



The “Frankenstein Effect” and Modern Intelligence: Technology, Ethics, and the Loss of Moral Proximity

Anil Kumar Parhi

Reader in English, Kunja Bihari College, Barang, Odisha, India

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Abstract— This paper explores the relationship between *Frankenstein* by Mary Shelley and *Permanent Record* by Edward Snowden, focusing on what Snowden calls the “Frankenstein effect”, the unintended and often harmful consequences of technological innovation. By bringing together Shelley’s early warning about the dangers of unchecked scientific ambition and Snowden’s account of modern surveillance systems, the paper argues that today’s intelligence structures repeat the same ethical failures: they create systems without taking responsibility for them, operate at a distance that weakens empathy, and exercise power without sufficient accountability. It further suggests that the shift from human intelligence (HUMINT), which involves direct human interaction, to signals intelligence (SIGINT), which relies on remote data collection, does not mark ethical progress. Instead, it expands forms of power that are increasingly detached from moral responsibility. Ultimately, the paper argues that as technology creates greater distance between action and consequence, it erodes what can be understood as “moral proximity,” making ethical judgment more difficult in the digital age.



Keywords— *Frankenstein Effect; Surveillance Technology; Moral Proximity; Intelligence Ethics*

Introduction: Creation and Responsibility across Centuries

The enduring relevance of *Frankenstein* lies not merely in its gothic imagination but in its profound philosophical inquiry into the ethics of creation. Shelley’s novel, often read as an early work of science fiction, anticipates modern anxieties about technological innovation by dramatizing a fundamental moral failure: the severance of creation from responsibility. Victor Frankenstein’s transgression is not simply that he creates life, but that he refuses to assume responsibility for what he has brought into existence. As he confesses, “Unable to endure the aspect of the being I had created, I rushed out of the room, and continued a long time traversing my bedchamber, unable to compose my mind to sleep.” (Shelley 87).

This moment of abandonment establishes a moral paradigm in which innovation is divorced from accountability, setting into motion consequences that spiral beyond the creator’s control.

The creature’s subsequent violence is thus not an inherent attribute but a product of neglect, isolation, and the denial of relational recognition. Shelley’s narrative resists simplistic binaries of creator and monster, instead presenting monstrosity as an emergent condition produced by ethical failure. The novel’s central insight, that creation demands sustained moral engagement, resonates powerfully in contemporary contexts, particularly in relation to technological systems that operate at scales unimaginable in Shelley’s time.

While Edward Snowden invokes the “Frankenstein effect” as a descriptive metaphor for unintended consequences, this paper seeks to extend his insight by developing it into a sustained ethical framework, placing *Frankenstein* and *Permanent Record* in a more rigorous conceptual dialogue. In doing so, it introduces the idea of “moral proximity” as a critical tool for understanding how technological systems reshape ethical responsibility in the digital age.

The concept of “moral proximity,” widely discussed in ethical philosophy to describe the relationship between

distance and responsibility, provides a useful framework for interpreting Snowden's observations on technologically mediated action.

Frankenstein: Creation Without Responsibility and the Loss of Moral Proximity

Mary Shelley's *Frankenstein* narrates the story of Victor Frankenstein, a scientist driven by an obsessive desire to transcend the limits of human knowledge by creating life. His success, however, is immediately followed by revulsion and abandonment. Upon animating the creature, Victor confesses, "the beauty of the dream vanished, and breathless horror and disgust filled my heart" (Shelley 87). This moment establishes the central ethical rupture of the novel: the creator's refusal to assume responsibility for his creation.

Deprived of guidance, companionship, and recognition, the creature is forced to navigate the world alone. His initial disposition is not violent but benevolent, as he later reflects:

Remember, that I am thy creature; I ought to be thy Adam, but I am rather the fallen angel, whom thou drivest from joy for no misdeed. Everywhere I see bliss, from which I alone am irrevocably excluded. I was benevolent and good; misery made me a fiend. Make me happy, and I shall again be virtuous. (Shelley 127)

Shelley thus rejects the notion of inherent monstrosity, instead presenting violence as the consequence of social exclusion and emotional neglect. The creature's suffering is intensified by Victor's continued refusal to acknowledge him, a failure that culminates in tragic acts of revenge.

