

The Influence of Science and the Supernatural on the Gothic Novel

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Introduction

Scary stories are a vital part of all known human cultures. In ancient history, these stories were conveyed orally. Later, they were written down or printed for future generations to read. The scary part of these stories is usually something unknown or uncommon to the reader or the listener. For instance, Horace Walpole's 1764 novel *The Castle of Otranto*, which is generally considered to be the first of many novels in the gothic tradition (Lewis vii), depicts spectres (Walpole 102) and other strange, improbable phenomena to frighten readers. In Walpole's day and age, "there could be no appeal to the imagination that went beyond rational causes" (Clery 23). Walpole challenged this notion in the preface to the second edition of *The Castle of Otranto* (23) and succeeded in scaring his audience, which is shown in a letter Thomas Gray wrote to Walpole in 1764 stated that *The Castle of Otranto* made "some of us cry a little, and all in general afraid to go to bed o' nights" (qtd. in Lewis vii). In the modern age, successful scary stories are turned into movies with the notable exception of zombie stories, because they seem "to have almost entirely skipped an initial literary manifestation" (Hogle "Foreword" 13) and went straight to the cinema.

There are many stories in which the source of the scare is based on the supernatural, like wizardry, voodoo or religion-based themes. Likewise, there are many examples of supernatural causes in gothic novels. For example, in Bram Stoker's *Dracula*, the supernatural is presented in the antagonist as an undead person who speaks of historical battles hundreds of years before the start of the narrative "like he had been present at them all" (Stoker 25) and "he can live for centuries" (262). Furthermore, the antidote to the supernatural evil is also presented as being largely supernatural because the character Van Helsing uses items like the crucifix to repel vampires (176). Similarly, early zombie-related

narratives, usually based on descriptions of the Haitian zombie, mention voodoo as the cause of reanimation of the dead. The Haitian zombie is described in William Seabrook's popular anthropological work *The Magical Island*: "[t]he zombie, they say, is a soulless human corpse, still dead, but taken from the grave and endowed by sorcery with a mechanical semblance of life – it is a dead body which is made to walk and act and move as if it were alive" (Seabrook 93). In addition, according to Kyle Bishop, voodoo is a mixture of African tribal religious practices brought to Haiti with the slaves and European Christian traditions. Furthermore, Seabrook's anthropological account of these practices was easily incorporated into gothic narratives because "the ancient theological and ritual practices of Africa provided voodoo sorcerers the ability to turn people into zombies; the Christian belief system made the loss of agency and self-control all that more horrific" (Bishop 72). According to Fred Botting, "[t]he Enlightenment did away with ghosts and supernatural beings" (Botting *Limits* 7), but they "kept on returning in Gothic romances, popular dramas and spectacular entertainments" (7). Therefore, the presence of supernatural beings in Gothic fiction can be seen as a reaction to the Enlightenment.

Furthermore, change itself could also be seen as a scary, uncommon occurrence. Therefore, scientific and technological discoveries are often used in gothic novels to frighten the reader. According to Jerrold Hogle, "Gothic fictions play with and oscillate between the earthly laws of conventional reality and the possibilities of the supernatural" (Hogle "Introduction" 2). Therefore, there are examples of evil supernatural phenomena, but there are also many examples of good supernatural occurrences, like fairies, guardian angels and traditions originating from religion. Likewise, science can be a two-faced phenomenon regarding good and evil as well. Throughout history, scientific findings have baffled society by exposing new ways of thinking or new ways of working. These findings were a blessing for some, but a threat to others. For instance, the invention of steam-propelled machinery led

to the industrial revolution, which completely changed the conditions for workers because, for instance, the demand for manual labour declined significantly, which caused an increase in unemployment and poverty. Besides, such manual labour as was available was, due to the crude technological environment, harmful to the workers' health. Meanwhile, owners of factories and mills profited because they required fewer workers, which led to lower financial expenses, to continue their business. Likewise, the discovery of electricity sparked numerous beneficial inventions, but this finding also led to the creation of, for instance, the electric chair.

