A Modern Fable
The influence of science on Mary Shelley's Frankenstein
and subsequent retellings

An Honors Thesis (HONRS 499)

by

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Thesis Abstract

This Honors thesis explores the science that influenced Mary Shelley's *Frankenstein* and later theatrical productions based on the novel, including Universal Studios' 1931 *Frankenstein* and 1935 *The Bride of Frankenstein*, as well as TriStar Pictures' 1994 *Mary Shelley's Frankenstein*. It is concluded that Mary Shelley's tale, though it begun as a Gothic tale of creation and destruction, has become a fable for the modern age through its seemingly endless applications to new scientific discoveries and their effects on society. It traces major findings during the Scientific Revolution of 1600 to 1750 in the pertinent fields of anatomy, physiology, and the study of a new discovery, electricity. It also notes scientific discoveries and practices in the years before Shelley's writing of the novel. It then surveys the theories of biological determinism and degenerationism at the turn of the 20th century, as well as eugenics in the 1920s and 1930s, and examines how these theories influenced the making of the 1931 Universal Studios film. The 1935 film is examined for its echoes of society's continuing fascination with science and technology despite their potential for danger and destruction. Finally, there is a look at the 1994 film, and how its return to the novel as its source (as opposed to springing out of another film or simply being the product of the screenwriter's imagination) is particularly remarkable in this present age of seemingly daily new discoveries in the fields of medicine and genetics.
Mary Shelley's *Frankenstein* is one of the most well-known stories of all time. What started out as a manuscript refused by publishers has, in one form or another, found its way into many facets of popular culture. Hollywood has played the story out on the big screen several times, and the monster has become one of the most recognizable horror-film characters of all time. Costumes fashioned in his image have even become a popular choice at Halloween. His form and all it can stand for -- from well-intentioned but misguided or misinformed creation, to rebellion of the disadvantaged, to vengeful destruction -- has been employed in various political cartoons throughout the years. He can even be found, in a friendly pink, on cereal boxes -- complete with a new name: Frankenberry. The original story has been retold countless times in virtually every medium, and the very word "Frankenstein" brings to mind the unnatural, the uncontrollable, the undeniable consequences of any number of actions.

Why are we so fascinated with this story? Why does it hold so much meaning for us? Is it more than just a Gothic horror story? Simply, yes. We identify with Victor (and his many counterparts). We know the pain of helplessness, the longing to keep our loved ones from death. We feel his horror when he realizes the mistake he has made, and we understand his guilt and shame for the chaos his creation causes. We instinctively know the fear the monster instills. Yet we also know his sorrow and his longing to be loved, to belong somewhere.
But beyond our shared feelings, the story of Frankenstein and his monster means even more. It is the tale of science and society. It explores the hopes that science offers and the dangers that lurk in our dreams of conquering death and disease. Mary Shelley's Frankenstein has become for us a fable for modern times, inexhaustibly applicable to new theories, new discoveries, and new dangers.

An Enduring Nightmare

By Mary Shelley's own account, her enduring tale grew out of a nightmare vision. The famous story of the novel's origin was first told by Mary in the introduction she wrote for the 1831 edition of the novel. Percy and Mary Shelley, Lord Byron, Mary's stepsister Claire Clairmont, and Byron's physician John William Polidori, so the story goes, were spending a wet summer in the Swiss Alps. One evening, Byron suggested they should each write a "ghost story." Mary’s inspiration came to her in a "waking dream" of a monstrous creature and his tortured creator. The novel, she reported, is merely a "transcript" of her vision (Shelley 196-199).

The haunting tale, however, has not the transience of a nightmare. Indeed, it has captured the imaginations of many generations. It has refused, say George Levine and U.C. Knoepflmacher,
either to "dissipate ... into mere escapist excitement or to harden into clear and rational meaning..." (xiii). In this refusal it has established itself as a modern fable. "When all is said," H.J. Blackham explains, a fable remains "as though nothing had been said" (223). The image left behind, he contends, cannot be replaced by a simple meaning. "Its message can never be, Think this; always Think about this."