Central to this narrative is the erosion of **moral proximity**. Victor's inability to remain in relation to his creation, to see, hear, and respond to it as a sentient being, results in a profound ethical failure. Even when he recognizes his responsibility, admitting, "I, not in deed, but in effect, was the true murderer" (Shelley 121), he remains incapable of acting upon this awareness. His retreat into silence and self-preservation allows suffering to proliferate unchecked.

Ultimately, *Frankenstein* is not merely a cautionary tale about scientific ambition, but a philosophical exploration of the responsibilities inherent in creation. Shelley demonstrates that innovation, when severed from sustained ethical engagement, produces outcomes that exceed intention and control, a dynamic that resonates strongly with contemporary technological systems.

Frankenstein: Creation Without Responsibility and the Loss of Moral Proximity

Frankenstein recounts the story of Victor Frankenstein, a young scientist consumed by the ambition to surpass human limits and unlock the secret of life. His experiment

succeeds, but the moment of creation is followed not by triumph, but by an immediate impulse to withdraw. Unable to confront what he has made, Victor abandons the creature, initiating a cycle of isolation and suffering that shapes the course of the narrative. This act of desertion constitutes the novel's central ethical failure: the severing of responsibility from creation.

Left to fend for himself, the creature enters the world as an innocent being, gradually learning language, social customs, and human emotion through observation. He seeks connection and compassion, but is repeatedly met with fear and rejection. His longing for companionship becomes explicit when he appeals to Victor: "I am malicious because I am miserable. Am I not shunned and hated by all mankind?" (Shelley 167). This plea underscores the novel's rejection of inherent monstrosity, instead presenting violence as the consequence of sustained social exclusion.

Victor's continued refusal to acknowledge or care for his creation deepens this rupture. Even when confronted with the creature's suffering, he prioritizes his own fear and reputation over ethical responsibility. The creature's turn toward vengeance is thus not an origin point, but an outcome, an expression of accumulated neglect. As he warns Victor, "I will be with you on your wedding-night" (Shelley 189), the narrative moves toward its tragic resolution, where personal failure expands into irreversible loss.

At its core, Shelley's novel offers not merely a critique of scientific ambition, but a sustained meditation on the responsibilities that accompany creation. It reveals that when innovation is divorced from ethical engagement, its consequences do not remain contained but unfold unpredictably, often beyond the creator's control, a dynamic that continues to resonate in modern technological contexts.

The "Frankenstein Effect" in Modern Intelligence

In *Permanent Record*, Snowden introduces the concept of the "Frankenstein effect" to describe "situations in which policy decisions intended to advance American interests end up harming them irreparably" (Snowden 130). While the term originates within intelligence communities as a descriptor of geopolitical "blowback," Snowden expands its scope to encompass the technological infrastructures underlying contemporary surveillance.

This expansion is crucial. Snowden moves from historical examples, such as U.S. support for anti-Soviet fighters contributing to later extremist movements, to a broader critique of systemic patterns in technological development. These examples demonstrate how actions taken within a specific strategic context can generate unintended consequences that persist and mutate over time. By

invoking the "Frankenstein effect," Snowden implicitly aligns these outcomes with Shelley's narrative of creation escaping control.

In the "Geneva" chapter, Snowden traces a progression from geopolitical miscalculation to technological overreach. He frames the "Frankenstein effect" as a structural tendency rather than an isolated anomaly. Having established the pattern through historical illustration, he extends it to the digital domain, arguing that efforts to "restructure the world's communications" (Snowden 131) have produced systems that operate beyond the ethical oversight of their creators. Surveillance technologies, once developed, acquire a momentum that resists containment, much like Frankenstein's creature.

This analogy is not merely rhetorical. Both Shelley and Snowden depict systems that exceed the intentions of their creators, revealing a fundamental limitation in human capacity to anticipate the consequences of innovation. The "Frankenstein effect" thus emerges as a recurring feature of technological systems embedded within structures of power.

From HUMINT to SIGINT: The Ethics of Distance

One of the most significant transformations in modern intelligence is the shift from human intelligence (HUMINT) to signals intelligence (SIGINT). This transition represents not only a change in methodology but a profound reconfiguration of ethical engagement.

HUMINT, grounded in direct interpersonal interaction, necessitates a degree of emotional and moral involvement. Snowden's recollection of a failed recruitment operation involving a Saudi banker illustrates this complexity. Reflecting on the encounter, he writes, "I found the whole experience unforgettably visceral and sad" (Snowden 136). The language here is telling: "visceral" suggests an embodied experience, one that resists abstraction. The operation involves manipulation and coercion, but it also imposes an emotional burden on the agent, who must confront the human consequences of his actions.