Therefore, scientific inventions were often viewed as frightening enough for scary stories and, in a way, the scientific functions as a plot device comparable to the supernatural. Moreover, although the scholars responsible for the scientific discoveries were praised for their work, their evil literary counterpart, the mad scientist, was created as an actor to explore or even wield new scientific discoveries in a horrifying fashion. For instance, Anne Stiles states that “the rise of the mad scientist as fictional trope coincided with the growth of scientific professions” (Stiles 323). For example, the protagonist in Mary Shelley's *Frankenstein* uses electricity to create a hideous being. Shelley describes how Dr Frankenstein studies two years before reanimating dead matter by “infus[ing] a spark of being into the lifeless thing” (Shelley 34). Nevertheless, although the protagonist in *Frankenstein* acts like a mad scientist by creating a monster, he intends to create “happy and excellent natures” (32), but “the beauty of the dream vanishe[s], and breathless horror and disgust fill[s] [his] heart” (34). Similarly, the doctor in Robert Stevenson's “Strange Case of Dr Jekyll and Mr Hyde” uses chemistry in an attempt to separate his inner good and his inner evil (Stevenson 62) so he could relieve his inner good from being “exposed to disgrace and penitence by the hands of this extraneous evil” (61), but fails miserably because his evil side, manifested as a monster called Mr Hyde, keeps returning without the consent of Dr Jekyll:

“above all, if I slept (...) it was always as Hyde that I awakened” (75-6). Christopher Toumey suggests that the mad scientists’ inability to control their own creation is brought into existence to heighten the fright of the story:

Here are modern-day exercises in the tradition of antirationalism, which argues that rationalist science is dangerous to one's spiritual wellbeing because it is too clinical, too abstract, and that the scientists who control the mysteries of modern secular knowledge are unaccountable to conventional standards of morality. (Toumey 411)

Furthermore, contemporary zombie-related stories tend to focus the cause of reanimation around seemingly scientifically plausible events. For instance, a virus is presented as the scientifically proven cause of the zombie in Max Brooks’ 2003 novel *The Zombie Survival Guide* (2). Moreover, the novel tries to remove the notion of voodoo zombies as described by Seabrook by claiming that “[w]e must begin by separating fact from fiction. The walking dead are neither a work of “black magic” nor any other supernatural force” (Brooks *Guide* 1). Besides, *The Zombie Survival Guide* states that “the origin of their name is the only similarity between the voodoo zombie and the viral zombie” (20) and gives a list of differences between the two (20-2). Nevertheless, the scientific in these stories has the same function as the supernatural in other stories.

In conclusion, it appears that there are multiple forms of fear-provoking mechanisms in the gothic tradition. Most notably, although occurrences like religion and magic are said to be soothing or beneficial to people’s happiness, the supernatural and the unexplained can be viewed as something frightening and are therefore used in the gothic tradition. Likewise, the scientific, however often presented as a rational practice and a harbinger of progress, shares the same duality. Both these plot devices, the scientific and the supernatural, tend to be used as a reaction to the rationalism of the Enlightenment and they are used to address the society’s anxieties. Therefore, this thesis aims to answer the following question: how does

science influence the gothic novel in comparison with the influence of the supernatural? In particular, the first chapter will examine the supernatural and the unexplained in gothic fiction. The primary sources used in this section will be Walpole's *The Castle of Otranto* and Stoker's *Dracula*. The second chapter will focus on science, technology and mad scientists in gothic fiction. Shelley's *Frankenstein* and Stevenson's "Strange Case of Dr Jekyll and Mr Hyde" will be used as examples of nineteenth century gothic literature influenced by science. Furthermore, the character Van Helsing from *Dracula* will be analysed. Lastly, the third chapter will include the anthropological work *The Magic Island* by Seabrook and the contemporary novels *The Zombie Survival Guide* and *World War Z* by Brooks in combination with a short analysis of the zombie films *White Zombie*, *Dawn of the Dead* and the series *The Walking Dead*.

