From the Instructor

This was Patrick Allen's final paper for a WR 100 course titled "The Mad Scientist in Literature and Film." In the course, we traced the long history of the mad scientist figure from myths and legends which tell of the religious transgressions of the "overreacher" to more recent stories and their added urgency due to the potentially destructive power of new technologies. We saw that there are many types of mad scientist, whose stories raise different social and philosophical questions, but we found that common themes emerge, especially questions concerning the ethics of research and invention and a consideration of humanity's place in nature.

Patrick made quick progress as a writer over the semester, and this essay demonstrates his increasingly sophisticated vocabulary and sentence structure, and his insightful analyses. Though the scope of the essay is perhaps overly ambitious, there is a logic behind it. He begins with Frankenstein, arguably the first major modern mad scientist, who creates a man, then moves to the industrial age with Karel Čapek's *R.U.R.*, in which men are mass produced, and ends with Dr. Strangelove, of the military-industrial complex, where it is mad politicians and generals who wield the power of technology. Across this line of modern development, Patrick both identifies a type of cultural anxiety that lies behind mad scientist stories, whereby the promise of science can inspire both hope and discontent, and considers what happens when the utopian motives of mad scientists themselves come up against the paradoxes inherent in knowledge, freedom, and, as the word implies, utopia.

— Andrew Christensen

WR 100: The Mad Scientist in Literature and Film

From the Writer

"The Dichotomy of Science" is the final product of my work in my WR 100 seminar, "The Mad Scientist in Film and Literature." The purpose of this paper was to develop an interpretive argument on the topic of mad scientist figures.

I at first grappled with settling on a thesis for this project, considering the broad scope of both the prompt and the source material. From Christopher Marlowe's *Doctor Faustus* to Stanley Kubrick's *Dr. Strangelove*, there seemed to be an endless number of directions in which to begin my writing. Should I focus on the hubris of these men and women? Should I argue that they were victims of society's scorn? These questions proved early roadblocks in my writing process.

In order to decide how best to craft a thoughtful argument, I went back to what inspired me to take this course in the first place. Growing up, I loved watching the old black and white movies that breathed life into the pages of Mary Shelley and Robert Louis Stevenson. Seeing the lightning flashes illuminate Doctor Frankenstein's laboratory in the 1931 Universal Pictures masterpiece or Doctor Jekyll's first transformation before the mirror in Rouben Mamoulian's film of the same year still amazes me to this day. I chose to take this seminar in order to learn more about these characters with whom I grew up, to delve into their long literary histories which extend much farther back than the silver screen.

Over the span of the course, I learned how these mad scientists were truly complex characters. None of them fit the bill for the maniacal madman hell-bent on ruling the world. Rather, I found each of them was caught up in the utopias they envisioned as a result of scientific progress. I thus found the central argument for my final paper.

Looking back on this piece, I wonder if I could have made a more convincing argument had I devoted the entirety of the paper to one specific work. I feel I sacrifice depth in my argument in favor of breadth. However, I am nonetheless pleased with my work and I am glad that I can introduce the figure of the mad scientist to a larger audience.

— Patrick Allen

Patrick Allen

The Dichotomy of Science

Science has a dual nature. It can uplift and entice us with promises of a better tomorrow, free from disease and tedium, and often follow through with tangible technological and medical improvements. Such a bright future guaranteed by advancement in scientific knowledge can also be a source of anxiety and despair, as it only sheds more harsh light on the dim realities of the present. How, then, does the figure of the mad scientist fit in to this spectrum of science's influence? The answer: not easily. The mad scientist has served many roles throughout his long literary trajectory, from the swindling alchemist to the misguided father. Such various roles attest to the broad range of meanings which science, in general, can be said to hold. The mad scientist is a caricature of the fear concerning unrestricted learning. However, his image becomes clearer when his own motives are examined alongside his work and creations. Most "mad" scientists are not truly maniacs because they are bent on destruction and world domination, but rather they, too, are caught up in this duality of scientific research. Thus, the appearance and use of the mad scientist symbol, specifically in the works of Mary Shelley, Karel Čapek, and Stanley Kubrick allows for a more nuanced understanding of how the fascinations and apprehensions of humanity are tapped by science, as its approach to a perfect society only makes the distance to such a goal all the more apparent.