This moral immediacy, however uncomfortable, enforces a form of ethical accountability. The presence of another human being, visible, responsive, and vulnerable, creates a relational context in which actions cannot be entirely detached from their consequences.

SIGINT, by contrast, replaces these encounters with technologically mediated processes. Surveillance is conducted remotely, often through automated systems that collect, process, and analyze vast quantities of data. As Edward Snowden explains in *Permanent Record*, an agent can gain access to a target's system simply by delivering malicious code, often through something as routine as an

email. This shift dramatically increases efficiency and scale, but it also introduces a profound ethical distancing, as the subject of surveillance is no longer encountered as a person but accessed as a system.

The target is no longer encountered as a person but as a data point within a system. This transformation aligns closely with Victor Frankenstein's reaction to his creation: an inability to sustain proximity to what has been brought into being. Where Victor recoils from the physical presence of the creature, modern intelligence systems render their subjects invisible, eliminating the possibility of relational engagement altogether.

Moral Proximity and Ethical Judgment

The concept of "moral proximity" is central to understanding the ethical implications of this shift. Moral proximity refers to the degree of closeness, physical, emotional, or cognitive, between an agent and the subject of their actions. In *Frankenstein*, the absence of such proximity is catastrophic. The creature's suffering is intensified by his exclusion from human society, a condition that denies him recognition and empathy.

In modern surveillance systems, however, moral proximity is systematically eroded. Individuals are reduced to data points, their identities fragmented into metadata and algorithmic profiles. This abstraction facilitates decision-making processes that prioritize efficiency over ethical reflection. When the subject of action is no longer perceived as fully human, the moral weight of that action diminishes.

This phenomenon aligns with broader philosophical concerns about the relationship between distance and responsibility. The greater the distance between action and consequence, the easier it becomes to disengage ethically. In this sense, SIGINT does not merely transform intelligence practices; it reconfigures the moral landscape in which those practices operate.

The Paradox of Control: Technology Beyond Intention

A central theme shared by Shelley and Snowden is the paradox of control. Both texts reveal the limits of human capacity to govern the systems they create. Victor Frankenstein himself articulates this insight when he warns,

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 83)

This statement reflects a recognition that knowledge, once applied, can produce consequences that exceed intention.

Snowden also engages with the paradoxical nature of anonymity-enhancing technologies such as The Onion Router (Tor). Tor is a privacy network designed to conceal a user’s identity by routing internet traffic through multiple encrypted layers of relay servers, thereby preventing any single point in the system from simultaneously knowing both the origin and destination of communication. Originally developed with support from the United States Naval Research Laboratory for secure governmental and intelligence communication, Tor was intended to protect sensitive digital exchanges and strengthen operational security. However, Snowden observes that its subsequent public release and widespread adoption transformed it into a dual-use technology that serves both protective and adversarial purposes. While it enables journalists, activists, and ordinary users to evade surveillance and censorship, it also allows malicious actors and intelligence agencies alike to conceal their digital traces, thereby complicating cyberintelligence operations. This inversion illustrates a central tension in modern technological systems: tools designed to enhance security and control often generate new forms of opacity that exceed the intentions of their creators, reinforcing the broader “Frankenstein effect” of unintended systemic consequences.

This dual-use nature of technology underscores the unpredictability of innovation. Systems designed for specific purposes often acquire new functions as they interact with broader social and technological environments. The creator cannot fully determine the trajectory of the creation, a limitation that lies at the heart of the “Frankenstein effect.”

Power, Systems, and Diffused Responsibility

The ethical implications of technological systems cannot be understood in isolation from the structures of power in which they are embedded. Snowden situates his narrative within the context of the global financial crisis, highlighting the disparity between widespread economic hardship and the continued prosperity of global elites. Reflecting on his time in Geneva, he observes:

As the rest of the world became more and more impoverished, Geneva flourished, and while the Swiss banks didn’t engage in many of the types of risky trades that caused the crash, they gladly hid the money of those who’d profited from the pain and were never held accountable. (Snowden 140)

This observation underscores the extent to which technological and financial systems operate within a global order characterized by unequal distributions of power and accountability. Surveillance infrastructures, like financial systems, are not neutral tools; they are shaped by and reinforce existing hierarchies.