Chapter 1: The Supernatural and the Gothic Novel

The supernatural is one of the most notable plot devices for writers of gothic novels. Moreover, the supernatural is often combined with the unexplained in gothic narratives. This chapter will show that the supernatural in *The Castle of Otranto* and in *Dracula* is used as a reaction to the rationalism of the Enlightenment. Likewise, the use of religious symbols and occurrences will be examined. Furthermore, this chapter will show how the supernatural also symbolizes anxieties.

In the introduction to the 1964 reprint of the 1764 gothic novel *The Castle of Otranto*, W.S. Lewis states that “[t]he interest of the book’s early readers was in the story itself” (Lewis vii), but that “this is not true today” (vii). Although nearly 50 years have passed since Lewis wrote that introduction, the statement that “*The Castle of Otranto* owes its reputation now to its being the earliest of the Gothic novels” (vii) still applies today as David Rogers states that “[the gothic] tradition began with Horace Walpole’s *The Castle of Otranto*” (Rogers IX) in the introduction to *Dracula* in 2000. Likewise, in 2010, Kate Ellis points out that Walpole “launched this genre” (Ellis 8) when referring to “a particular kind of novel, one in which terror helped drive the plot,” (8) ergo, the gothic novel. In its second edition, Walpole presents *The Castle of Otranto* as a romantic novel in which a sickly son, Conrad, is to be married to the daughter of another house, Isabella, in order to preserve the wealth of the family. However, the first page of the first chapter already mentions the eerie omen of the narrative in the form of “an ancient prophecy, which was said to have pronounced, That [sic] the castle and lordship of Otranto should pass from the present family, whenever the real owner should be grown too large to inhabit it” (Walpole 15-6). Next, Conrad is killed by the mysterious appearance of a giant helmet. His father, Manfred, “beheld his child dashed to pieces, and almost buried under an enormous helmet, an hundred times more large than any

casque ever made for human being, and shaded with a proportionable quantity of black feathers” (17). Later, Isabella’s father, Frederic, reveals that earlier a dying “saint-like man” (78) instructed him to dig up a giant sabre with an inscription on the blade that said:

Where’er a casque that suits this sword is found,
 With perils is thy daughter compass’d round:
 Alfonso’s blood alone can save the maid,
 And quiet a long-restless prince’s shade. (Walpole 79)

Near the end of the novel, a giant wearing the complete “more than mortal armour” (108) blasts some of the walls of the castle away. Furthermore, Frederic talks with the saint-like man again, but this time, since the saint-like man is already dead, he is presented as a spectre:

And then the figure, turning slowly round, discovered to Frederic the fleshless jaws
 and empty sockets of a skeleton, wrapt in a hermit’s cowl. (Walpole 102)

The idea of the talking reanimated dead can also be seen in the Bible. Specifically, Lazarus (John 11:38-44) and, more prominently, Jesus (John 20:1-23) return from the grave, but they are usually referred to as being resurrected rather than reanimated. Although these Biblical occurrences are seen as miracles, the reanimation in *The Castle of Otranto* is used as a warning. Nevertheless, although he is labelled as being present, the saint-like man is described as a spectre (Walpole 102) and, since there is no more mention of him after his undead role has been played, he vanishes quite rapidly (102). By comparison, the reappearances of Jesus are unexplained in the Bible and resemble the sudden appearance of the saint-like man in *The Castle of Otranto*. Specifically, Mary Magdalene suddenly sees Jesus though she does not initially recognise him (John 20:14). Likewise, Frederic does not initially recognise the saint-like man at his reappearance (Walpole 102). Furthermore, Jesus also appears to the twelve disciples in a similar fashion (John 20:19-20) and does so again because one of the disciples was not present during the first appearance (John 20:26-27).

