designers. It addresses contemporary issues like algorithmic bias and recommends a regulatory framework called the "Frankenstein Rules," emphasizing developer stewardship, transparency, and human oversight. Ultimately, it asserts that both flesh-and-code "monsters" mirror societal values, necessitating a blend of technical skill with ethical responsibility. Mary Shelley's *Frankenstein* serves as a profound precursor to modern artificial intelligence, offering critical insights into the responsibilities of creation. Its primary contribution lies in shifting the focus from the technological marvel itself to the moral accountability of the creator, establishing a foundational framework for "the ethics of innovation." The narrative demonstrates that the ultimate danger is not the artificial being, but the inventor's abandonment of ethical oversight and empathy. Translated to modern AI, *Frankenstein* warns that pursuing advanced autonomy without a rigorous framework for control, alignment, and social responsibility can lead to unintended, destructive consequences, making it a timeless cautionary tale for today's tech innovators.

Keywords: Artificial Intelligence (AI), Artificial General Intelligence (AGI), Scientific Hubris, Algorithmic Bias, Ethical Responsibility, Transparency, Human Oversight, Frankenstein Rules

المستخلص

تحلل هذه الأطروحة رواية ماري شيلي فرانكشتاين الصادرة عام 1818؛ أو بروميثيوس الحديث، بوصفها عدسة نبؤية لمعالجة المعضلات الأخلاقية والفلسفية التي يفرضها الذكاء الاصطناعي الحديث والذكاء الاصطناعي العام. وتنتقد الأطروحة الغطرسة العلمية من خلال تجربة فيكتور فرانكشتاين، مستعرضة تطور المخاوف المتعلقة بالخلق والسيطرة من الثورة الصناعية إلى العصر الرقمي. يضع هذا البحث النص في سياقه التاريخي، ليربط بين الميكنة (إدخال الآلات) وثورات اللوديين (مناهضي التطور التكنولوجي) وبين المخاوف الثقافية المرتبطة بالاغتراب وفقدان الوظائف. ويُصوّر فيكتور كنموذج للعقلانية التنويرية، حيث تتبع مأساته من انهيار المسؤولية بعد خلق الحياة. ومن خلال تطبيق مفهوم "اللوحة الفارغة" ("Tabula Ras") لجون لوك، تُجادل الدراسة بأن كلاً من مخلوق شيلي والخوارزميات الحديثة يتشكلان برؤية مصمميهم. كما تتناول الأطروحة قضايا معاصرة مثل الانحياز الخوارزمي، وتوصي بإطار تنظيمي يُطلق عليه اسم "قواعد فرانكشتاين"، مع التركيز على توجيه المطورين، والشفافية، والإشراف البشري. وفي النهاية، تؤكد الأطروحة أن هذين "الوحشين" سواء المصنوع من لحم أو من شفرة برمجية يعكسان قيم المجتمع، مما يستلزم دمج المهارة التقنية بالمسؤولية الأخلاقية. تُعد رواية *فرانكشتاين* للكاتبة ماري شيلي بمثابة تمهيد عميق للذكاء الاصطناعي الحديث، حيث تقدم رؤى نقدية حول مسؤوليات الخلق والابتكار. وتكمن مساهمتها الأساسية في تحويل التركيز من الأعجوبة التكنولوجية نفسها إلى المسؤولية الأخلاقية للمبتكر، واضعةً بذلك إطاراً أساسياً لـ "أخلاقيات الابتكار". وتوضح السردية أن الخطر الأكبر لا يكمن في الكائن الاصطناعي، بل في تخلي المبتكر عن الإشراف الأخلاقي والتعاطف. وإذا ما أسقطنا ذلك على الذكاء الاصطناعي الحديث، فإن *فرانكشتاين* تحذر من أن السعي وراء تحقيق استقلالية متقدمة دون إطار صارم للتحكم، والتوجيه (التحذير)، والمسؤولية الاجتماعية يمكن أن يؤدي إلى عواقب مدمرة وغير مقصودة، مما يجعلها قصة تحذيرية صالحة لكل زمان وموجهة لمبتكري التكنولوجيا اليوم.

الكلمات المفتاحية: الذكاء الاصطناعي، الذكاء الاصطناعي العام، الغطرسة العلمية، الانحياز الخوارزمي، المسؤولية الأخلاقية، الشفافية، الإشراف البشري، قواعد فرانكشتاين.

Résumé

Cette thèse analyse le roman de Mary Shelley *Frankenstein* publié en 1818, ou le Prométhée moderne, comme un prisme prophétique permettant d'aborder les dilemmes éthiques et philosophiques posés par l'Intelligence Artificielle (IA) moderne et l'Intelligence Artificielle Générale (IAG). Elle critique l'hubris scientifique à travers l'expérience de Victor Frankenstein, illustrant l'évolution des angoisses liées à la création et au contrôle, de la révolution industrielle à l'ère numérique. La recherche situe le texte dans son contexte historique, reliant la mécanisation et les révoltes luddites aux préoccupations culturelles d'aliénation et de déplacement de la main-d'œuvre. Victor est dépeint comme un exemple du rationalisme des Lumières, dont la tragédie découle de la rupture de la responsabilité après la création de la vie. En appliquant le concept de *tabula rasa* de John Locke, l'étude soutient que la créature de Shelley tout comme les algorithmes modernes sont façonnés par leurs concepteurs. Elle aborde des questions contemporaines telles que le biais algorithmique et recommande un cadre réglementaire appelé « Règles de Frankenstein » (Frankenstein Rules), mettant l'accent sur la responsabilité des développeurs, la transparence et la supervision humaine. En fin de compte, elle affirme que ces « monstres » de chair et de code reflètent tous deux les valeurs sociétales, ce qui nécessite d'allier les compétences techniques à la responsabilité éthique. Le roman *Frankenstein* de Mary Shelley constitue un précurseur profond de l'intelligence artificielle moderne, offrant un aperçu critique des responsabilités liées à la création. Sa contribution principale consiste à déplacer l'attention de la merveille technologique elle-même vers la responsabilité morale du créateur, établissant ainsi un cadre fondamental pour « l'éthique de l'innovation ». Le récit démontre que le danger ultime n'est pas l'être artificiel, mais l'abandon par l'inventeur de la surveillance éthique et de l'empathie. Transposé à l'IA moderne, *Frankenstein* nous avertit que la poursuite d'une autonomie avancée, sans un cadre rigoureux de contrôle, d'alignement et de responsabilité sociale, peut mener à des conséquences imprévues et destructrices, ce qui en fait un conte d'avertissement intemporel pour les innovateurs technologiques d'aujourd'hui.

Mots-clés: Intelligence Artificielle (IA), Intelligence Artificielle Générale (IAG), Hubris scientifique, Biais algorithmique, Responsabilité éthique, Transparence, Supervision humaine, Règles de Frankenstein

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Abréviations

Abbreviations	Scientific Term
AI	Artificial Intelligence
GAI	General Artificial Intelligence
HITL	Human –in –the - Loop

General Introduction

General Introduction

The Modern Prometheus, or Frankenstein, by Mary Shelley, has been widely recognised as a seminal work that explores the moral, social, and philosophical repercussions of scientific and technological innovation since its initial publication in 1818. Frankenstein is, above all else, a reflection on the concept of generating new forms of life and being accountable for their management, despite its frequent interpretation as a gothic or horror novel. The issues that Shelley raised in relation to responsibility, ambition, and creativity remain highly relevant as society navigates new technological and scientific frontiers. These new frontiers encompass the onset of the industrial age and the emergence of artificial intelligence in the digital era. The objective of this dissertation is to elucidate the manner in which Frankenstein provides a potent framework for understanding the obstacles that are produced by the rapid advancement of technology. The objective of this investigation is to illustrate that the emotions and concerns that are linked to creation, control, and responsibility are not exclusive to any particular era. This is achieved by assessing the novel's historical context and establishing connections between its themes and current discussions regarding digital ethics and artificial intelligence. On the other hand, these concerns persist and evolve, requiring us to consistently evaluate the lessons we have acquired from the past as we confront the challenges that await us. The first chapter of this dissertation situates Shelley's novel within the intellectual and cultural transformations that were taking place in Britain during the early nineteenth century. The Industrial Revolution was a period of significant transition, during which traditional forms of labour and society were disrupted. These disruptions were precipitated by urbanisation, mechanisation, and novel scientific discoveries. The pervasive uneasiness and opposition were exacerbated by the proliferation of factories and machines, as well as the replacement of trained artisans with industrial processes. The Luddite protests, which were initiated by groups of workers who destroyed technology that they perceived as a threat to their livelihoods, were not merely manifestations of technophobia; rather, they reflected more profound anxieties regarding alienation, loss of purpose, and the degradation of human dignity in the face of relentless development.

The character of Victor Frankenstein, a young scientist who, in his pursuit of understanding the mysteries of life, creates and animates a living being out of lifeless materials, is a reflection of and a response to these concerns in Shelley's novel Frankenstein. Victor's approach to science is indicative of the mechanistic worldview that gained prominence during the Enlightenment and the Industrial Revolution. The human body is perceived by him as a

conundrum that requires resolution, a machine that must be assembled, and a challenge that must be surmounted. The laboratory's terminology, which incorporates terms such as "electricity" and "sparks of being", is reminiscent of the technological advancements that were made during Shelley's era. Scientists were at that time beginning to explore the boundaries between living and non-living entities, as well as between natural and artificial. Frankenstein, however, is not solely a negative critique of the scientific community's aspirations. Shelley's novel serves as a cautionary tale regarding the dangers of pursuing knowledge without humility, empathy, or ethical foresight as a result of its content. Victor's covert experiments may be interpreted as a paradigm for the moral ambiguity and obscurity that can accompany the advancement of scientific knowledge. Victor conducted these experiments in solitude, without the involvement of his family, acquaintances, or the broader community. Victor is overcome with dread and revulsion upon bringing his invention to life, and he subsequently abandons his creation and refuses to accept responsibility for its fate. This decision sets in motion a sequence of tragic events, with the ignored creature becoming a symbol of isolation, sorrow, and the repercussions of unbridled pride. The book's allusion to the Promethean myth, which recounts the story of the titan who took fire from the gods, serves to underscore the perils of having an overly ambitious objective. Victor Frankenstein, like Prometheus, has the temerity to challenge the boundaries of nature and divinity, only to be punished by the unforeseen consequences of his endeavours. The narrative of Shelley prompts readers to reflect on the obligations and sacrifices that are required to uphold the creations that we bring into existence, in addition to the potential accomplishments that can be achieved through scientific methods.