According to Roslynn Haynes, in her article "The Alchemist in Fiction: The Master Narrative," the "master narrative concerning science and scientists is about fear—fear of specialized knowledge and the power that knowledge confers on the few, leaving the majority of the population ignorant and therefore impotent" (5). She suggests that the "typical"

mad scientist scenario has the deranged megalomaniac threatening the planet and, eventually, failing to follow through with his plans, leading to a "memory of disempowerment" among the general populace to be recalled each time a new scientific breakthrough is achieved. Furthermore, Christopher Toumey affirms, "The mad scientist stories of fiction and film are homilies on the evil of science" (1). Thus, Haynes and Toumey argue that fear and suspicion characterize our fascination with science in literature. Yet, fear alone is not enough to sustain some five hundred years of longevity enjoyed by the idea of the mad scientist, beginning with the legend of Doctor Faustus. Behind these mad scientist and alchemist figures lies a distinct sense of optimism, which likewise intrigues and captivates audiences. Best described by Haynes in *From Faust to Strangelove*, mad scientists, specifically Victor Frankenstein, are "the heirs of Baconian optimism and Enlightenment confidence that everything can ultimately be known and that such knowledge will inevitably be for the good" (94). Indeed, the protagonist of Mary Shelley's 1818 Gothic masterpiece provides a good starting point from which to launch an examination into how the mad scientist's work is not solely characterized by vain or arrogant desires, but rather deeply ingrained personal convictions and visions of a better tomorrow.

Victor Frankenstein's fascination with science and subsequent transformation as a result of these pursuits are testaments to the metamorphic power of science. The young Genovese initially dabbles in scientific investigation with moderation. He reads the works of Paracelsus, Cornelius Agrippa, and Albertus Magnus, and their writings appeared to him as "treasures known to few beside [himself]" (21). He is fascinated by his foray into the sciences, but he is careful not to throw himself headlong into the venture. He explains:

> The human being in perfection ought always to preserve a calm and peaceful mind, and never to allow passion or transitory desire to disturb his tranquility. I do not think the pursuit of knowledge is an exception to this rule. If the study to which you apply yourself has a tendency to weaken your affections, and to destroy your taste for those simple pleasures in which no alloy can possibly mix, then that study is certainly unlawful, that is to say, not befitting the human mind. (34)

To think that such wise advice against the overindulgence in intellectual endeavors originates from one of the most prominent representations of the mad scientist serves as a chilling reminder of the enticing power of science.

Once he finds a companion and soul mate in the form of Elizabeth, Frankenstein notes, "I was capable of a more intense application, and was more deeply smitten with a thirst for knowledge" (18). His devotion to science is motivated by ostensibly noble reasons. Disillusioned by the death of his mother at the hands of scarlet fever, Frankenstein vows to "banish disease from the human frame and render man invulnerable to any but a violent death" (22). To achieve this end, Frankenstein sets forth to answer the question, "Whence . . . did the principle of life proceed?" (30). Frankenstein's first error, perhaps, is best described as falling into the paradox elaborated upon by Haynes: "the pursuit of freedom through knowledge" (99). "The more Frankenstein learns, the more aware he is of his own ignorance" (99), and he isolates himself from those whom he loves as the thirst for knowledge intoxicates him. He seeks to flush out and discover the essence of life, but his attempts to unlock such secrets, although successful in some sense due to the creation of his monster, leave him more disillusioned with life.