According to Fred Botting, uncanny appearances in eighteenth century narratives like those of the saint-like man were “distinguishing past from present and delineating cultural and historical differences that testified to the newness of modernity” (Botting *Limits* 7). This is confirmed by the fact that Walpole had the first edition of *The Castle of Otranto* published as a translation of a pre-Enlightenment work rather than an original post-Enlightenment narrative (Lewis viii). Therefore, it could be argued that Walpole’s spectres were a response to the rational way of thinking of the Enlightenment. In short, the combination of the spectral appearance and the Biblical similarity make the reappearance of the saint-like man a notable supernatural occurrence in Walpole’s narrative, and his skeletal description, along with the eerie message he carries, creates a frightening scene. Clearly, Walpole uses supernatural suggestions to create multiple monsters to scare his audience and to react to the Enlightenment’s rationalism.

Likewise, the supernatural plays a very prominent role in Bram Stoker’s *Dracula*, because both the source and a way to combat the monster lie in the supernatural. For example, Count Dracula, the antagonist, initially appears to be a normal person; he invites Jonathan Harker into his castle and the two share many seemingly normal conversations. However, Jonathan is shocked to see that “[Dracula] has grown young” (Stoker 143) when Jonathan and Mina first encounter the Count in London. Moreover, the character in *Dracula* with the most knowledge of vampires, the imperfectly English-speaking Professor Van Helsing¹ from Amsterdam, later confirms that “[Dracula] can, within limitations, appear at will when, and where, and in any of the forms that are to him [sic]” (197), turn into “elemental dust” (199) and “slip through a hair-breadth space” (199). Furthermore, he can command animals (197) or turn into them (199). Likewise, “[Dracula] has the strength of many in his hand,” (199) “[h]e throws no shadow” (199) and “he make in the mirror no reflect [sic]” (199). Nevertheless, the Count’s powers are not unlimited, because he cannot

enter a house uninvited (199). Furthermore, “he can only pass running water at the slack or the flood of tide” (199). Most notably, whilst vampires in many other narratives burn or vaporize in the sun, Dracula is only weakened during the day and his supernatural powers are only available to him “at noon or at exact sunrise or sunset” (199). Furthermore, the origin of Count Dracula is shrouded in mystery. Although there are hints that the Count was once a living person (25), it remains unknown how Dracula became a vampire. Nonetheless, Van Helsing explains how a vampire comes into existence:

When they become such, there comes with the change the curse of immortality; they cannot die, but must go on age after age adding new victims and multiplying the evils of the world; for all that die from the preying of the Un-Dead become themselves Un-Dead, and prey on their kind. And so the circle goes on ever widening, like as the ripples from a stone thrown in the water [sic]. (Stoker 178)

Van Helsing’s account suggests that Dracula must have been bitten by another vampire before the start of the narrative, but it does not explain how the concept of the vampire came into existence in the universe of Stoker’s *Dracula*. Specifically, Van Helsing’s explanation requires a first vampire, which is not mentioned in the narrative. Furthermore, David Rogers argues that the description of vampirism in *Dracula* is linked to the fear of strange plagues. Rogers states that “as with AIDS and hepatitis C viruses in our own time and syphilis during Stoker’s, the vampiric cult has emerged during periods of strangely spreading infection and disease” (Rogers IX). Moreover, Dracula “can flourish when (...) he can fatten on the blood of the living” (Stoker 199) and, when Jonathan Harker cuts himself while shaving during his visit of Dracula’s castle, Dracula reacts by reaching rather aggressively for the drop of blood (23). In combination with the use of his penetrating teeth, Dracula’s response to both Jonathan and Mina Harker’s blood is almost a sexual one, thus giving Dracula’s behaviour a bisexual connotation. Rogers states that “his luscious mouth with his sharp protruding (and

penetrating) teeth combining the symbolic shape of the feminine with a signifier of masculine phallic power to provide (...) only the most conspicuous of many signs of his figurative bisexuality” (Rogers XI). Likewise, Judith Wilt describes how Lucy, as a vampire, is “pure driving sexuality” (Wilt 90). Thus, Stoker adds sexual suggestions to the already frightening STD epidemic. In short, Stoker uses the supernatural to create a monster and to refer subtly to the anxieties surrounding the syphilis epidemic.