Another subject that is addressed in the initial chapter is the discrepancy between the reason and order of the Enlightenment and the Romantics' celebration of nature, imagination, and emotion. Victor's icy and analytical perspective on existence is in striking contrast to the creature's yearning for connection, sympathy, and beauty. The novel functions as a cautionary tale, emphasising that the pursuit of technological objectives, when divorced from a sense of ethical responsibility and compassion, can lead to feelings of isolation, despair, and devastation. Frankenstein remains a significant work of literature for its exploration of the moral boundaries of creativity and the importance of reconciling the advancement of science with the principles that govern human behaviour.

These subjects are elaborated upon and contextualised within the twenty-first century in the second chapter of this dissertation. The world is presently undergoing a new wave of technological transformation as a result of the increasing integration of algorithmic systems and artificial intelligence into our daily lives. This technology now has a significant impact on the decisions made regarding employment, healthcare, education, and criminal justice. Algorithms, such as those that determine eligibility for loans or employment, curate the information that individuals view. Additionally, algorithms are employed in surveillance and law enforcement. Despite the potential for increased efficiency and new opportunities, these systems also raise significant ethical concerns regarding the possibility of prejudice and the extent of human control and responsibility.

By employing the metaphor of the "monster", the chapter illustrates that modern artificial intelligence systems, like Shelley's creature, are not intrinsically good or malevolent. Rather, they are shaped by the data, design decisions, and modes of supervision or neglect that their human designers impose. The concept of the *tabula rasa*, which is frequently referred to as a "blank slate", is employed to illustrate how Frankenstein's creature and contemporary algorithms commence their lives without any predetermined characteristics but instead acquire those characteristics through their interaction with their environment. In the same way that Shelley's creature undertakes a transformation as a result of the rejection and prejudice he experiences, it is feasible for artificial intelligence systems that are instructed on biased or insufficient data to perpetuate and even exacerbate existing social inequities. To be more precise, the chapter explores contemporary case studies that examine instances in which digital "monsters" appear to turn against their creators or society as a whole. For instance, the systematic misidentification and exclusion of marginalised groups have been the consequence of algorithmic bias in facial recognition technology. This is a manifestation of the creature's experience of exclusion from society and misinterpretation. This raises questions about the potential for meaningful recourse for those who are affected by automated system decisions, as well as accountability and transparency. The black box dilemma is a circumstance in which the operations of intricate artificial intelligence systems become incomprehensible to the designers of those systems. As a result of the proliferation of generative artificial intelligence, there have been new concerns regarding the fragmentation of identity, permission, and authorship. This dilemma arises from the fact that these systems produce new content by recombining the work and data of a large number of individuals, often without recognition or compensation.

The second chapter suggests a set of "Frankenstein Rules" for digital ethics as a remedy to the issues discussed in the first chapter. The establishment of legal requirements for transparency and explainability in algorithmic systems, the recognition of the ongoing responsibility of artificial intelligence developers for the impacts of their creations, and the guarantee that human oversight, also known as "human-in-the-loop", continues to play a central role in all high-stakes automated decision-making are among these. These principles are established by the teachings that Shelley's novel imparts. The necessity of aligning technological advancement with the greater interests of society, the requirement of continuous care and stewardship, and the implications of the risks of secrecy and isolation in the domain of innovation are all part of these teachings.

This dissertation demonstrates that the challenges of creation, control, and responsibility are strongly rooted in the human experience of invention by analysing both the industrial age and the digital revolution through the lens of Frankenstein. Specifically, the dissertation concentrates on the industrial era. Ultimately, the monsters we create, whether they are composed of flesh or code, are a reflection of our aspirations, fears, and values. The central thesis of this research is that genuine progress, regardless of whether it is in the field of science or technology, requires not only technical proficiency and ambition but also humility, ethical reflection, and a commitment to the well-being of others.

Ultimately, Frankenstein remains a cautionary tale and a guide for individuals who are navigating an era of significant technological advancement. Accountability and creation are inextricably linked in the novel's most enduring insight. As our society prepares to encounter increasingly potent forms of artificial intelligence and digital innovation, the lessons of Shelley's narrative are more pertinent than ever. In order to reduce the probability of recurrence of past catastrophes, it is imperative that our innovations be informed by empathy, transparency, and a shared sense of responsibility for the consequences of their actions. Shelley's vision continues to enlighten the ethical path for creators, inventors, and any other individual who is impacted by the technologies that are transforming our world.

Chapter One

The Hubris of the Creator and the Industrial Ghost

*Chapter One: The Hubris of the Creator and the Industrial Ghost***Introduction**

like Mary Shelley's *Frankenstein*; or, *The Modern Prometheus*. Shelley's novel is much more than a gothic fable, a complex web of philosophical inquiry and historical reflection woven at the intersection of the Industrial Revolution and the dawn of modern science. The tragic tale of Victor Frankenstein's quest for forbidden knowledge is not simply a singular occurrence, but the product of a world undergoing seismic shifts: artisanal craftsmanship giving way to mechanised industry, tradition yielding to the relentless march of technology, and ancient beliefs about nature and the soul tested by the promise and the dangers of scientific progress.

This chapter places *Frankenstein* in the intellectual and cultural ferment of the early nineteenth century. It starts with the rise of industrial ambition, looking at how the mechanisation of labour and the Luddite revolts against machines created a new 'technophobia' a fear that machines might replace or erode our humanity. Here, we focus on the novel's central clash the Romantic desire for nature and authenticity versus the Enlightenment faith in reason, control, and the ability of science to "reanimate" the world. Victor Frankenstein's methods viewing the body as a machine to be assembled and electrified mirror the era's fascination with galvanism and the idea that electricity could unlock the secrets of life.

Yet *Frankenstein* is also a meditation on the eternal dangers of the "God complex". Shelley calls upon the myth of Prometheus to enquire what toll must be paid when mortals steal the fire of creation. Victor's secretive, solitary experimentation in his "filthy workshop" serves as a powerful metaphor for the opacity and ethical ambiguities that continue to surround technological innovation today from biotech labs to the pursuit of artificial general intelligence. This crystallises the core ethical question of the novel: when Victor abandons his creation, what is the responsibility of the creator toward that which he brings into being? Is the inventor a mere mechanic, or is he to be a parent of his work?"

Finally, the chapter discusses the conflict between the rationality of the Enlightenment and the feeling of Romanticism the "machine nature" of Victor's scientific vision contrasted with the creature's capacity to feel, suffer and wonder. Shelley's warning is clear: creation without conscience and science without compassion lead only to ruin. Following these interwoven threads industrial ambition, scientific discovery, mythic warning, ethical obligation, and the clash of worldviews this chapter explains why Shelley's novel remains a

vital parable for any society beset by the ghosts of its own inventions. "Shelley's novel is a complex web of philosophical inquiry woven at the intersection of the Industrial Revolution and modern science, serving as a powerful metaphor for the ethical ambiguities that surround innovation today. Ultimately, her warning remains clear creation without conscience and science without compassion lead only to ruin, forcing us to question the true responsibility of the creator toward that which he brings into being."

1.1 The Industrial Revolution: An Engine of Ambition

1.1.1 Mechanisation of Humanity

The Industrial Revolution stands as a pivotal moment in modern history, fundamentally transforming economies and reshaping the collective mindset of society. The transition from artisanal craftsmanship to mechanised production lines marked a significant change in how individuals relate to their work. As Eric Hobsbawm notes, "The old way of life [was] destroyed," and people were "forced...to adapt to new rhythms, new disciplines, and a new sense of alienation" (45). This observation captures the profound disruption experienced by those living through the era, as familiar patterns gave way to the unfamiliar demands of industrial life. Previously, artisans and craftspeople derived not only economic security but also personal identity from the process of creation. The value placed on unique, handcrafted work fostered a sense of pride and individuality. However, the rise of mechanisation, as Karl Marx observed, rendered the worker "an appendage of the machine" (361), reflecting a loss of autonomy and individuality. The transformation of labour into repetitive, machine-driven tasks gradually diminished both skill and personal investment. The reconfiguration of daily life extended even to the perception of time. According to Thompson, the introduction of the "clock" in place of the "season" signified a shift to a regimented and accelerated pace, driven by the demands of industrial efficiency (Thompson 67). This change not only influenced factory productivity but also began to shape the rhythms and expectations of society as a whole. Set against this backdrop, Mary Shelley's *Frankenstein* emerges as a product of its age, deeply informed by contemporary anxieties about progress, mechanisation, and human identity. Victor Frankenstein embodies the new archetype of the scientific "engineer", whose ambitions are expressed in mechanical terms: "I collected the instruments of life around me so that I might infuse a spark of being into the lifeless thing that lay at my feet" (Shelley 56). The language of "instruments" and "spark" resonates with both the technological innovations of the period and the impersonal logic of industrial production. Scholarly analysis, such as that of Anne K.

Mellor, situates Victor's project within the broader intellectual currents of the Enlightenment and Industrial Revolution. Mellor writes, "The body is simply a machine, and Victor is its mechanic" (89), indicating how scientific materialism and the mechanistic worldview permeate the novel's underlying philosophy. This outlook, which reduces life to a series of mechanical processes, raises questions about the ethical and emotional costs of progress. The consequences of this perspective are evident in Victor's relationship with his creation. The moment of animation, initially driven by ambition, quickly gives way to horror and revulsion: "I had worked hard for nearly two years, for the sole purpose of infusing life into an inanimate body...but now that I had finished, the beauty of the dream vanished, and breathless horror and disgust filled my heart" (Shelley 56). The abrupt shift in Victor's emotions reflects the broader sense of alienation and disillusionment brought about by unchecked technological advancement. Contemporary poets and critics responded to these developments with a mixture of concern and nostalgia. William Blake's reference to "dark Satanic Mills" and Wordsworth's lament, "The world is too much with us; late and soon, getting and spending, we lay waste our powers" (Wordsworth 1–2), articulate a shared unease about the spiritual consequences of industrialisation. These works highlight a longing for a lost connection with nature and a recognition of the costs associated with material progress. Similarly, Leo Marx's description of machinery as a "disruption of harmonious, organic relations" (195) underscores the sense that industrialisation fractured the bonds between individuals and their environment. Within *Frankenstein*, this Romantic counterpoint is reflected in the creature's search for empathy and belonging. His interactions with the cottagers "The gentle manners and beauty of the cottagers greatly endeared them to me; when they were unhappy, I felt depressed; when they rejoiced, I sympathised in their joys" (Shelley 107) reveal a yearning for genuine human connection amid a mechanised world that often neglects such needs. The themes Shelley explores remain relevant in the twenty-first century, as debates about digital technology, automation, and artificial intelligence echo earlier concerns. Shoshana Zuboff's assertion that "automation threatens to strip meaning from work, leaving workers isolated and powerless in the face of algorithmic management" (125) draws a parallel between past and present anxieties, illustrating the persistent tension between efficiency and human fulfilment. In summary, the mechanisation of humanity during the Industrial Revolution provides both a historical context and a metaphorical lens for understanding *Frankenstein*. The novel critiques not only scientific hubris but also a broader cultural shift that risks reducing individuals to mere components within impersonal systems. Its enduring relevance lies in its implicit warning: progress without compassion may lead to isolation and despair for both creator and creation.