This inexhaustible quality, Levine and Knoepflmacher say, places the novel "in a prophetic tradition open only, one would have thought, to mature literary imaginations..." (xiii), certainly not to a 19-year-old. Some have even voiced suspicions -- prompted in part by the fact that the introduction to the 1818 edition was written not by Mary, but by Percy Shelley -- that he, not Mary, was the primary author. The idea that Mary Shelley wrote such an enduring novel, however, is not quite so infeasible as it may at first appear. Mary had quite a background, as Levine and Knoepflmacher note. In her consciousness were the philosophies of her father, William Godwin -- his utopian theories of the the regeneration of humanity (Sterrenburg 144), his political philosophies that held that social institutions were restraining and merely maintained arbitrary inequality and that anarchy would usher in a new age where death and disease would be banished and overpopulation would be conquered (Sterrenburg 149-150. 158), and his educational theories that endorsed mind over matter, that held that all individuals ought to be left to the progress of their own mind and should be free of coercion of any sort (Knoepflmacher 118-119). Her mind also echoed with ideas gleaned from the writings of her dead mother, Mary Wollstonecraft -- such
as her rebellious writings in "Duty to Parents," from *A Vindication of the Rights of Woman*, in which she encourages disobedience of tyrannical fathers (such as Godwin), saying that blind obedience is weakness (Knoepflmacher 90), and her writings on the French Revolution, in which she heralds the radicals (Sterrenburg 162). Mary Shelley's intellect was filled with science she learned from Percy Shelley and with the world views of the radicals Shelley and Byron. Her moral outlook was formed in this same sphere (Levine and Knoepflmacher xiii). And from that mind so crowded with extraordinary ideas sprang a tale that has lingered in the minds of many for nearly two centuries.

Mary Shelley could never have imagined the long life her tale would have. She most likely did not sit down with the intent of writing a fable for future generations. Surely anyone would be daunted by such a purpose. But though it may not have begun as such, it has assumed that role, and with each new application that role is reinforced. For such general application beyond a story's original purpose is characteristic of a fable, Blackham says (xiv). Fable, he says, is defined by a paradox: a particular action with general applications, a scenario that "is seen to transcend historic time and place to represent what is" (179).

But how did a Gothic horror story become so transcendent, so ingrained in the modern mind? Mary Shelley contended in her introduction to the 1831 edition of the novel that she saw it as nothing more than a "tiresome unlucky ghost story" (Shelley 199). Yet over and over the tale has intrigued new generations. The key to understanding *Frankenstein's* life as a fable is comparing
Mary Shelley's world with the worlds reflected in various reincarnations of the story. The factor that seems to emerge time and again is science.

**In the Midst of Marvels**

Mary Shelley lived in a world of exciting new scientific discoveries, of rapidly expanding knowledge of the workings of the world and the creatures in it. Successive generations have easily identified with such a world because, since Mary Shelley's time, scientific discoveries have been made with increasing frequency -- and have continued to affect people's lives in ways with which they are often not entirely comfortable.

The explosion of scientific knowledge that so intrigued people like Byron and the Shelles had its beginnings in the later days of the Renaissance. Gloria K. Fierro places the beginning of the Scientific Revolution about 1600, and extends it to 1750 (3: 42). During this time extraordinary leaps were being made in various scientific fields, most notably, in regards to Frankenstein, in the fields of anatomy and physiology, as well as the study of a new discovery, electricity.

Long before the Scientific Revolution, around 1500, Leonardo da Vinci made detailed, amazingly accurate drawings of the bones and muscles of men, animals and birds (Shepherd 51). However, his notebooks were not published until 1898, and his contemporaries were largely
unaware of his scientific insights (Fiero 3: 52). The first great advance in anatomy came in 1543, when the Flemish physician Andreas Vesalius published his De humani corporis fabrica, an illustrated treatise on anatomy that he produced by dissecting cadavers to obtain an accurate understanding of the workings of the human body (Fiero 4: 42; Shepherd 48).

The beginning of modern physiology came in 1628 when William Harvey published his Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus, in which he correctly traced the path of the blood throughout the body and through the heart (Shepherd 53). Notable strides in physiology in the 18th and early 19th centuries include Spallanzani’s studies of digestion in 1776 and respiration in 1790, and Sir Charles Bell’s work on the nervous system in 1811 (Shepherd 62, 64, 67).