By the same token, almost all of the actions performed by Van Helsing are related to the supernatural and their origin remains largely unexplained. Another character in *Dracula*, Dr Seward, confirms the weirdness of Van Helsing’s actions by stating that “[t]he Professor’s actions were certainly odd, and not to be found in any pharmacopoeia that [Dr Seward] ever heard of” (Stoker 109). Initially, the characters in the novel are completely oblivious to the effect of Van Helsing’s methods. For instance, when first using garlic flowers to protect the bitten Lucy, she thinks Van Helsing is “only putting a joke on [her]. Why, these flowers are only common garlic” (109). Likewise, just after Lucy’s death, Van Helsing shocks Dr Seward by exclaiming that he “want[s] to cut off her head and take out her heart” (137). Furthermore, Van Helsing claims protection from supernatural items, like “a crucifix” (168), because vampires loathe these items (168). A notable supernatural item used by Van Helsing is a catholic communion wafer or “[t]he Host” (174) which he uses to seal a tomb “so that the Un-Dead may not enter” (174). Likewise, he uses the wafer to make a protective circle. For example, when chasing Dracula to his castle, Mina Harker is “left safe from the Vampire in that Holy circle” (307) by Van Helsing. The wafer is used so frequently by Van Helsing that it leads Judith Wilt to state that “the old man from Amsterdam, Abraham Van Helsing, scientist and mystic, comes to England with what seems a whole cartful of the sacred wafer” (Wilt 86). The emphasis on the wafer and other supernatural items suggest that the

supernatural is more effective than the rational, thus making *Dracula* a critical reaction to the rationalism of the Enlightenment.

To conclude, the supernatural is a notable plot device for authors of gothic fiction to frighten their readers and to counter the rationalism of the post-Enlightenment world. The first gothic novel, *The Castle of Otranto*, is a clear example of a scary story with a hint of nostalgia towards the pre-Enlightenment era via supernatural monsters and religious suggestions. Likewise, Stoker shows in *Dracula* that the supernatural still holds the key to combat true evil. Furthermore, *Dracula* also shows that the supernatural is used to portray anxieties like contagious diseases.

Chapter 2: The Scientific and the Gothic Novel

Scientific change can lead to speculation and wild imaginary visions and the boundaries of things possible in the known universe are often stretched in unforeseen ways. For instance, technological inventions like steam-propelled machinery led to the creation of the train, which completely changed the mobility of people and goods. By the same token, scientific discoveries can lead to different perspectives and, consequently, ideas, beliefs and perceptions of reality are altered by philosophers and other thinkers. This chapter will focus on the influence of science on the gothic novel. Furthermore, some of the unexplained gaps of knowledge in the fictional accounts of science will be shown. Moreover, this chapter will examine that the inadequateness of science is a reaction to the rationalism of the Enlightenment. Likewise, it will show that science as a plot device can be compared to the supernatural as a plot device. Firstly, the character Dr Van Helsing from Stoker's *Dracula* will be analysed. In addition, the scientific in Shelley's *Frankenstein* will be examined. Furthermore, this chapter will examine the use of science in Stevenson's "Strange Case of Dr Jekyll and Mr Hyde."

The previous chapter has shown how the supernatural is used in Bram Stoker's *Dracula* as a source of a frightening monster and as a way to combat that same monster. Both the explanation of evil and the combat plan are provided by Van Helsing. Nonetheless, although Van Helsing's most effective weapons are supernatural, the character is also presented as an academic thinker and a skilled doctor. The most superficial, but, nevertheless, notable description of Van Helsing's scientific background is in the heading of the letter from Van Helsing to Dr Seward: "*Letter, Abraham Van Helsing, M.D., D.Ph., D.Litt., etc., etc. to Dr Seward*" (Stoker 94). The scientific nature of Van Helsing is later, silently, questioned by