1.1.2 The Luddite Fear

The Luddite movement represented the first significant backlash against technological change in the early nineteenth century, arising as machines rapidly transformed industry. Between 1811 and 1816, skilled textile artisans in England, known as Luddites, resorted to destroying machines that threatened their livelihoods, sensing that their expertise and, by extension, their very sense of self stood at risk of obsolescence. As Eric Hobsbawm notes, the Luddites were not simply irrational opponents of progress but workers challenging the use of machinery to undermine their status and conditions (Hobsbawm 41). Such actions reflected a deep-rooted response to the social and economic dislocation that accompanied industrialisation.

Over time, “Luddite” has become shorthand for technophobia, yet the label often misrepresents the true nature of their protest. E. P. Thompson clarifies that the Luddite argument was less a rejection of technology itself than a protest against its deployment to erode customary rights and livelihoods (Thompson 547). Here, the machine emerges not as a neutral tool but as an emblem of dispossession an agent of dehumanisation that realigned power in favour of capital at the worker’s expense.

It was in this atmosphere of unrest and uncertainty that Mary Shelley wrote *Frankenstein*. While the novel remains silent on the Luddite riots, its central conflict strongly echoes those anxieties: the perils of powerful creations, the unpredictable outcomes of unchecked ambition, and the ethical ambiguities of innovation. Victor Frankenstein’s relentless pursuit of mastery over nature mirrors the industrialist’s drive to dominate productive forces, often with little regard for deeper consequences.

The relationship between Victor and his creation quickly devolves into one of fear and rejection, with the newly animated being regarded as a “wretch” whose presence provokes horror (Shelley 56). This reaction encapsulates broader cultural anxieties of the time, revealing an unease about the unintended consequences of human ingenuity creations that may escape their creators’ control or threaten the established order. Literary scholar Esther Schor reflects on this pervasive fear, observing that *Frankenstein* is fundamentally concerned with the risks

inherent in technological innovation and the anxieties about creations that may ultimately overwhelm their makers (Schor 35).

The era's undercurrents of secrecy and resistance also found expression in the methods of the Luddites, who operated at night, masked and adopting the persona of the mythical "General Ludd". As Steven Jones suggests, their actions combined protest and performance, signalling a fracturing of traditional communal ties (Jones 77). Such nocturnal rebellion resonates with Victor's own secretive withdrawal from society and his absorption in the "filthy workshop of creation" (Shelley 54). In both cases, night and secrecy become refuges for those driven by fear whether of obsolescence or of discovery and consequence.

The concern that machines might "kill the soul" of work and workers extended well beyond the Luddite ranks, echoing through Romantic literature. The vision of "dark Satanic Mills", as William Blake wrote, captured the threat of industrialisation to the spiritual and imaginative life of individuals (Blake 24). Similarly, the solitary despair of Shelley's creature "I am alone and miserable: man will not associate with me" (Shelley 120) mirrors the sense of exclusion and alienation experienced by those displaced in the industrial age.

Such anxieties persist in contemporary debates about automation, artificial intelligence, and the gig economy. The fear that new technologies might render human labour obsolete or be harnessed in ways that undermine human well-being remains a central concern. As David F. Noble observes, innovation invariably brings with it both the promise of liberation and the threat of dispossession (Noble 13).

Ultimately, the Luddite movement and the anxieties it embodied offer a crucial lens for interpreting *Frankenstein* as a text deeply rooted in its time. The novel's portrayal of the dangers inherent in creation of unleashing forces that may elude human control resonates with the apprehensions of those who viewed the industrial future as both a promise and a peril, with profound implications for society and the human soul alike.

1.1.3 Nature vs. Machine

The Industrial Revolution not only reshaped physical landscapes and economies but also stirred deep anxieties among those who prized spiritual and aesthetic values rooted in nature. The rise of mechanisation, with its unyielding advance, appeared to threaten the very essence of what the Romantics cherished. It was in this climate that the Romantic movement emerged,

viewing the encroachment of industry as more than an environmental concern it signified a spiritual rupture, an estrangement from the vital forces of the natural world.

Among the leading voices, William Wordsworth articulated a sense of alienation and loss, writing, “The world is too much with us; late and soon, getting and spending, we lay waste our powers; little we see in Nature that is ours” (Wordsworth 1-3). Through such lines, Wordsworth mourned not simply the loss of pastoral beauty but the diminishing capacity for wonder and deep connection with nature in an increasingly commodified world. Echoing this perspective, Percy Bysshe Shelley lamented the “unremitting man” whose satisfaction now derived from “manufacture and the loom” rather than from the rhythms of the natural world (“To Sidmouth and Castlereagh” 33-34). The voices of the Romantics, united in their apprehensions, offered a literary counterpoint to the triumphalism of industrial progress.

This conflict between the mechanical and the natural is dramatised throughout Mary Shelley's *Frankenstein*, both in the settings she describes and in the internal struggles of her characters. Victor Frankenstein, shaped by the rationalistic ethos of his time, is driven to “reanimate” dead matter, convinced that the secrets of life can be forced from nature through technical mastery. The process is depicted in mechanical terms: “I collected bones from charnel houses and disturbed, with profane fingers, the tremendous secrets of the human frame” (Shelley 54). His clandestine laboratory his “workshop of filthy creation” stands in stark contrast to the restorative natural landscapes that offer solace elsewhere in the novel (Shelley 54).

Victor’s scientific ambition, as Anne K. Mellor observes, transforms his laboratory into a microcosm of the Industrial Revolution, creating life in an artificial environment divorced from natural processes (Mellor 123). The irony is acute: Victor’s pursuit of mastery over life leads not to triumph, but to a profound loss of empathy and responsibility. In seeking to “stitch” life together through mechanical means, he inadvertently produces a being condemned to isolation and suffering a reflection of the mechanistic mindset’s limitations.

The creature, by contrast, comes to embody the Romantic ideal. Abandoned by his creator, he seeks meaning not in the artificial confines of experimentation, but in the woods, lakes, and mountains. Nature, in all its beauty and changeability, becomes both sanctuary and guide: “The pleasant showers and genial warmth of spring greatly altered the aspect of the earth. Men, who before this change seemed to have been at war with nature, were now reconciled to her... The birds sang in more cheerful notes, and the leaves began to bud forth”

(Shelley 97). This awakening to the natural world, rendered in Romantic language, emphasises the healing and inspiring qualities found outside the reach of machines.

The novel thus constructs a central opposition between Victor's mechanistic science and the creature's Romantic experience. For Shelley and her contemporaries, the machine served as both a symbol of technological progress and a warning about the potential for spiritual and emotional decline. As Leo Marx suggests, the intrusion of technology into the pastoral landscape becomes a metaphor for the disruption of harmonious relations between people and the natural world (Marx 195). In *Frankenstein*, this disruption is enacted vividly: Victor's workshop, with its corpses and instruments, invades the natural order, and the resulting tragedy signals the perils of such trespass.

Even today, this tension between the artificial and the organic continues to resonate. Debates over biotechnology, artificial intelligence, and environmental degradation all echo the Romantic apprehension that unchecked technological progress can erode our sense of wonder and responsibility. In its portrayal of the costs of "reanimating" life through mechanical means, Shelley's novel endures as a cautionary tale, reminding us that the legacy of the machine is still very much with us.

1.2 The Scientific Frontier: Alchemy to Galvanism

1.2.1 The Spark of Life

The late eighteenth and early nineteenth centuries witnessed advances in electricity and physiology, inspiring both awe and anxiety in the public imagination. Central to this scientific ferment was the work of Luigi Galvani, whose experiments in the 1780s and 1790s led to the theory of "galvanism" the idea that electricity could animate living matter.

Galvani's most famous experiments involved applying electrical currents to the nerves of dead frogs, which caused their limbs to twitch as though reanimated. In an era when the boundaries between life and death were mysterious, these demonstrations blurred the line between animate and inanimate, natural and artificial. Public fascination and fear intensified as Aldini, Galvani's nephew, later performed similar experiments on human corpses in London, and the press speculated on the prospect that science might "resurrect" the dead (Aldini 136). Such episodes reveal the extent to which scientific spectacle could disrupt established beliefs and provoke new anxieties about the possibilities of knowledge.

The notion that electricity could be a “divine tool” capable of bestowing or restoring life fuelled Romantic imaginations and ethical debate, finding unique expression in literary works of the period. In *Frankenstein*, Victor Frankenstein’s quest is shaped by the very language and ambitions found in scientific circles: “From this day natural philosophy, and particularly chemistry, in the most comprehensive sense of the term, became nearly my sole occupation... I entered with the greatest diligence into the search for the philosopher’s stone and the elixir of life, but the latter soon obtained my undivided attention.” Wealth was an inferior object, but what glory would attend the discovery if I could banish disease from the human frame and render man invulnerable to any but a violent death? (Shelley 33). Through Victor’s aspirations, Shelley’s novel subtly mirrors the period’s transition from mystical quests toward a more material, experimental science.

Victor’s later reflection “collected the instruments of life around [him] that [he] might infuse a spark of being into the lifeless thing that lay at [his] feet” (Shelley 56) invokes the language of galvanism in a way that bridges scientific discourse and literary imagination. The “spark of being” becomes not only a scientific concept but also a metaphor for the mysterious threshold between life and death and for the unsettling potential of human intervention in nature’s domain.