The more that Victor Frankenstein learns, the more aware he is of his own shortcomings. When he first arrives at the University of Ingolstadt, he meets with the professor of natural philosophy there, M. Krempe. When the disgruntled teacher questions Frankenstein on his scientific background and hears of his devout readings of the likes of Cornelius Agrippa and Albertus Magnus, he lambasts him, "Every minute. . . every instant you have wasted on those books is utterly and entirely lost. You have burdened your memory with exploded systems and useless names" (26). Because of this encounter, Frankenstein is understandably disheartened, having his entire repertoire of knowledge brushed aside, and he is all the more incited to the cause of learning.

Furthermore, Victor's advancements with regard to instilling the spark of life into inanimate objects likewise only lead him to the realization that it is impossible to truly create a human being with empathy and rationality. Despite the fact that he had chosen only the most "beautiful" parts and features to create his monster, his heart is filled with "breath-

less horror and disgust" (35) at the sight of his creation rising up from the floor. Science seems to fail Frankenstein at the moment when he should stand triumphant due to his success. Frankenstein emerges from the hazy stupor of his scientific work to discover that he has created something so unnatural as to horrify him and make him regret all of the sleep-deprived and isolated hours he spent in laboratories and morgues. The reasoning behind his disgust with his monster can best be explained by Philip Ball, in his book *Unnatural: The Heretical Act of Making People*. Since "the 'natural' end of sex is procreation . . . the natural and therefore the only permissible beginning of procreation is sex" (18). Frankenstein fails to recognize this basic human reaction to "playing God" because he is so caught up with the possibilities that the ability to instill life into inanimate objects might grant. However, untold suffering at the hands of his monster shatters his vision of a better future.

The same disillusionment arising from science's failure to live up to its high expectations can be seen in Karel Čapek's 1920 science fiction drama *R.U.R. (Rossum's Universal Robots)*. The protagonists of the play, Rossum and Domin, both foresee a world where robots are diffuse and cheap, allowing for humanity to exchange unstimulating daily toil for a life of pleasure and happiness. As Domin passionately explains to his colleagues as his robot operation collapses around him and his life hangs in the balance, "I wanted man to become a master! So he wouldn't have to live from hand to mouth! I didn't want to see another soul grow numb slaving over someone else's machines. I wanted there to be nothing, nothing, nothing left of that damned social hierarchy" (54). Such a vision for a paradise on earth, where man no longer has to endure his punishment set out in the Book of Genesis, certainly testifies to the hope instilled by scientific advances. Though Rossum's robots do indeed become widespread and allow for a greater amount of leisure time, they eventually become so advanced that they are able to stage a global, violent revolution. The future envisioned by Čapek more obviously shows how science can be uplifting yet terrifying.

Domin's dream is a utopia of "supermen," but the reality that follows the scientific breakthroughs is a world where humans are hunted to the last and exterminated. The world envisioned by Domin is "unnatural," as the newly created robots do not have souls. The widespread belief out-

lined by Philip Ball that "The 'artificial person' has no soul" (7) may seem antiquated, but it nonetheless influences how the public feels about the robots. For example, Nana exclaims to Helena, "Out of Satanic pride you dared take upon yourselves the task of Divine creation. It's impiety and blasphemy to want to be like God" (32). Nana's sentiment is characteristic of that of the general populace: that the ends do not necessarily justify the means. As much as the mad scientist attempts to break loose from archaic restrictions on what is deemed acceptable, he is still shackled by those parts of society that refuse to relinquish their old taboos. The prevalence of robots makes it apparent that society is not ready for the type of freedom granted by a seemingly infinite supply of manual labor. Sometimes, it is not a matter of how soon we can achieve a new technology, but rather of how soon the public can become ready for the type of world affected by the emergence of such new science.