Dr Seward in his diary (109). However, the fact remains that Van Helsing's initial response to Lucy's illness is established in medical science. Specifically, Van Helsing states that "[t]here must be a transfusion of blood at once," (101) because "[Lucy] wants blood and blood she must have or die [sic]" (101) and the procedure is repeated a few times until Lucy has "four men's blood in her poor veins" (159). Lucy's need of blood, which must be replenished because Dracula takes it from her, is a reference to a later event at Lucy's tomb, where she, as a vampire, is also in need of blood and attacks Arthur to take it from him (175-6). By the same token, Van Helsing uses a narcotic (102) to sedate Lucy when performing the blood transfusions, even though it is later revealed that Van Helsing is able to perform the, never scientifically proven, procedure of hypnosis (259). Likewise, Van Helsing performs rigorous actions to vanquish vampires when taking out their heart and beheading them (137), while the other, supernatural, method, namely "a sacred bullet fired into the coffin [to] kill [the vampire] so that he be true [sic] dead," (200) seems a lot less work. It remains unclear why Van Helsing prefers a gruesome surgery-like solution to a simple bullet, but, since Van Helsing does not explain how a bullet is made sacred, such a bullet might be hard to obtain. Nevertheless, according to Judith Wilt, "[t]he great old religion alone is adequate" (Wilt 86), suggesting that, on the one hand, the novel is a reaction to the post-Enlightenment notions of empiricism and rationalism. On the other hand, Wilt also suggests a reaction to the Anglican Church as Jonathan Harker is a "mild-mannered Anglican advocate" (86) and, Wilt notes, the Anglican via media does not suffice and Van Helsing's "older, harsher magic is needed" (86). By the same token, Van Helsing states that "tradition and superstition – are everything" (198) in the "scientific, sceptical, matter-of-fact nineteenth century" (198).

By comparison, the protagonist in Mary Shelley's *Frankenstein* is also ambiguous in his scientific ways; even Dr Frankenstein is heavily influenced by the supernatural when he, as a youth, finds a volume of one of Cornelius Agrippa's works². Frankenstein relates that he

“opened [the work] with apathy,” (Shelley *Frankenstein* 21) but continues by stating that “the theory which [Agrippa] attempts to demonstrate, and the wonderful facts which he relates, soon changed this feeling into enthusiasm” (21). On the other hand, when reflecting after the monster has wreaked its havoc, Frankenstein states that “[i]t is even possible, that the train of [Frankenstein’s] ideas would never have received the fatal impulse that led to [his] ruin” (21) if he had never read Agrippa’s work. Furthermore, Frankenstein tries to emulate incantations used by Agrippa and other authors for “[t]he raising of ghosts or devils” (22). Nevertheless, Frankenstein also states that “the principals of Agrippa had been entirely exploded” (21) and continues with the notion “that a modern system of science had been introduced, which possessed much greater powers than the ancient, because the powers of the latter were chimerical, while those of the former were real and practical” (21). Furthermore, Frankenstein’s father shows him how electricity works as Frankenstein reflects that “[his father] constructed a small electrical machine, and exhibited a few experiments” (23) and that “he made also a kite, with a wire and string, which drew down that fluid from the clouds” (23). Although Frankenstein eventually decides to focus on the scientific, he keeps the goals of the ancient supernatural philosophers in his mind during his studies (23). However, Frankenstein also mentions how his background was devoid of the supernatural:

In my education my father had taken the greatest precautions that my mind should be impressed with no supernatural horrors. I do not ever remember to have trembled at a tale of superstition, or to have feared the apparition of a spirit. Darkness had no effect upon my fancy; and a church-yard was to me merely the receptacle of bodies deprived of life, which, from being the seat of beauty and strength, had become food for the worm. (Shelley *Frankenstein* 30)

This childhood description explains how Frankenstein is moved towards Agrippa’s works, because Frankenstein fails to see the danger in the supernatural without the scary,

supernatural stories of the past. Meanwhile, this description also explains why Frankenstein chooses scientific methods to achieve his goals, because his rational upbringing makes him see more possibilities in empirically proven actions. On the one hand, the events and choices made in *Frankenstein* portray the possibilities and dangers created by the scientific development of the Enlightenment. On the other hand, a hint of nostalgia to the repressed superstitions of the pre-Enlightenment world is revealed by Agrippa's influence on Frankenstein. In short, Frankenstein uses science and technology to create a monster, but is influenced by Agrippa's teachings of the supernatural.