This fascination with electricity as a quasi-divine force reflects shifting attitudes toward science and the sacred. Where earlier natural philosophers might have seen themselves as interpreters of divine order, the galvanists seemed to step into the realm of creation itself. Shelley’s own words, “Perhaps a corpse would be reanimated; galvanism had given token of such things: perhaps the component parts of a creature might be manufactured, brought together, and endued with vital warmth” (Shelley, “Introduction” vii), position the novel within the currents of contemporary debate, blurring boundaries between speculation and possibility.

The cultural resonance of these experiments was such that Shelley’s readers could hardly ignore the connections between Victor’s laboratory and the sensational electrical demonstrations of Aldini and others (Butler 302). The drama of reanimation, played out in both science and fiction, captured the hopes and fears of an age increasingly preoccupied with the dual promises and dangers of progress.

Shelley’s narrative does not straightforwardly celebrate scientific achievement. Victor’s work, while remarkable, ultimately leads to tragedy; the power to bridge life and death proves overwhelming when exercised without wisdom or ethical restraint. The “spark of life”, as

Mellor notes, becomes a burden when bestowed “without compassion or foresight” (Mellor 115). In this way, Frankenstein interrogates the notion that mastery of nature can be separated from the demands of responsibility, suggesting that the act of creation is inseparable from its moral consequences.

The “spark of life” thus emerges as both a scientific and philosophical symbol a sign of the era’s excitement about new knowledge and a cautionary emblem of the risks inherent in overreaching ambition.

1.2.2 AGI Obsession

The scientific ambition that drives Victor Frankenstein the urge to animate dead matter and challenge the boundaries of nature finds a striking echo in the contemporary pursuit of Artificial General Intelligence (AGI). In both cases, ambitions that once belonged to myth and legend creation, animation, and mastery become the focus of practical inquiry, shadowed by questions of ethics and consequence.

Victor’s fascination with the “mystery of life “Life and death appeared to me ideal bounds, which I should first break through, and pour a torrent of light into our dark world” (Shelley 32) articulates a desire to transcend established limits. Such language, rooted in the rhetoric of the Enlightenment and Romantic periods, finds its modern parallel in the discourse surrounding AGI. The aspiration to “bestow animation upon lifeless matter” (Shelley 32) is at once Promethean and fraught, as both scientific and literary narratives explore the risks of pursuing knowledge without adequate foresight.

In Shelley’s account, Victor’s technical achievement is not matched by emotional or ethical maturity, resulting in consequences beyond his control. The observation that Victor “aspires to omnipotence but fails to acknowledge the moral responsibilities of the creator” (Mellor 114) resonates with present-day debates in technology, where the pace of innovation can outstrip reflection on its implications.

The quest for AGI defined as intelligence capable of understanding and learning across a wide range of tasks at a human level or beyond (Bostrom 30) is framed as a logical extension of this tradition. The language used by leaders in the field, such as Demis Hassabis’s claim that AGI will be “the last invention humanity will ever need to make” (Hassabis), evokes the same sense of transformative potential and profound risk found in Frankenstein.

Discussions of AGI frequently draw on metaphors of "creation", "awakening", and "birth", suggesting an enduring fascination with the "spark of life". Yet, as in Shelley's narrative, such fascination is accompanied by anxieties about agency and unforeseen consequences. Warnings about "surveillance capitalism", where autonomous systems shape society in unpredictable ways (Zuboff 163), recall the unintended aftermath of Victor's experiment.

The question of responsibility remains central. In *Frankenstein*, Victor's retreat from his creature underscores the perils of creation without guidance, companionship, or ethical boundaries a theme Jay Clayton emphasises in noting the novel's warning against "irresponsibility and emotional detachment in the face of scientific power" (Clayton 87). Similar concerns animate contemporary debates about AGI, where scholars argue that misalignment between machine goals and human values constitutes the greatest risk (Bostrom 200).

Themes of secrecy and isolation persist as well. Victor's tendency to "shun" others "I shunned my fellow creatures as if I had been guilty of a crime" (Shelley 54) mirrors the competitive secrecy that often surrounds technological innovation today. Decisions about AGI, made behind closed doors (Russell 251), recall the hidden "workshop of creation" in Shelley's tale.

Ultimately, both *Frankenstein*'s laboratory and the development centres of Silicon Valley confront the same questions about the limits of human ambition, the ethics of creation, and the potential for unintended consequences. Shelley's novel, far from losing relevance, continues to remind us that the act of creation demands humility, empathy, and an enduring sense of responsibility for what we bring into the world.

1.3 The God Complex and the Promethean Myth

1.3.1 The Modern Prometheus

Mary Shelley's *Frankenstein* carries the subtitle "The Modern Prometheus", a direct invocation of the myth in which Prometheus, bringer of fire, becomes a symbol of both creative power and forbidden transgression. In the ancient tale, the theft of fire is not only an act of generosity toward humanity but also an overstepping of boundaries, punished by relentless torment (Aeschylus 45). The echoes of this myth reverberate throughout *Frankenstein*, as Victor's scientific aspirations repeatedly draw upon the language and imagery of Prometheus.

Victor's desire to cross "forbidden boundaries in his pursuit of knowledge and wisdom" (Shelley 31) places him firmly within this mythic tradition. The urge to "pour a torrent of light into our dark world" (Shelley 32) resonates with the Promethean image of fire as both illumination and risk, suggesting that the pursuit of enlightenment is never without its shadows. In Shelley's rendering, there is an undercurrent of caution Prometheus's myth is not simply celebrated but interrogated for its consequences. The narrative, influenced by the tragedies of Greek lore and the critical reflections of thinkers like Kant, presents ambition as a double-edged sword, fraught with the dangers of hubris and the unforeseen costs of grasping at powers once thought divine (Mellor 115).

Shelley's approach to the myth is complex. While the Enlightenment often championed reason and discovery, Frankenstein lingers on the ethical and existential perils that accompany unchecked ambition. Victor's act of creation, performed in secrecy, is likened to theft an act of taking what is not rightfully his. His later reflection "Learn from me, if not by my precepts, at least by my example, how dangerous is the acquirement of knowledge and how much happier that man is who believes his native town to be the world than he who aspires to become greater than his nature will allow" (Shelley 38) transforms the Promethean quest from an emblem of progress into a cautionary tale. The narrative's tone suggests that the cost of forbidden knowledge extends beyond personal suffering to encompass the well-being of those around the seeker.

On a philosophical level, the mythic allusion underscores enduring questions about the moral dimensions of discovery. The pursuit of knowledge, as Kant and later existentialists have argued, is never without its ethical implications (Kant 72). Victor's tragedy arises not from curiosity itself but from a failure to recognise the limits and responsibilities that come with creative power. As Bloom observes, "Victor Frankenstein assumes the creative prerogatives of God but refuses the moral obligations of a parent" (Bloom 211), highlighting the tension between invention and accountability.

The consequences of Victor's Promethean ambition unfold both in his own suffering and in the fate of his creation. Illness, loss, and remorse follow in the wake of his achievement, while the creature's exclusion and anguish evoke the torment of Prometheus himself ("soul [is] filled with remorse and horror" [Shelley 60]). In this way, Shelley suggests that the price of overreaching is not only borne by the individual but is also inevitably shared whether through personal loss or the unleashing of uncontrollable forces.

The Promethean theme retains contemporary resonance, particularly in debates about science and technology. The impulse to grasp powers once reserved for the gods continues to shape discussions of bioengineering, artificial intelligence, and other advances. As Gould reflects, “We cannot return the fire to the gods, but we may yet learn to use it without self-destruction” (Gould 88). *Frankenstein* endures as both a gothic tale and a meditation on the responsibilities that accompany human creativity.

1.3.2 Secrecy and Ethics

At the heart of *Frankenstein* lies the image of Victor’s secret laboratory, described as a “workshop of filthy creation” (Shelley 54). This hidden space is more than a setting; it becomes a symbol of the dangers that arise when ambition is pursued in isolation. Victor’s withdrawal from society, his turning away from family and friends, creates an atmosphere in which ethical scrutiny is absent and the experiment proceeds unchecked. When Victor describes how he “shunned his fellow creatures as if [he] had been guilty of a crime” (Shelley 54), the narrative quietly draws attention to the psychological and social consequences of such secrecy.

The motif of secrecy resonates deeply with anxieties about science divorced from social responsibility. As Mellor notes, “*Frankenstein*’s secret experiment is emblematic of a science divorced from social responsibility, ethics, and human feeling” (Mellor 116). The isolation of the “filthy workshop” is not just a gothic flourish; it serves as a powerful metaphor for the risks inherent in innovation that proceeds without transparency or dialogue. Shelley’s narrative aligns with broader Romantic critiques of mechanistic progress, echoing warnings from contemporaries such as Percy Bysshe Shelley and William Blake, who both cautioned against knowledge and power severed from compassion and community (Blake 24).

This theme finds new life in the context of modern technological debates. Today’s laboratories and tech companies, often shielded by secrecy for reasons of competition or security, echo Victor’s solitude. Zuboff’s observation that secrecy creates “asymmetries of knowledge and power” (Zuboff 210) and Crawford’s argument about “black boxes” in AI research (Crawford 14) demonstrate that Shelley’s concerns remain pressing. The absence of accountability and open discourse can result in innovations with far-reaching, unpredictable effects.

The narrative’s caution is reinforced by the aftermath of Victor’s secrecy. The creature, left unguided and misunderstood, and the tragic consequences that follow, serve as reminders of how concealed power can spiral beyond the control of its originator. Pasquale’s assertion

that “without transparency, there can be no accountability, and without accountability, technological power becomes indistinguishable from tyranny” (Pasquale 41) finds a literary parallel in Victor’s story, where isolation and withheld knowledge lead to disaster.

In sum, the “filthy workshop” is more than a setting it is a symbol of the ethical hazards that can arise when creation is shrouded in secrecy. Whether in Shelley’s time or in the age of digital technology, the lesson is clear: innovation must remain open to scrutiny and guided by an awareness of its broader impact if it is to serve, rather than threaten, the common good.

1.4 The Breakdown of Responsibility

1.4.1 The Moment of Abandonment

One of the most defining turning points in *Frankenstein* unfolds in the quiet aftermath of Victor Frankenstein’s experiment, when the boundary between creator and creation is suddenly, irrevocably crossed. The so-called “moment of abandonment” Victor’s immediate retreat from his creation is rendered with particular psychological and moral weight. Upon witnessing the results of his labour, Victor is struck not by pride but by horror: “The beauty of the dream vanished, and breathless horror and disgust filled my heart” (Shelley 56). In that instant, the creature is no longer the object of scientific ambition but something wholly other, a “wretch” and “demoniacal corpse” (Shelley 56), alienated from its maker and denied the welcome of the world.