Technology was also aiding scientific discovery. In 1610 Johannes Kepler perfected the compound microscope (Fiero 4: 42). The first drawings made by the use of a compound microscope were published in 1625 (Shepherd 53), and in 1655 Robert Hooke published the first important book about microscope work, Micrographia (Shepherd 54).

The year that Fiero cites as the approximate beginning of the Scientific Revolution, 1600, was also, according to Walter Shepherd, the beginning of the Modern Period in scientific thought (Fiero 4: 42; Shepherd 51). It also marked the public debut of a new force in science — electricity. The very word, in fact, was born that year, coined by William Gilbert to describe the property that amber and other substances take on when they are rubbed — the ability to attract light objects, or
what we commonly call static electricity. He derived the term from the Greek word for amber, "elektron" (Shepherd 51). In the same year, Gilbert published De Magnete, a summary of knowledge of electricity and magnetism. In 1729 Stephen Gray and Granvil Wheeler discovered electric current, and Gray published lists of conductors. At around the same time he expressed his opinion that lightning is an electric spark (Shepherd 59). Benjamin Franklin, probably the most well known of all those who took an interest in electrical experiments, published his Experiments and Observations on Electricity carried out at Philadelphia in 1751. The next year he proved the hypothesis that lightning was an electric spark by way of his famous kite experiment (Shepherd 60).

On the heels of such an explosion of scientific knowledge, scientists and physicians of Mary Shelley’s time must have felt, much as we do today, that anything was within reach, perhaps even control over death. In 1780, the Italian physician Luigi Galvani observed the violent twitching of the leg of a dissected frog when one of his assistants touched a nerve with his scalpel while another assistant was producing sparks from an electrostatic machine nearby. Galvani reported this experience, along with similar experiments and his theory of animal electricity, in his De viribus electricitatis in motu musculari in 1791 (Shepherd 64). Knowledge of animal electricity -- the electrical basis of nerve impulses in animals -- is still an important part of neurophysiology today, but in the era out of which Frankenstein was born, the word galvanism implied the release, through electricity, of mysterious life forces. "Perhaps," Mary Shelley recalled of her talks with Byron and
Percy Shelley, "a corpse would be reanimated; galvanism had given token of such things" (Shelley 198).

Physicians of the time also explored the line between life and death, attempting to resuscitate drowning victims through various methods and to restore life to the recently dead by means of electricity. When Percy Shelley's first wife, Harriet, drowned in London in 1816, rescuers took her body to a receiving station where "smelling salts, vigorous shaking, electricity and artificial respiration with resuscitation bellows had been used since the 1760s to restore drowning victims to life" (Frankenstein: An exhibition). When these measures were successful in reviving some drowning victims, it was as if they had died and been brought back to life. All attempts were unsuccessful with Harriet, however.

By the time Mary and Percy Shelley were married after Harriet's death in December 1816, Mary had already borne Percy two children. However, her baby daughter, born in February 1815, died less than two weeks later. In her journal, Mary wrote in March 1815 that she had dreamed of the baby being held before a fire, rubbed vigorously and restored to life (Scott xviii). Mary seems to have been haunted by the risk of death that comes with birth -- something she had known from the very beginning of her life, when her own mother died from a retained placenta eleven days after the difficult birth (Knoepflmacher 92).

Thus while Mary Shelley's novel came out of a world imbued with ever-increasing scientific knowledge, it was also shaped by her own experiences with life and death. It was further
influenced by her education and her reading, and reflected a culmination of ideas she absorbed from her mother's writings, her father's social and political theories and Percy Shelley. It was the product of a summer spent listening to Shelley, Byron and Polidori discuss the new sciences of electricity and galvanism (Moers 82). And though Victor Frankenstein's quest for power over life and death produced nothing but tragedy, he refused -- perhaps Mary Shelley refused -- to deny the validity of his undertaking, voicing to Walton the hope that perhaps another may succeed where he failed. Thus in the novel the reader is not given an easy answer. The story does not "yield a moral principle," but rather, as Blackham says all fables do, "it serves its purpose by exposure to thought" (101). And as generations have faced new discoveries and new technologies -- and the crises such knowledge often produces -- they have repeatedly turned to this story of science and society for help in coping with their world.