In *Frankenstein*, Victor’s social privilege enables him to evade responsibility for his actions. Although he is fully aware of the destructive consequences of his experiment, he repeatedly retreats into the protective structures of family, education, and social status that shield him from immediate accountability. His own admission

“I considered the being whom I had cast among mankind, and endowed with the will and power to effect purposes of horror, such as the deed which he had now done, nearly in the light of my own vampire, my own spirit let loose from the grave, and forced to destroy all that was dear to me.” (Shelley 30)

reveals not only his recognition of responsibility but also his refusal to publicly acknowledge it. Instead of confessing, Victor remains silent, allowing others to suffer for crimes he has indirectly caused, most notably during the trial of Justine, where he admits, “I, not in deed, but in effect, was the true murderer” (Shelley 121). Yet even this moment of self-awareness does not translate into action, underscoring how his privileged position allows him to internalize guilt without facing external consequences.

Similarly, as Edward Snowden demonstrates in *Permanent Record*, modern intelligence systems diffuse responsibility across complex bureaucratic networks, rendering accountability increasingly opaque. Decisions are made collectively and often anonymously, making it difficult to assign moral blame even when harm is evident. Snowden describes how responsibility within such systems is often distributed in a way that obscures individual accountability (Snowden 30). This diffusion mirrors Victor’s evasion of responsibility, but on a vastly larger scale: where Victor hides behind social privilege, modern institutions conceal agency within layers of bureaucracy and technological mediation. The result in both cases is a moral vacuum in which harm persists without clear accountability.

Reframing the “Monster”: Systems, Not Individuals

One of the most important implications of this analysis is a shift in how we conceptualize the “monster.” In *Frankenstein*, the creature is initially perceived as the embodiment of monstrosity, primarily through Victor’s horrified gaze at the moment of animation: “the beauty of the dream vanished, and breathless horror and disgust filled my heart” (Shelley 87). However, as the narrative unfolds, this perception is steadily destabilized. The creature himself challenges this imposed identity, asserting, “I ought to be thy Adam; but I am rather the fallen angel” (Shelley 30), thereby reframing himself not as inherently monstrous but as a being rendered so through rejection and abandonment. It becomes increasingly clear that the true source of horror

lies not in the creature’s existence, but in Victor’s failure to assume responsibility for his creation.

In the context of modern intelligence, the “monster” is no longer a singular entity but a vast, interconnected system. Surveillance infrastructures operate on a scale that transcends individual agency, making it difficult to identify a single point of origin or control. Snowden argues that contemporary surveillance systems extend beyond counterterrorism objectives and function as tools of broad intelligence gathering, including political, economic, and diplomatic analysis (Snowden 218). The “Frankenstein effect” thus invites us to reconsider the locus of ethical concern: not the individual user or operator, but the system as a whole, whose operations exceed the intentions and awareness of any single participant.

This shift has significant implications for ethical analysis. Traditional frameworks that focus on individual responsibility may be insufficient to address the complexities of technologically mediated systems. Shelley anticipates this problem through Victor’s fragmented accountability, while Snowden articulates its modern form by noting how surveillance operates through distributed mechanisms where no single person feels responsible for the totality of the system. Instead, there is a need for systemic approaches that consider how power, design, and institutional structures shape ethical outcomes, recognizing that in such environments, responsibility is not absent but diffused across networks that resist moral clarity.

CONCLUSION

The comparison between *Frankenstein* and *Permanent Record* reveals a persistent and evolving ethical dilemma: the human capacity to create systems that exceed both our control and our moral comprehension. Shelley’s novel warns against the dangers of scientific ambition untempered by ethical responsibility, while Snowden’s memoir demonstrates how these dangers have been amplified in the digital age.

The “Frankenstein effect” serves as a powerful conceptual bridge between nineteenth-century literary imagination and twenty-first-century technological reality. Both Shelley and Snowden illuminate the consequences of creation divorced from responsibility, highlighting the ways in which distance, whether physical or digital, can erode moral judgment.

In an era defined by rapid technological advancement, their insights underscore the urgent need to reintroduce ethical reflection into the processes of innovation and governance. Without such reflection, the systems we create may continue to evolve beyond our control, replicating, on a

global scale, the tragedy first imagined in Victor Frankenstein’s laboratory.

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