The atmosphere Shelley crafts in this scene, saturated with anxiety and revulsion, dramatises the collapse of empathy at the very moment when it is most needed. Victor’s visceral withdrawal is not simply emotional but signals a deeper, ontological refusal to recognise the creature’s claim to kinship. The hasty flight from the laboratory Victor was unable to “endure the aspect of the being [he] had created” (Shelley 57) serves as a physical enactment of the abdication of moral responsibility, transforming the act of creation into a source of anguish rather than fulfilment.

Shelley’s narrative, attentive to the consequences of such abandonment, subtly invites reflection on wider philosophical questions about upbringing and duty. Rousseau’s ideas on the formative power of environment and the responsibilities of the parent or guardian cast a revealing light on Victor’s failure. In neglecting the creature, Victor withholds not only care but also the very possibility for virtue or humanity to take root. This deprivation is felt most keenly in the creature’s own voice: “I ought to be thy Adam, but I am rather the fallen angel,

whom thou drivest from joy for no misdeed” (Shelley 87). The transformation of the creature, from hopeful to embittered, underscores the tragic implications that arise when nurture is denied.

The repercussions of Victor’s retreat reverberate through the narrative. Isolated and seeking acceptance, the creature encounters only rejection, and his subsequent evolution is shaped less by inherent monstrosity than by the absence of guidance and compassion. Critics have frequently observed that the so-called monster is shaped by neglect rather than by any innate evil (Bloom 215). In this way, Shelley frames monstrosity as a social and ethical, rather than purely physical, phenomenon.

The persistent resonance of this theme extends far beyond the novel’s nineteenth-century context. The dilemma Victor faces whether to guide and oversee what he has created remains acutely relevant in modern debates about technological innovation and moral stewardship. Concerns about the unintended consequences of “runaway” inventions, from artificial intelligence to biotechnologies, continue to echo the anxieties Shelley so powerfully dramatises. The warning is implicit: an invention that is not accompanied by responsibility risks unleashing harm that may prove difficult or impossible to control.

In the end, the moment of abandonment marks not only a narrative pivot but also the crucible in which the novel’s central ethical and philosophical questions are forged. It is through Victor’s flight, rather than his act of creation, that tragedy is set in motion a tragedy rooted in the refusal to nurture, guide, and empathise with what one has brought into being.

1.4.2 Inventor vs. Parent

The crisis that follows Victor’s abandonment of his creation draws attention to a fundamental ethical tension in *Frankenstein*: what does a creator owe to that which it has brought to life? Shelley’s novel consistently blurs the line between invention and parenthood, prompting readers to consider responsibility as an ongoing, rather than momentary, obligation. This distinction between inventor and parent remains a central concern in contemporary ethical discussions regarding the legacies of science and technology.

Victor’s reaction to his creation, marked by immediate horror, reveals a deep reluctance to accept any continuing duty. He reflects, “I had desired it with an ardour that far exceeded moderation, but now that I had finished, the beauty of the dream vanished, and breathless horror and disgust filled my heart” (Shelley 56). The rupture between anticipation and reality, between

desire and responsibility, manifests in Victor's decision to flee rather than to nurture or instruct his creation.

Shelley's narrative structure repeatedly returns to the language of kinship and estrangement, as the creature frames its existence in terms of familial longing: "I ought to be thy Adam, but I am rather the fallen angel, whom thou drivest from joy for no misdeed" (Shelley 87). The plea is not merely for recognition as an experiment but as a being deserving of connection and care. The distinction, as Mellor notes, lies in Victor's fundamental error believing that one can be a creator without also assuming the obligations of a parent (Mellor 116). Through this lens, abandonment becomes a failure not of science, but of stewardship.

Philosophical undercurrents, drawn from Rousseau and others, further emphasise the formative role of the environment and the ongoing nature of duty. The creature's own account "I was benevolent and good; misery made me a fiend" (Shelley 97) underscores how isolation and exposure to cruelty, rather than any innate quality, shape its fate.

This tension between the roles of inventor and parent continues to inform contemporary debates, particularly as the creations of science and technology acquire increasing autonomy or complexity. The obligation to anticipate, guide, and, if necessary, correct the course of artificial systems is a recurring theme in ethical frameworks for responsible innovation. Shelley's insights are echoed in modern calls for ongoing stewardship and accountability reminders that the act of bringing something new into the world does not absolve the creator of further responsibility.

Ultimately, *Frankenstein* compels us to consider not only what we are capable of creating, but also the enduring obligations we hold toward our creations. The tragedy that unfolds in the novel is not the result of scientific ambition alone but of the refusal to sustain the bonds of care and responsibility that true creativity demands.

1.5 The Core Conflict: Enlightenment Reason and Romantic Feeling

1.5.1 The Enlightenment: Machine Nature

The Enlightenment often styled the "Age of Reason" ushered in a profound trust in rationality, science, and empirical observation. Central to this intellectual revolution was the idea that the universe, including the human mind and body, functioned according to knowable laws. René Descartes, for example, famously described the human body as a kind of divine machine: "I consider the human body as a machine which, having been made by the hands of

God, is arranged with all the art and perfection imaginable” (Descartes 99). Such a worldview suggested that nature could be measured, analysed, and ultimately mastered through technical ingenuity.

This mechanistic outlook forms the backdrop to Mary Shelley’s *Frankenstein*. Victor Frankenstein emerges as a quintessential Enlightenment scientist, pursuing the secrets of nature with methodical determination. His approach, characterised by observation and dispassionate analysis, is evident in his reflection on anatomy and decay: “I became acquainted with the science of anatomy, but this was not sufficient; I must also observe the natural decay and corruption of the human body. I saw how the fine form of man was degraded and wasted; I beheld the corruption of death succeed to the blooming cheek of life” (Shelley 52). Victor’s mindset, shaped by the reductionist spirit of his times, treats the body as a complex apparatus one whose mysteries might be unlocked and manipulated, given sufficient understanding.

Yet Shelley’s treatment of Enlightenment ideals is far from uncritical. The narrative subtly exposes the limitations of a purely technical faith in mastery and progress. Victor’s confidence that assembling the right components and applying the galvanic “spark” will yield life “I collected the instruments of life around me so that I might infuse a spark of being into the lifeless thing that lay at my feet” (Shelley 56) mirrors the period’s optimism about the powers of the scientific method but also its blind spots. The reduction of creation to a mechanical process is depicted as both impressive and dangerously incomplete.

This attitude is echoed in the academic setting of Ingolstadt, where an institutional pride in progress leads to the dismissal of mystery and the supernatural: “The professors were proud of their progress in science” and “disdained the supernatural” (Shelley 49). Such confidence in mechanism, as Mellor observes, frames the body as a machine and the scientist as its mechanic (Mellor 89), but it also narrows the scope of inquiry, leaving little space for moral reflection or empathy.

Shelley’s critique becomes clear through Victor’s journey. Absorbed in the “how” of creation, he loses sight of larger ethical questions. The project becomes an end in itself, obscuring the person behind the experiment. As Hans Jonas would later reflect, the responsibilities that accompany creation care, empathy, and wisdom cannot be engineered in the laboratory (Jonas 162). The novel’s caution extends beyond Victor’s personal failings, offering a prescient warning against conflating technical expertise with true understanding or wisdom.

1.5.2 Romanticism: Nature as a Soul

Against the backdrop of Enlightenment rationality, Romanticism arose as a celebration of feeling, intuition, and the spiritual dimension of nature. Romantics viewed the natural world not as a passive mechanism but as a living, mysterious force, imbued with its own value and agency. This philosophical divergence is woven deeply into the fabric of *Frankenstein*, shaping both its structure and its critique of science untempered by empathy.

Romantic poets such as Wordsworth articulated the conviction that nature harboured a “sense sublime of something far more deeply interfused, whose dwelling is the light of setting suns, and the round ocean and the living air, and the blue sky, and in the mind of man” (Wordsworth 95–99). Through such language, nature becomes a source of spiritual revelation and interconnectedness a realm where rational categories dissolve into awe and kinship.

Shelley brings this Romantic sensibility to life in the creature’s journey. Rejected by his creator, the creature turns to the natural world for solace, discovering beauty and meaning in its rhythms: ‘Spring advanced rapidly; the weather became fine and the skies cloudless. It surprised me that what before was desert and gloomy should now bloom with the most beautiful flowers and verdure’ (Shelley 97). The creature’s awakening, shaped by the changing seasons and the writings he discovers in the De Lacey cottage, unfolds as an emotional and aesthetic education, quite different from Victor’s empirical investigations.

The contrast between Victor and his creature points to the novel’s deeper philosophical divide. Victor, absorbed by his scientific labours, becomes alienated from the world and those he loves: “Winter, spring, and summer passed away during my labours, but I did not watch the blossom or the expanding leaves sights which before always yielded me supreme delight, so deeply was I engrossed in my occupation” (Shelley 53). In contrast, the creature’s encounters with nature and people his appreciation for Elizabeth’s kindness, for example reflect a romantic ideal of empathy and emotional atonement: ‘The saintly soul of Elizabeth shone like a shrine-dedicated lamp in our peaceful home. Her sympathy was ours; her smile, her soft voice, and the sweet glance of her celestial eyes were ever there to bless and animate us’ (Shelley 35).

Shelley’s narrative thus positions the creature as an embodiment of the Romantic spirit, capable of feeling and connection, in stark opposition to Victor’s cold rationalism. Mellor notes that Shelley uses the creature to represent the ideal of the emotionally aware, naturally attuned

human being, revealing the dangers of a worldview that prioritises knowledge over compassion (Mellor 128). The creature's longing for acceptance and beauty, his capacity for empathy, lays bare the inadequacy of a purely mechanistic approach to life.

The lesson embedded in *Frankenstein* is unmistakable: scientific advancement, when severed from feeling and moral imagination, courts disaster. Shelley's story rejects the hubris of Enlightenment rationalism and insists on the irreducible complexity and mystery of life. In a world increasingly shaped by technological power, the novel's insistence that a creator must possess a heart as well as a mind remains as timely as ever.

Frankenstein's enduring value lies in its recognition that intellect alone is insufficient. The ethical challenge, as Shelley presents it, is to unite reason and feeling to care as deeply as we know. In this, the novel's Romantic vision continues to resonate, reminding us that science without empathy is, ultimately, a dangerous pursuit.