A Classic in the Making

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It took only a few years for Mary Shelley's "ghost story" to catch the public imagination. According to Donald Glut, the text's dramatic possibilities were recognized soon after the first printing of the novel in 1818. Ideas for staging the story were abandoned, according to Glut, because the assumed author, Percy Shelley, was too controversial (28). But by the time of Percy
Shelley's death in 1822, Mary Shelley was already widely acknowledged as the author (Glut 28). And in the year after his death (and just five years after the first printing of the novel), the story appeared on stage in at least five different versions, including a production at the English Opera House entitled "Presumption; or, The Fate of Frankenstein." The play was inspired by the novel but departed from it freely, simplifying the settings and modifying the storyline (Glut 28). Mary Shelley herself attended a performance of the play and later commented:

But lo and behold! I found myself famous. 'Frankenstein' had prodigious success as a drama, and was about to be repeated, for the twenty-third night, at the English Opera House . . . . The story is not well managed but [T.P.] Cooke played [the monster's] part extremely well . . . . I was much amused and it appeared to excite a breathless eagerness in the audience. (qtd. in Glut 32)

Thus began more than a century of retellings.

Frankenstein Meets the World

In 1931, after nearly a dozen major stage productions (serious retellings as well as burlesques and farces), and three silent films, including Thomas Edison's version of 1910,
Hollywood reintroduced Frankenstein and his creation to the world. The Universal Studios movie almost instantly became a classic of an infant genre -- the horror movie -- and Boris Karloff, a widely unknown though experienced stage actor, gained star status with his portrayal of Frankenstein's monster (Frankenstein: An exhibition). The movie, based on Peggy Webling's 1937 theatrical adaptation of the novel, earned rave reviews, was named to top-ten lists, and earned more than $12 million in Depression-era dollars (Frankenstein: An exhibition; Glut 119-120).

Universal's version of the story inarguably departs from the original novel. Some of the changes, such as Frankenstein's name switching from Victor to Henry, originated in Webling's drama (Glut 42). Much of her original script was retained or modified little by Universal in the making of the movie, including the scene not found in (but not out of character with) the novel in which the creature meets a young girl by a river and inadvertently drowns her (Glut 45).

Perhaps the most obvious aberration from the novel is the characterization of the creature. Instead of Mary Shelley's intelligent, sensitive, articulate creature, Universal's executives decided that the creature in their film would not speak. His only verbal communications would be a few animal-like growls and groans. This was not a new concept, for even in the very first dramatization of the story, the English Opera House production mentioned above, the creature had been without the ability to speak. The Demon, as the creature had been called in "Presumption; or, The Fate of Frankenstein," could only grunt, leading to misunderstanding and hatred despite his attempts to act kindly (Glut 31).
The executives' decision in mid-1931, however, marked a major change from the original concept of the film. The Monster, to be played by Bela Lugosi, was described in the June 13, 1931, issue of Television as "a weird creature resembling a man of the neanderthal age whose mentality is astounding in some respects but whose heart is that of a monster" (qtd. in Glut 95). But when executives told Lugosi of their revised concept of the Monster, including his lack of speaking ability, Lugosi, who had already experienced stardom in his native Europe and, thanks to Universal's Dracula, was enjoying fame in America as well, refused the role. He left the production, and with him went the original director, Robert Florey (Glut 95).

Florey, however, had already made important contributions to the film. He had blocked out most of the story and added many of his own ideas to the plot (Glut 95). The climax of the film, the windmill scene, was his brainchild. Glut reports that the inspiration came to Florey as he stared out of his hotel window at the Van de Kamp's bakery, with its windmill trademark, across the street (95).

The most notable change Florey made to the storyline, however, was a product not merely of his imagination, but of the world in which he lived. Undoubtedly influenced by the "science" of eugenics and the theory of biological determinism, Florey conceived the placement of a criminal brain in the Monster's skull, instead of the brilliant mind Mary Shelley had envisioned (Glut 95). Whereas Shelley's creature turned to murder motivated by revenge after he was spurned by his creator, audiences in 1931 would see the Monster with his abnormal brain as preprogrammed to
commit horrible acts of violence. A new storyteller had once again shaped Shelley's century-old tale of creator and created to reflect views of his time and to explore scientific thought of his day.