A much more poignant example of how science can allure us into dreams of utopia comes in the example of Stanley Kubrick's satirical depiction of the Cold War arms race. Kubrick's envisioning of a world liberated by the horrors of conventional warfare by the rise of the atom bomb continues this theme of the dual nature of science. In his 1964 satirical film *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb*, Kubrick captures the Cold War era and the prevailing ideology of the time: mutually assured destruction, commonly abbreviated M.A.D. The leading chiefs of staff and think tanks of the time revel in the fact that conventional warfare is, for the most part, rendered useless thanks to the sheer destructive power and devastation afforded by the rise of the atom bomb and nuclear weapons. Dr. Strangelove explains to his colleagues the premise of the "doomsday device" within the war room:

> That is the whole idea of this machine, you know. Deterrence is the art of producing in the mind of the enemy . . . the FEAR to attack. And so, because of the automated and irrevocable decision-making process which rules out human meddling, the Doomsday machine is terrifying and simple to understand . . . and completely credible and convincing.

D. H. Dowling, in his article "The Atomic Scientist: Machine or Moralist?" argues that Dr. Strangelove is the "apotheosis" (145) of mad science. Strangelove is, as Haynes noted, one of the paradoxical "heirs to Baconian

optimism" because, although he has devoted his life's work developing technology designed only to destroy human life, he is utilizing this knowledge to actualize a society that enjoys a new, consummate peace.

What Dr. Strangelove referred to as a "fear to attack" has, in the eyes of the military and diplomatic strategists, given rise to a new, consummate type of peace. The citizens of those nations with nuclear capabilities are now free from the type of destruction caused by World War II and previous conflicts. However, rather than bringing about some form of new world order in which warfare has been rendered useless, a darker shadow now looms heavily over the minds of the global population: nuclear warfare. Once again, we see how our society is not yet ready for the freedom made possible by technological innovations.

A main focus of Kubrick's satire in the film is the eradication of warfare as it was previously defined. Rendering older forms of warfare useless, ironically, has given rise to a tense situation in which the stakes are infinitely higher. At the turn of a key and the push of a button, humanity could bring about unparalleled death and destruction. Because of this, many of the chiefs of staff presented in this film take on the role of mad scientists, in a way, as they play fast and loose with weapons that could end all human life. General Buck Turgidson, played by George C. Scott, embodies this type of brazenness when he tries to justify the obliteration of millions of people to the president, played by Peter Sellers: "Mr. President, I'm not saying we wouldn't get our hair mussed. But I do say no more than ten to twenty million killed, tops. Uh, depending on the breaks."

The ending of the movie leaves the audience with another example of gallows humor, as science is exploited to gratify one of the most primitive of desires. The East-West conflict is planned to renew itself after the detonation of the atomic bomb upon the Russian test facility. The men, with no women present, as is typical considering the genre and setting of the film, discuss rival mineshafts, which must be necessary following the presence of radiation on the surface of earth. Dr. Strangelove, catering to the lustful appetites of the men in the war room explains: "But it is, you know, a sacrifice required for the future of the human race. I hasten to add that since each man will be required to do prodigious . . . service along these lines, the women will have to be selected for their sexual characteristics, which will have to be of a highly stimulating nature." Mad scientists, too,

are only human, and Dr. Strangelove is forced to abase his work in order to ensure its success. In a uniquely masculine critique, Kubrick shows how science cannot progress unless it displays a clear and immediate appeal for the masses

The essence of the mad scientist genre of literature and, now, film is changing. The focal point of the work is no longer the mad scientist himself, but rather how his work caters to the hopes and fears held by the masses. This fact is perhaps a testament to how the scale of scientific research has grown: from the past, where a solitary man slaves away in his laboratory, pursuing his own dreams, to the present, where droves of research teams compile data and statistics at frightening speeds, eager to release new improvements to the public. The science practiced by all these knowledge-seekers carries with it the dreams of a utopian society made possible by technological improvements. Optimism characterizes such accumulation of knowledge, as it suggests that man has dominion over the world, the power to see the problems with society and improve them. However, the connotations of science do not stop there, with solely the benefits of possible research. Rather, the advancements of science likewise make the grim realities and shortcomings of the present all the more obvious, leading to renewed attempts to try and alleviate them, ad infinitum.

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