Conclusion

The theoretical framework examined in this chapter reveals *Frankenstein* as a text profoundly shaped by the intellectual and social upheavals of the early nineteenth century. Mary Shelley's novel is both a child of the Industrial Revolution and a critique of its excesses: a meditation on the consequences of mechanisation, scientific ambition, and the dehumanising effects of unchecked technological progress. The era's transition from artisanal craft to industrial production, the rise of Luddite anxieties, and the mechanistic worldview of Enlightenment rationalism all form the backdrop for Victor Frankenstein's fateful experiment. At the heart of Shelley's narrative is the collision between two worldviews: the Enlightenment faith in reason, measurement, and control, and the Romantic conviction that nature and the human soul transcend the reach of scientific mastery. Victor's pursuit of knowledge, inspired by real-world developments in galvanism and the desire to "pour a torrent of light into our dark world" (Shelley 32), is characterised by a mechanistic reduction of life to its constituent parts. Nevertheless, in seeking to reanimate dead matter, Victor not only ignores the ethical and emotional dimensions of creation but also severs himself from the very sources of empathy and connection that make life meaningful.

Shelley's invocation of the Promethean myth serves as both inspiration and warning. Victor's theft of the "fire" of life, conducted in the secrecy of his "filthy workshop" (Shelley 54), mirrors the industrialist's drive to harness nature for human ends. However, this hubris comes at a steep cost: abandonment, isolation, and the unleashing of uncontrollable destructive forces. The moment Victor flees from his creation crystallises the novel's central ethical question: what duty does a creator owe to their creation? Shelley's answer, articulated through the tragic fate of both Victor and the creature, is that true creation demands responsibility, care, and ongoing moral engagement.

The chapter has also shown how the Romantic critique of industrialism and mechanistic science is embodied in the figure of the creature, whose emotional education and longing for kinship stand in stark contrast to Victor's cold rationality. Shelley's narrative thus anticipates modern debates about artificial intelligence, biotechnology, and the ethics of innovation fields in which the dangers of creation without empathy and transparency remain all too real. As Anne K. Mellor and other scholars have argued, the lessons of *Frankenstein* are not confined

to the past; they remain urgent as we confront the promises and perils of new technologies (Mellor 116; Zuboff 210).

In sum, *Frankenstein* dramatizes the enduring tension between reason and feeling, science and humanity, and ambition and responsibility. By situating Victor's tragedy within the broader currents of history and philosophy, this chapter has established a foundation for understanding the novel as both a product of its age and a timeless warning about the ethical costs of unchecked creation. As we proceed to further explore the consequences of scientific hubris and the search for meaning in a mechanised world, Shelley's insights offer a powerful lens through which to examine our own technological moment.

Chapter Two

The Modern “Monster” and Digital Ethics

*Chapter Two: The Modern “Monster” and Digital Ethics***Introduction:**

The digital age has introduced powerful technologies that test the limits of human agency, creativity and responsibility. Artificial intelligence systems are now seeping into every aspect of life from the algorithms that control our news feeds to facial recognition software that makes decisions about who is allowed to work, walk the streets and even live in our countries. Mary Shelley’s *Frankenstein* provides a prophetic framework to examine these issues, delivering a narrative that associates creation with ethical consequence and social responsibility. In this chapter I undertake a practical analysis of modern AI as the “monster” in our pockets, making explicit connections between the theoretical insights of *Frankenstein* and the realities of algorithmic systems. Just as Victor Frankenstein’s creature was shaped by the nurture, neglect, and prejudice of those around him, today’s AI models are heavily shaped by the data, design decisions, and oversight or lack thereof bestowed upon them by their creators. The chapter opens with a discussion of the *tabula rasa* in literature and machine learning, illustrating how algorithms, like Shelley’s creature, are not born evil or biased, but are shaped by the environments in which they are situated.

The chapter then expands on this foundation, showcasing case studies where the digital “monster” appears to turn on its maker: facial recognition technologies that misidentify and exclude marginalised groups; opaque “black box” algorithms that defy human understanding; and generative AI models that raise complex issues of identity, authorship, and consent. Each of these examples not only resonates with Shelley’s themes of social exclusion and unintended consequence, but also hints at the ethical perils of technological advancement without sufficient reflection or accountability.

The final section of the chapter attempts to move from cautionary tales to constructive solutions by proposing a set of “Frankenstein Rules” for modern digital ethics. I argue here for the legal and moral recognition of AI developers as the “parents” of their code, for transparency laws that make technological innovation an open, scrutinising process rather than secret workshops, and for the importance of “human-in-the-loop” systems that guarantee human oversight in all high-stakes automated decision-making.

The goal of this chapter is to demonstrate the persistent importance of *Frankenstein* to the issues of digital modernity, through a combination of literary analysis, technological

critique, and normative ethical frameworks. The legacy of Shelley’s novel is not only a warning against hubris, but also a call to responsibility, reminding us that the monsters we create, in the laboratory or the datacenter, will inevitably reflect the values, biases, and humanity (or lack thereof) of their creators. In this way, the chapter helps to build the foundations for imagining AI systems that are not only powerful but also just, accountable and aligned with the wider interests of society.

2.1 The ‘Nurture’ of the Algorithm: Machine Learning

2.1.1 The Tabula Rasa (Blank Slate)

The concept of the tabula rasa, or blank slate, has long held a central place in philosophical accounts of learning and identity. In Enlightenment thought, it suggested that minds are born without content, shaped only by experience and environment. Mary Shelley draws on this tradition in crafting the creature of *Frankenstein*, who enters the world entirely unformed, declaring an absence of a “distinct idea of myself” (Shelley 87). His subsequent journey a gradual acquisition of language, morality, and self-understanding mirrors the classic Lockean model. The creature’s learning, painstaking and contingent on observation and text, is shaped by the world around it rather than by any innate disposition.

Locke’s vision of the mind as “white paper, void of all characters, without any ideas” (Locke 104) finds a narrative dramatisation in Shelley’s novel. The creature’s formative experiences his reading of works like *Paradise Lost* and his efforts to interpret social cues demonstrate how nurture, more than nature, determines his development. Far from being marked by inherent monstrosity, his actions and character are responses to the patterns of acceptance and rejection he encounters.

This literary exploration closely parallels developments in artificial intelligence. Modern machine learning systems, like Shelley’s creature, begin with little to no programmed knowledge. They are “blank” at the outset, as Melanie Mitchell notes: “A machine learning system starts with little or no encoded knowledge about the tasks it will perform; its ability is acquired through exposure to data” (Mitchell 41). The “intelligence” such systems display is the result of cumulative experience patterns and associations derived from large-scale training sets.

But this parallel also brings ethical questions to the fore. As in Shelley’s narrative, where the creature is shaped by the reactions he receives, so too are AI systems shaped by the quality and character of the data they consume. The trajectory of the creature from curiosity to alienation and violence serves as a reminder of what can unfold when a blank slate is written upon by a world that is itself flawed or hostile. The warning is clear: “Machine learning systems are only as objective or unbiased as the data from which they learn” (Mitchell 142). In both literature and technology, the blank slate becomes the site of ethical responsibility, demanding foresight and care from the creator.

Shelley’s depiction of Victor’s neglect from secrecy in creation to abandonment in aftermath finds contemporary echoes in debates about the opacity and accountability of AI development. The creature’s lament, “I ought to be thy Adam, but I am rather the fallen angel” (Shelley 119), signals the enduring consequences of abdicated responsibility. The lesson, for both human and artificial intelligences, is that the act of creation entails lasting obligations and insistence that the legacy of what is brought into the world always circles back to its maker.

2.1.2 Algorithmic Bias

Beyond its meditation on scientific audacity, *Frankenstein* offers a searching examination of exclusion and prejudice. The creature, designed for empathy and reason, is shaped by the reactions of those around him. “I was benevolent and good; misery made me a fiend” (Shelley 101). The transformation from innocence to violence is not the result of inherent malice but of sustained experiences of rejection and discrimination. In this way, the creature reflects the fears and biases of his makers, becoming a living mirror of social attitudes.

This pattern has a distinct resonance in the era of artificial intelligence. AI systems, like Shelley’s creature, do not emerge with pre-existing values; instead, they absorb patterns from the external world. Ruha Benjamin points out that “coded inequity is not a glitch but a reflection of the underlying social and historical patterns embedded in data” (Benjamin 6). When these systems are trained on data sets marked by prejudice however subtle or systemic they inherit, amplify, and sometimes perpetuate these biases.

The practical consequences can be seen in technologies such as facial recognition, which have repeatedly shown disparate accuracy across demographic groups. These discrepancies arise not from technical necessity but from the composition of underlying data mirroring broader patterns of social visibility and exclusion (Benjamin 54-56). The digital misrecognition

experienced by marginalised groups thus echoes the creature’s own fate: systematically othered and misjudged by the society meant to embrace him.

Cathy O’Neil’s assertion that “algorithms are opinions embedded in code” (O’Neil 21) further underscores the human element in technological systems. The myriad decisions made by designers from data selection to model objectives shape outcomes in ways that can reinforce cycles of advantage and disadvantage. Real-world examples, such as predictive policing or credit scoring, illustrate how automated systems can entrench inequalities, sometimes invisibly and at scale (O’Neil 86-90).

Shelley’s novel, in this light, anticipates a key ethical dilemma of the digital age: the need for vigilance and care in the shaping of new intelligences. Victor’s abdication of responsibility for his creature’s integration leads not only to tragedy for the creature but also to broader social harm. Similarly, the designers of AI systems must confront the reality that their work is never value-neutral and that failure to attend to issues of fairness and bias risks producing digital “monsters” that echo and reinforce the injustices of their context.

Ultimately, the development of intelligence whether biological or artificial cannot be separated from the world in which it unfolds. Both Shelley’s narrative and contemporary discussions insist that the shaping of minds, human or machine, is an ethical project. Algorithmic bias, then, is less an isolated flaw than a reflection of deeper social dynamics. The lesson of Frankenstein endures: creators remain accountable for the ways their creations interact with and are shaped by the prejudices of the world.

2.2 Case Studies: When the Monster Turns on its Maker

2.2.1 Facial Recognition & Exclusion

Within Frankenstein, the repeated scenes of the creature’s rejection “the children shrieked, and one of the women fainted; the whole village was roused; some fled, some attacked me” (Shelley 133) offer more than a depiction of physical difference. Shelley’s narrative taps into the psychological and social consequences of being denied recognition, where the creature’s longing for acceptance is met only with fear and flight. The villagers’ reactions reveal not just surface-level prejudice but also a deeper anxiety about otherness that manifests as exclusion.