The Battle Against the 'Abnormal'

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Americans at the turn of the 20th century could scarcely have ignored the onslaught of scientific discoveries. They lived in an age “distinguished by a notable consequence of the great increase in the rate of advance” in science, as Shepherd describes it in his Outline History of Science (85). Just as they had in Mary Shelley’s day, scientists seemed “poised to penetrate once-sacrosanct boundaries between life and death” (Frankenstein: An exhibition).

Newspapers and magazines of the age speculated freely about one day defeating death and capturing immortality through the use of artificial organs. In the 1930s, American chemist Robert E. Cornish killed a dog with nitrogen gas, then revived it. He vainly sought access to executed men, in hopes of proving his power over death, and his efforts got widespread press coverage (Frankenstein: An exhibition). Aviator Charles Lindbergh, prompted by a diagnosis of heart disease in his sister-in-law, began in 1931 to work on the development of a “glass heart,” a pump made from Pyrex glass, intended to sustain organs outside of the body. He worked with Nobel Prize-winning French surgeon Alexis Carrel, who used the apparatus to keep hearts, kidneys,
ovaries, and other organs alive for study and experimentation (*Frankenstein: An exhibiton*). The audiences that flocked to the theaters to see Universal's *Frankenstein* might have been reminded of such experiments when, just before the animation of the Monster, Henry Frankenstein told his former professor of how he had kept a human heart beating in his laboratory for three weeks.

News of efforts such as those of Cornish and Lindbergh undoubtedly intrigued the public much as galvanism and the resuscitation of drowning victims had intrigued Mary Shelley and her peers a century before. Perhaps they felt a real thrill of hope when they saw Henry Frankenstein pat the casket he and his assistant had just removed from its grave and say, "He's just resting . . . waiting for new life to come!" (*Frankenstein*)

One of the most pervasive scientific theories of the time, however, was the idea of biological determinism. Heredity, more than environment or education, the theory went, caused physical, mental and even social problems (*Frankenstein: An exhibiton*). A person's character was molded by his physiology, not by his upbringing. Such views led to many pseudo-scientific beliefs and theories.

The early 1900s saw degenerationist theories become popular, for example, and during the same time period the influence of Darwin's theory of natural selection was extended to social contexts, hence the development of social Darwinism (Bowler 273; Brantlinger 3). Herbert Spencer, a late-19th century philosopher and leading social Darwinist, coined the term "survival of the fittest," which, when applied to society, predicted that unfit individuals would gradually be
edged out by the superior individuals (Bowler 274).

Degenerationism, in light of this application of evolutionary thought, was seen as an effect of too little competition for survival, and it was thought that some groups of people had reverted to earlier evolutionary forms. This theory was taught in textbooks of the time, one of which instructed that there were five races or varieties of man: the Ethiopian or negro race from Africa, the Malay or brown race from the Pacific islands, the American Indian, the Mongolian or yellow race including Chinese, Japanese, and the Eskimos, and "the highest type of all, the Caucasians represented by the civilized inhabitants of Europe and America" (qtd. in Gelb 3).

This reversion or degeneration theory is also evident in a look at the history of the disease we now know as Down syndrome. J. Langdon H. Down, who wrote a clinical description of the disease, and for whom the disease is now named, believed that parents of one race could give birth to a child who was a reversion to another race, hence the term Mongelism, by which the disease was long known (Gelb 4).

These theories of degenerationism were then extended to morality. Lax morals came to be seen as a characteristic of degeneracy, and added those labeled as insane, mentally deficient, and socially deviant to the list of regressed groups (Gelb 4).

As Bowler notes, pseudo-scientific theories such as degeneracy and social Darwinism have often been misused to support harsh social policies (273). The eugenics movement is one example of such misuse. The term "eugenics" was adapted from the Greek word *eugene"
"wellborn" (Brantlinger 3), and the movement strove to better the human race through adoption
of genetic principles. Thomas M. Shapiro sees the movement as having taken two general
directions; one being "positive eugenics," which was centered on efforts to increase "breeding"
opportunities for what were seen as more "fit" individuals, and the other being "negative eugenics,"
centered on the restriction of the "breeding" of "unfit" individuals (33).

The supporters of eugenics, which included the likes of Alexander Graham Bell, members
of the Carnegie Foundation, and J. H. Kellogg, founder of Kellogg Foods, seem to have thought
that natural selection was not weeding out the undesirables fast enough to prevent the
contamination of the population, and so desired to take the matter into their own hands by
instituting artificial selection (Shapiro 35). With their very surface understanding of genetics, the
eugenicists of the early 20th century believed that most human characteristics would be linked
directly to single genes. They purported the influence of genes in everything from physical traits: 6
occupational preferences, to character strengths and weaknesses (Smith, "The Bell Curve" 60).
They saw undesirable traits as heritable and reasoned that these could be eliminated by restricting
the reproduction of individuals who displayed such traits.

A model law was written up, and supporters of the movement were asked to present it to
the legislatures in their own states. This law was to appoint a state eugenics agent who would
investigate the heredity of "a socially inadequate person"; this agent would be authorized to order
sterilization (Shapiro 35). The first eugenics law was passed in Indiana in 1907, and 29 other states
had followed by 1931 (Shapiro 35).

A Virginia law authorized the sterilization of 17-year-old Carrie Buck, the supposedly "feeble-minded" daughter of a prostitute, who had given birth to an illegitimate child because she was raped (Shapiro 3). These restrictions were upheld by the Supreme Court in the 1927 decision of Buck v Bell:

> We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices... in order to prevent our being swamped with incompetence. It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or let them starve for their imbecility, society can prevent those who are manifestly unfit from breeding their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting the fallopian tubes.

three generations of imbeciles are enough. (cited in Brantlinger 33; Shapiro 3)

Ironically, Carrie Buck was later found to show no mental retardation whatsoever, and her daughter went on to display high academic potential (Smith, "Reflections" 234). Nevertheless, this decision set a precedent under the authority of which it is estimated that at least 50,000 people were sterilized in the United States (Smith, "Reflections" 234).

Such was the atmosphere in which Universal's Frankenstein was conceived. The pervasive
theory of biological determinism supported eugenics, and surely made the idea of a murderous monster, murderous because he was pieced together from criminals, believable. It is biologically and certainly frightening. Professor Waldeman, the film's proponent of biological determinism, is shown teaching his class at Goldstadt Medical College the differences between the normal human brain and the abnormal brain, taken, he says, from a man who lived a life of violence and crime.

After the creation of the Monster, he tries to convince Henry Frankenstein that his creation will never overcome his biological ancestry:

*Waldeman:* Wake up and look facts in the face! Here we have a fiend whose brain . . .

*Frankenstein:* (interrupting) Whose brain must be given time to develop:

*Frankenstein:* It's a perfectly good brain, doctor. Well, you ought to know. It came from your own laboratory.

*Waldeman:* The brain that was stolen from my laboratory was a criminal brain.

*Frankenstein:* Oh, well. After all, it's only a piece of dead tissue.

*Waldeman:* Only evil can come of it . . . . You have created a monster and it will destroy you.

*Frankenstein:* Patience, patience. I believe in that monster, as you call it.

And if you don't, then you must leave me alone.

Frankenstein's creation, of course, does not overcome his inferior brain, instead, he remains
his biologically predestined role, just as Professor Waldeman predicted he would. He hands

Frankenstein's assistant, Fritz, after enduring his torture for a few days, and he kills Waldeman

before the professor has a chance to end his manmade life.

Strangely enough, though this retelling at first glance seems almost didactic in its illustration

of biological determinism at work, its outcome is perhaps even less definite in its judgment than

that of the novel. Indeed, Henry Frankenstein pays a lesser price than did his precursor, Victor.

"While Victor pays for his mistakes with the lives of his family and friends, his wife, and eventually

himself, the only totally innocent victim of Henry's Monster is Marta, the little girl by the river.

After the Monster is apparently destroyed, Henry's father, his fiancée, and indeed the whole town

seem perfectly willing to pick up their lives as if nothing had happened at all. But are their lives the

same? Or was the destruction of the monster the start of a new and better world? Perhaps this

ambiguous plot twist mirrors attitudes of the time. New discoveries were being made every day.