This literary motif anticipates the dynamics at play in today’s deployment of facial recognition technologies. These systems, frequently deployed in security and policing, are presented as neutral observers, yet they often reproduce the same patterns of exclusion seen in Shelley’s novel. Buolamwini and Gebru’s pivotal study revealed that commercial facial analysis tools frequently fail to correctly identify darker-skinned and female faces, with error rates exceeding 30% for darker-skinned women compared to less than 1% for lighter-skinned men (Buolamwini and Gebru 77). The cause is not just technical oversight but the underlying composition of training data datasets that reflect and reinforce dominant norms.

This technological exclusion echoes the fate of Shelley’s creature, who is “failed to be seen” by those who define the norm. The systems that determine access or decide surveillance outcomes may misrecognise or ignore entire populations, leading to consequences as concrete as wrongful arrests or exclusion from public life. As Crawford observes, such systems “amplify the power of those who define the norm and further marginalise those deemed ‘other’” (Crawford 217). The lived reality of algorithmic misrecognition is thus not far removed from the existential alienation experienced by the creature, whose misery is compounded by the knowledge that he is “shunned and hated by all mankind” (Shelley 121).

These exclusions often go unnoticed by those unaffected, mirroring the indifference of the villagers to the creature’s suffering. The ethical implications extend beyond technical fixes; Buolamwini and Gebru argue for a wholesale reassessment of the values embedded in technological development, while Crawford points to the way AI systems entrench discrimination under the guise of efficiency (Crawford 217). The creature’s plight reminds us that exclusion is often the result of choices, biases, and failures of empathy lessons that AI practitioners must heed if they hope to avoid perpetuating cycles of marginalisation.

2.2.2 The Black Box Problem

Victor Frankenstein’s initial confidence in his experiment quickly gives way to dismay and a loss of control “I had desired it with an ardour that far exceeded moderation; but now that I had finished, the beauty of the dream vanished, and breathless horror and disgust filled my heart” (Shelley 56). This transformation from mastery to bewilderment foreshadows the challenges faced by modern developers of artificial intelligence, particularly those working with complex machine learning models.

The “black box problem” emerges when AI systems, built on deep and intricate data architectures, become so complex that their decisions cannot easily be understood even by their

creators. Burrell identifies several forms of opacity, but it is the intrinsic complexity of deep learning models that renders them most inscrutable (Burrell 3–4). The creator’s inability to trace or explain outcomes mirrors Victor’s realisation that his own creation has grown beyond his understanding and control. As the creature’s actions become more unpredictable, Victor laments, “I had turned loose into the world a depraved wretch whose delight was in carnage and misery” (Shelley 138).

This opacity has profound implications for accountability. In high-stakes domains, the inability to explain or contest an AI’s decision can leave individuals and institutions powerless. Selbst and Barocas stress that such opacity “undermines the possibility of contesting or even understanding automated decisions, leaving those affected without recourse” (Selbst and Barocas 59). Calls for explainable AI are driven by the need for transparency and justice, yet technical solutions remain elusive especially as efforts to simplify models may trade away accuracy for the sake of interpretability.

Shelley’s novel thus anticipates the hazards of innovation without oversight, portraying a creator who is ultimately unable to answer for the consequences of his work. The black box problem raises the question of what obligations creators have to ensure that powerful technologies remain transparent, accountable, and aligned with human values. Without mechanisms for understanding and control, both the scientist’s creature and the developer’s algorithm may become sources of unintended and uncontrollable harm.

2.2.3 Generative AI & Identity

Frankenstein’s act of assembling his creature from “the dissecting room and the slaughterhouse” (Shelley 54) is more than a feat of scientific bravado; it inaugurates lasting questions about identity and authorship. The creature’s quest ‘Who was I? What was I? Whence did I come? What was my destination?’ (Shelley 110) lays bare the existential tension of being formed from the remnants of others. Shelley’s narrative thus prefigures the ethical challenges of generative AI, which similarly “stitches together” fragments of human data to produce new content and synthetic identities.

Generative AI models, such as those used for text and image synthesis, are built by recombining vast stores of existing human output. Their products are never entirely original; rather, they are composites, reflecting countless acts of creative and intellectual labour. Andrejevic notes that “the data used to train generative AI systems is frequently scraped from the internet without explicit permission, appropriating the creative and intellectual labour of

countless individuals” (Andrejevic 45). As with Victor’s use of anonymous body parts, the sources of this new creation are rarely credited or compensated.

This synthetic assembly generates both opportunities and risks. Generative AI can democratise creativity and spawn new forms of culture, yet it also destabilises traditional concepts of authorship and identity. Crawford observes that “generative AI challenges the very idea of originality and authenticity”, producing outputs that are deeply entangled with the traces of millions of lives (Crawford 118). The resulting uncertainty over provenance, ownership, and legitimacy echoes the creature’s own struggle for acceptance and selfhood.

The question of recognition is particularly acute: just as the creature is denied a meaningful place in society, so too are contributors to AI training data often denied agency and control. The proliferation of synthetic media raises further concerns about privacy, misrepresentation, and the erosion of individual identity. Deepfakes and similar technologies illustrate the urgency of developing ethical and legal frameworks to address these challenges. Andrejevic warns that “the rapid expansion of automated media production threatens to outpace the regulatory and ethical systems needed to ensure that identity, consent, and recognition are respected” (Andrejevic 59).

In the end, Frankenstein’s narrative serves as an enduring meditation on the responsibilities of creation. The creature’s fate is a cautionary tale about neglecting the ethical dimensions of new forms of life and expression. The imperative for AI developers is to move beyond technical achievement, remaining vigilant stewards of the identities, rights, and stories that underpin their innovations.

2.3 The “Frankenstein Rules”: A New Ethical Framework

2.3.1 Responsibility

Responsibility anchors every element of Mary Shelley’s *Frankenstein*, emerging as the novel’s most urgent and often neglected lesson. The tragedy that befalls Victor Frankenstein is not rooted merely in his scientific ambition but in his failure to care for and guide his creation. Shelley crystallises this theme through the creature’s anguished words: “I ought to be thy Adam, but I am rather the fallen angel, whom thou drive from joy for no misdeed” (Shelley 119). In this plea, the profound harm caused by abandonment becomes unmistakable. Shelley’s narrative thus insists that creation cannot be separated from stewardship; neglecting this bond jeopardises the individual and society alike.

This imperative is strikingly relevant for artificial intelligence. As with Shelley’s Creature, today’s AI systems are shaped by the intentions and limitations of their human creators. Yet it remains tempting for developers and organisations to shift blame onto the system itself when harms arise. Bryson’s argument that “artificial intelligence is not, and should not be treated as, an autonomous moral agent” (Bryson 13) underscores the need to maintain clear human accountability ensuring that those who design, deploy, and profit from technology accept the consequences of their choices. This framework stands in direct opposition to narratives that portray AI as uncontrollable or self-directing.

Victor Frankenstein’s own avoidance of responsibility demonstrates the dangers of this mindset. His retreat from the results of his work leaves his creation and society vulnerable to harm. When algorithmic systems today cause bias or injustice, a similar abdication of responsibility cannot be justified by appeals to complexity or ignorance. McQuillan reminds us that when “algorithmic systems increasingly mediate access to employment, health, justice, and opportunity”, denying responsibility equates to denying justice (McQuillan 259). Without clear accountability, those harmed are left without recourse, echoing the creature’s own fate.

Responsibility becomes even more critical in high-stakes situations. Predictive algorithms in criminal justice, for example, can perpetuate systemic bias if no one is held to account for their operation. McQuillan warns that, in such cases, “society risks the normalisation of harm, as technological actors evade accountability behind a screen of complexity or corporate structure” (McQuillan 260). To counter this, ethical AI frameworks must position developers as “parents” to their code obligated to provide ongoing oversight, transparency, and intervention. Bryson’s assertion that “regulation should require that responsibility for AI systems is always clearly assigned” (Bryson 17) points toward a future where accountability is not optional but essential.

Frankenstein, then, resonates as a timeless warning: when creators evade responsibility, both their works and the broader community suffer. Aligning technological progress with ethical stewardship is the only way to avoid Victor’s fate.

2.3.2 Transparency Laws

Intertwined with responsibility is the necessity of transparency. Shelley’s depiction of Victor’s secretive experimentation “in a solitary chamber, or rather cell, at the top of the house, and separated from all the other apartments by a gallery and staircase” (Shelley 55) captures the risks of unchecked innovation. His isolation, shielded from critique or guidance, is a crucial

factor in the novel’s unfolding tragedy. Shelley’s story thus anticipates the pitfalls of hidden processes and the importance of collaborative scrutiny.

This call for openness is echoed in the ethical discourse around AI. Modern machine learning systems often function as “black boxes”, their workings obscure not only to the public but sometimes even to their creators. Crawford highlights that “opacity in AI systems is not just a technical issue but a social one, reinforcing power asymmetries between those who design and control algorithms and those subjected to their effects” (Crawford 193). When the logic behind AI decisions is hidden, the potential for bias, error, and injustice increases dramatically, leaving those affected without a path to challenge or understand outcomes.

Legal frameworks are beginning to respond, recognising that transparency is foundational for accountability and public trust. Pasquale’s work, *The Black Box Society*, makes the case that “algorithmic accountability is a prerequisite for democratic governance in the age of automation” (Pasquale 143). The “right to explanation”, now embedded in regulations like the EU’s GDPR, ensures that individuals have meaningful access to the reasoning behind automated decisions (Pasquale 145). This right moves society away from Victor’s “secret workshop” and towards a model in which diverse voices can participate in ethical oversight.

Transparency also involves practical steps, such as open-source software, algorithmic audits, and documentation of data provenance measures that enable independent review and correction before harm occurs. Crawford further notes that, even when technical explanation is elusive, “system-level accountability” can ensure that responsibility for outcomes is clearly assigned (Crawford 199).

The lessons from *Frankenstein* are clear: secrecy enables ethical blindness and magnifies harm. In AI, transparency laws and practices uphold justice, enable redress, and anchor technological power in a framework of shared accountability.