Such ever-increasing knowledge could easily have allowed scientists of the era to feel they were

gaining control over the details of their world. Proponents of eugenics certainly felt that could

change the world with a few simple steps. 1930s audiences surely must have walked away from

Universal's Frankenstein with much to think about. At any rate, Mary Shelley's tale had provided

applicable to scientific findings not even dreamed of at its conception.
In 1935, myagents found out that Universal's story of Frankenstein and his creation did not end so simply. Director James Whale had returned, as had Boris Karloff as the Monster and Colin Clive as Henry Frankenstein. The movie returned to Mary Shelley's novel for inspiration and picked up where the 1931 movie had left off. The mate that the monster had demanded in the original story had never been completed, but she was brought to life in Universal's The Bride of Frankenstein.

The Monster had not, it turns out, died in the fiery collapse of the windmill in the 1931 film. But Henry Frankenstein, oblivious to this fact, had gone on with his life. He had married and had become the new Baron Frankenstein after the death of his father. His obsessions and mistakes of the past seem to be gone and forgotten. That is, until he gets a visit from a Dr. Pretorius, who had been expelled from his teaching position at Henry's old medical school:

Pretorius: I have ventured to hope that you and I together, no longer as master and pupil, but as fellow scientists, might probe the mysteries of life and death . . . and reach a goal undreamed of by science.

Frankenstein: I can't make any further experiments. I've had a terrible lesson.

Pretorius: That is sad, very sad. But you and I have gone too far to stop.
nor can it be stopped so easily.

Frankenstein is pulled in. The hopes and dreams that ruled him for those years in his laboratory are not dead, and he cannot resist them. He agrees to work with Dr. Pretorius. Frankenstein's disgust and horror for his earlier experiments can't destroy his curiosity—his ambition. Viewers understand this because it, like the novel itself, echoes, as George Levine describes it, "our relationship to the technology that we worship even as we recognize that it is close to destroying us" (17).

Though Frankenstein has second thoughts about the experiment, Dr. Pretorius convinces him, first by revealing the Monster alive and well and demanding that he create his mate, Elizabeth. The scenes of the creation of the new female creature again employed technology of the day, as the 1931 film had, but also echoed the science of Mary Shelley's time. The creature sits on the table lacking nothing but a heart. Karl, whom Pretorius has employed to retrieve the body parts needed for the experiment, is instructed to find a recently dead body and remove its heart. Instead of searching the morgues or hospitals, he kills a woman on the street and returns with her heart. Frankenstein puts the heart into a large beaker of some sort of solution and waits until the heart, presumably recording the electrical impulses from the heart, shows that it is beating on its own. Though the first real successful transplant would not be done until 1954 (a kidney transplant), Frankenstein's Hollywood heart transplant was successful. The creature was raised on a platform up toward the sky as huge kites were deployed to capture the energy of the lightning, echoing then
Franklin's experiments of the 1700s.

But when the "bride" comes to life, she rejects the friendship of the Monster and their friendship ends in destruction, again allowing Frankenstein and Elizabeth to escape unharmed. Critical reviews were again favorable. Glut notes that the sequel was seen as even better than the 1931 film (132). The Bride of Frankenstein began a cycle of films that Universal would continue through 1948, when the studio released the comedy/horror film Abbot and Costello Meet Frankenstein (Glut 179).

Albert J. Lavalley notes that after that final installation of the Universal series, there was a feeling that the parody signaled an end to the story. It was hard, he says, to see where Frankenstein films could go (285). But the story was picked up again, and Lavalley catalogs the more recent interpretations, including Andy Warhol's Frankenstein, Mel Brook's Young Frankenstein, and even The Rocky Horror Picture Show. From his vantage point in 1979, he found a similarity where the story could go from there. Another cycle, he says, seemed to be completed. He notes, however, that "though destruction is part of the myth, creator and creature perishing in a final apocalypse, rebirth is also part of it. The figures return because they evoke certain persistently human tensions, desires and fears . . . " (285). Though he could not imagine it, a new Frankenstein and a new monster were already being formed in the minds of his contemporaries.
New Science, Same Story

In 1972, it was announced that a new version of the Frankenstein tale was in the works. It was to be a $3 million film adapted from the original novel and was to have a "sympathetic" monster (Glut 222). Its director was to be Francis Ford Coppola, whom Glut reports had been contemplating a "definitive film version of the story" for years (222).

That definitive version, however, was not to appear until 1994. And Coppola would be the producer, not the director. But it did indeed return to the original novel as its source. It restored to the characters their original names -- Victor Frankenstein is the young medical student; Henry Clerval is his friend. It replaced the deleted scenes of the monster's journey after his creator abandoned him, as well as those of Frankenstein's sickness and delirium after his first meeting with the monster. It restored speech and intelligence to the monster, making him once again the sympathetic character Mary Shelley had created. Death comes once again to William, Justine, and even Elizabeth. The 1994 film showed a Frankenstein who was by the end of the story sad and lonely, robbed of all that had brought him joy and bent on finding and destroying the monster he had created.

Most notably, though, it did what no other dramatization before it had done: It retained the frame story of Walton and his ship in the Arctic, of Frankenstein's telling of his story. It showcased once again Frankenstein's exhortation to Walton, his warning about overarching ambition:
Walton: Listen to me. I have spent six years planning this, my entire fortune.
I will not be stopped by you or some phantom.

Frankenstein: Do you share my madness?

Walton: No, not madness.

Frankenstein: What then?

Walton: There is a passage to the North Pole, and I will find it.

Frankenstein: At the cost of your own life? The lives of your crew?

Walton: Lives come and go! If we succeed, our names will live on forever.

I will be hailed as the benefactor of our species

Frankenstein: You are wrong. I of all men know that.

And so begins Frankenstein's tale, very close to Mary Shelley's original story, played out on the screen. In the end, Walton, believing Frankenstein's words to be the ravings of a madman, seems still to be bent on finding the passage to the North Pole. When the monster appears after the death of Frankenstein, however, he realizes that his quest is too costly, and he gives the order to turn the ship toward home.

This film is extraordinary not in its changes from the original text, but in its return to it. In this age of transplants of everything from hair, to eyes, to fingers and hands, of fertility treatments, of genetic mapping and even cloning, the creation of life is apparently closer than ever before. In 1997, the world was confronted with the news that researchers in Scotland had cloned a sheep
from the cell of an adult ewe. The next year, scientists in Hawaii produced three generations of cloned mice, and scientists in Japan cloned eight identical calves from cells of a single adult cow (The History of Genetics). And in September 1999, international leaders of the Human Genome Project, launched in 1990 to map the entire human genetic sequence (The History of Genetics) announced that they expect to have a complete DNA reference sequence by 2003, two years earlier than originally projected (Human Genome Project). In such a world, we need no aid to understand Mary Shelley’s tale, now nearly 200 years old. The fable needs no translation. It is again directly applicable. And with the restoration of Walton, it seems to apply more specifically to each of us.

Frankenstein told his tale to Walton that he might learn from his mistakes, that he might realize that his decisions would affect the lives of so many others. Once Walton saw the truth of the story, he had no choice but to look his responsibilities in the face, as Frankenstein had refused to do until it was too late. Mary Shelley gave us a tale that has proved to be applicable to every age since hers. It gives us much to ponder, but refuses to give us simple answers. We as the audience have the opportunity to benefit from its history, for it is intertwined with our own. We have the responsibility to learn from the past misuses of science, to be aware of what is going on around us.

Frankenstein’s crime lay not in his search for knowledge, nor in his act of creation. His crime was his lack of forethought. He neglected to stop and think on what the effects of his actions would be. He did not consider what the consequences would be for himself, his creation and the
world around him. He did not think about these things until he stood face to face with his creation -- and by that time it was too late. Frankenstein also committed one additional crime. He refused to take responsibility for his mistake. In doing so, he compounded his first crime, and exposed the world around him to the consequences.

The solution, however, is not to stop exploration, to discontinue experimentation, to stifle science. We can learn from Frankenstein how better to use such things to the real benefit of society. We should learn to look at every possible outcome of our actions before we act. We should learn to take responsibility for our actions and their consequences. We should learn to communicate before, during, and after we act. If we do not learn these things, that which we create today will inevitably haunt us tomorrow. And future generations will question why we could not glean wisdom from the past.
Works Cited