2.3.3 Human-in-the-Loop

The final pillar of an ethical AI framework is the necessity of keeping humans actively involved in technological processes what is now termed “human-in-the-loop” (HITL). Shelley’s narrative is a vivid illustration of the dangers that arise when creative ambition is divorced from ongoing human judgement. Victor’s single-minded pursuit of his project leads to isolation from those who might offer perspective or critique: “I seemed to have lost all soul

or sensation but for this one pursuit” (Shelley 54). The absence of dialogue, empathy, and ongoing involvement leaves the creature’s development unchecked and ultimately tragic.

HITL practices are designed to counter these risks by embedding human oversight within automated systems. Doshi-Velez and Kim emphasise that “human-in-the-loop methodologies are essential for maintaining interpretability, accountability, and ethical alignment, especially as systems are deployed in contexts where errors can have serious consequences” (Doshi-Velez and Kim 60). In practice, HITL means that, whether in healthcare, criminal justice, or finance, humans review AI outputs, intervene where necessary, and ensure that context, empathy, and moral reasoning guide decisions.

Victor’s failure to remain engaged with his creation stands as a powerful analogy: the absence of human oversight in AI can lead to unanticipated consequences and lost alignment with societal values. Shneiderman reinforces this imperative, arguing that “humans must remain in control of AI systems, not just for technical reliability but to uphold social responsibility and public trust” (Shneiderman 29). HITL is not only about fixing mistakes but also about fostering systems that remain contestable, open to appeal, and embedded in democratic values.

Moreover, maintaining human involvement builds public trust. When people see that humans remain actively responsible for technological decisions, confidence in innovation grows. Shelley’s cautionary tale shows that when oversight is lacking, alienation and fear can follow. By embedding HITL into AI governance, we ensure that our creations remain accountable to human needs and values, preventing the tragedies that unfold when autonomy is unchecked.

In sum, the ethical lessons of Frankenstein responsibility, transparency, and human judgement are as relevant to the age of AI as they were in Shelley’s own time. Only by integrating these pillars into the design, deployment, and oversight of technology can we ensure that innovation serves humanity rather than repeating the tragic cycle of invention and abandonment.

Conclusion:

The exploration undertaken in this chapter reveals that the ethical dilemmas surrounding artificial intelligence are not unprecedented, but rather echo longstanding anxieties about creation, responsibility, and the unpredictable consequences of human innovation. By reading Mary Shelley’s *Frankenstein* alongside contemporary debates in AI ethics, it becomes clear that the “monster” of the digital age is not simply the technology itself, but the human failure to anticipate, guide, and remain accountable for its development and deployment.

The analogy of the tabula rasa, as drawn from both Locke’s philosophy and Shelley’s literary imagination, illustrates that neither the creature nor modern algorithms begin life with inherent malice or virtue. Instead, they are inscribed with the values, biases, and limitations of their environments their “nurture.” This insight foregrounds the enduring importance of data quality, diversity, and fairness in machine learning, reminding us that algorithmic bias is a social and ethical problem, not merely a technical one.

Through the case studies examined facial recognition and exclusion, the black box problem, and the ethics of generative AI the chapter has shown how the failures of oversight, transparency, and stewardship can result in technologies that marginalize, misrepresent, or even harm individuals and communities. Each scenario echoes the core tragedy of Shelley’s novel: that the creator’s neglect, secrecy, or abdication of responsibility ultimately inflicts suffering not only on the creation, but on society as a whole.

The framework proposed in “The Frankenstein Rules” draws directly from the lessons of both literature and recent scholarship. Assigning clear responsibility to AI developers, enacting robust transparency laws, and ensuring human-in-the-loop oversight are not merely regulatory ideals, but ethical imperatives rooted in the recognition of technology as a human and thus moral project. These principles are essential for building trust, fostering accountability, and safeguarding against the repetition of past mistakes, whether in the laboratory, the courtroom, or the digital domain.

Ultimately, this chapter argues that *Frankenstein* is not simply a cautionary tale about scientific hubris, but a call to responsible innovation. The monsters we create, be they flesh or code, reflect the best and worst of ourselves. Our challenge is not to halt progress, but to ensure that progress is accompanied by humility, vigilance, and an unwavering commitment to the public good. As we stand at the threshold of ever more powerful AI systems, the lessons of

Shelley’s narrative offer both a warning and a guide: we must not turn away from our creations, but remain their stewards engaged, accountable, and human.

Conclusion

Conclusion

This research has attempted to shed light on how Mary Shelley's *Frankenstein* is a myth for understanding ethical, social, and philosophical dilemmas that arise when humanity is on the verge of technological transformation. What began in Shelley's hands as a gothic tale grounded in the anxieties of the early nineteenth century has grown, through successive readings and reinterpretations, into a multi-layered parable for every era of invention and disruption. This study has demonstrated that the novel's historical context and its ongoing relevance to contemporary questions of artificial intelligence and digital ethics show that the challenges of creation, control, and responsibility are not mere vestiges of the past but rather timeless challenges that all societies face in negotiating the promises and perils of progress. The main interest of this reading is that *Frankenstein* is not merely a tale of scientific hubris or monstrous birth but a reflection on the nature of bringing something new into the world and of being responsible for its destiny. Shelley's Victor Frankenstein is an archetype whose ambition is representative of the rationalism of the Enlightenment but tragically flawed by his inability to foresee or control the consequences of his actions. The mechanisation and alienation of the Industrial Revolution, which was discussed in Chapter One, gave Shelley the raw material to interrogate the price of divorcing creativity from compassion and innovation from ethical stewardship. Victor's tragedy lies not only in his audacity to cross the boundaries between life and death, but also in his failure to embrace the ongoing moral responsibilities that his experiment imposed on him. His flight from his creation and, symbolically, from the duties of parenthood and community is a warning against the perils of innovation pursued in secrecy and isolation.

The continued relevance of these themes becomes particularly acute when read through the lens of the digital age. Chapter Two shows that the "monster" in *Frankenstein* is not evil but a product of his environment, shaped by his creator's neglect and the world's prejudices. This insight has obvious parallels in the development and deployment of modern artificial intelligence. Today's algorithms, like Shelley's creature, are not built with intent but trained, shaped, and ultimately judged by the data and frameworks their human designers feed them. The tabula rasa thus finds new life in the digital age, underscoring the deep responsibility of those who curate the "education" of algorithms through data selection, design choices, and oversight protocols.

The case studies presented, from algorithmic bias in facial recognition and exclusion to the opacity of black box AI systems to the ethical complexities raised by generative models,

reinforce the argument that technological artefacts are rarely, if ever, neutral. They serve as mirrors and magnifiers of the values, assumptions, and blind spots of their creators and the societies that produce them. When these technologies cause harm, whether through misrecognition, exclusion, or lack of recourse, it is not the tools themselves that bear the blame. Instead, as in Shelley's novel, the blame falls on those who do not guide, oversee and remain responsible for their innovations. The digital "monsters" of the twenty-first century are not autonomous agents, but rather the embodiment of the ethical and social paradigms however implicit or unexamined of their makers.

In tracing these parallels, a modern conceptual analogy emerges: the ghost is the code. Much like the unseen spark of life that animated Victor's creature, the "ghost" represents the unpredictable, emergent behaviours arising within complex computational systems the unintended consciousness born from lines of programming. This digital spectre haunts modern engineering, reminding us that advanced systems often operate within a black box that defies total human comprehension.

This dissertation has called for the urgent need to translate the lessons of Frankenstein into practical ethical guidelines for the digital age. To this end, the concept of the "Frankenstein Rules" was developed, promoting the three interlocking pillars of responsibility, transparency, and human-in-the-loop oversight. The first and foremost responsibility is the continuous stewardship that AI developers, corporations and institutions must exercise for the systems they build. As with parents, they must not only anticipate and prevent harm, but also step in when their offspring behave erratically or unfairly. The stakes involved heighten, not lessen, this responsibility, regardless of the technology's complexity or autonomy.

The second pillar is transparency, an echo of Shelley's critique of secrecy and isolation. Victor Frankenstein's tragedy lay in part in his refusal to share his process, to seek counsel, or to subject his work to collective scrutiny. In the AI context, this principle means that systems must be built to be as open and explainable as possible so that they can be independently audited, subject to public oversight, and have clear means for contesting decisions. Technical opacity may be an intrinsic feature of certain advanced models where the "ghost in the code" obscures accountability but that does not relieve developers of the obligation to provide meaningful paths to explanation and accountability. Laws and regulations on algorithmic transparency are not merely procedural hurdles; they are preconditions for the continued existence of justice and the preservation of public trust.

The third pillar of this ethical framework is the vital importance of human-in-the-loop oversight. Just as Victor's abandonment of his creation led to disastrous consequences, the

relinquishing of human agency and judgement in AI risks unleashing harms that are difficult to predict or contain. It is crucial to include human oversight, ethical thinking, and the ability to step in at key moments in automated systems to make sure that technological progress aligns with important social values and ethical standards. This is particularly critical in high-stakes domains like criminal justice, healthcare, and public safety, where the consequences of error or bias can be catastrophic and wide-ranging.

In addition to these practical recommendations, this dissertation has also reflected on the deeper philosophical and cultural significance of Shelley's text. Part of the endurance of *Frankenstein* is its resistance to closure. It does not offer easy answers but rather emphasises the necessity of humility, dialogue, and constant ethical engagement in the face of uncertainty. The monsters we create whether biological, mechanical, or digital are the personification of our greatest hopes and our greatest fears. They are mirrors, reflecting the best and the worst of the societies they come from. The key question of every era of innovation is whether we will care for them or leave them to chance.

In synthesising the arguments and findings of this study, it becomes apparent that progress without conscience is peril. Our inventions will be judged by their novelty or utility, but more so by our willingness to be their stewards, accountable not only to the inventions themselves but also to the communities and worlds they inevitably touch. *Frankenstein* is not only a cautionary tale about the perils of ambition but also a blueprint for constructing a more just, compassionate and sustainable technological future. Gazing toward the horizon, the implications of this dissertation extend beyond the literary or theoretical. As artificial intelligence and other emerging technologies become increasingly interwoven into the fabric of daily life, the ethical frameworks we construct today will shape the contours of possibility for generations to come. The "Frankenstein Rules" presented here are not comprehensive or definitive but rather an invitation to ongoing reflection, adaptation, and collective responsibility. Shelley's greatest legacy may be her reminder that creation is always a moral act and that the future will be shaped not just by what we build but also by how steadfastly we care for it.

As we look to that uncertain horizon where the line between creator and creation blurs, we are forced to confront the ultimate existential anxiety of our age: as artificial intelligence continues to evolve beyond our control, is it destined to become the instrument that will ultimately kill humanity?

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