In Stoker's *Dracula*, the origin of the monster is a mystery. Stoker uses Van Helsing to provide lengthy descriptions of Count Dracula's ways, strengths and weaknesses, but even the professor can do no more than utter that the vampire has been "everywhere that men have been" (Stoker 198) regarding the origin of the novel's antagonist. By contrast, the monster in Mary Shelley's *Frankenstein*, who remains nameless in the novel, has a clear origin, because it is created by the protagonist. Dr Frankenstein succeeds "in discovering the cause of generation and life" (Shelley *Frankenstein* 30) during his studies. Moreover, he "[becomes himself] capable of bestowing animation upon lifeless matter" (30) and decides to "[begin] the creation of a human being" (31). However, Frankenstein also decides, "contrary to [his] first intention, to make the being of a gigantic stature; that is to say, about eight feet in height, and proportionably large" (32). Nevertheless, although Frankenstein states that he is able to animate matter with a "spark of being," (34) it remains unclear how this spark is created and what the mechanics are behind the procedure. In other words, the creation of the monster is described as a scientific procedure, but the reader is unable to duplicate the process. Naturally, since Shelley had no knowledge of physics and the animation of dead matter as she only envisioned "the working of some powerful engine" (Shelley "Introduction" 172), the existence of an actual description of the process is impossible. Clearly, scaring the audience

is the main objective of the laboratory scene as Shelley states that “the effect of any human endeavour to mock the stupendous mechanism of the Creator of the world” (172) is “supremely frightful” (172). Nevertheless, Shelley used a conversation between Frankenstein and Walton, the captain of the ship passing by when Frankenstein is chasing the monster, to bypass the unexplainable process as Walton states that “[s]ometimes [he] endeavoured to gain from Frankenstein the particulars of his creature’s formation; but on this point [Frankenstein] was impenetrable” (146). Moreover, Frankenstein provides a good reason to conceal the exact method of animation:

Would you also create for yourself and the world a demoniacal enemy? Or to what do your questions tend? Peace, peace! learn [sic] my miseries, and do not seek to increase your own. (Shelley *Frankenstein* 146)

This statement refers back to Frankenstein’s earlier words in which he states that he tried Agrippa’s methods for himself (22). In short, Frankenstein uses science to create a monster, but, comparable to the monster in the supernatural story of *Dracula*, the exact method is left unexplained.

The 1886 story “Strange case of Dr Jekyll and Mr Hyde” by Robert Louis Stevenson takes a different approach to the scientist-monster bridge. On the one hand there are Stoker’s Van Helsing and Shelley’s Frankenstein: Van Helsing is fighting an already existing monster and Frankenstein is in conflict with a monster created by himself. On the other hand there is Stevenson’s Dr Jekyll, who is in conflict with his own monstrous creation called Mr Hyde. However, unlike Frankenstein’s monster, Mr Hyde shares the physical body of Dr Jekyll. In a way, this makes Dr Jekyll unable to physically confront his own evil creation, but, at the same time, Mr Hyde is always in the same room as Dr Jekyll. Nevertheless, Dr Jekyll is aware of the danger of his experiments as he states afterwards that “[he] hesitated long before [he] put this theory to the test of practice” (Stevenson 62) because the drug “potently

controlled and shook the very fortress of identity” (62), but he continues his experiment because “the temptation of a discovery so singular and profound at last overcame the suggestion of alarm” (62). Moreover, Judith Wilt argues that “Jekyll has known his doubleness perfectly well all his life” (Wilt 82). It could be argued that this doubleness is a reaction to the Victorian age of repressed emotions and passions in which Mr Hyde was simply an outlet of Dr Jekyll’s repressed side.

Like the monster in *Frankenstein*, the monster in “Dr Jekyll and Mr Hyde” is created via a scientific procedure with the initial intention to create something absolutely good. However, Dr Frankenstein has more success than Dr Jekyll because Frankenstein manages to create a being with a moral compass, as is shown when the creature saves a little girl (Shelley *Frankenstein* 94). Furthermore, the creature is capable of rational thought, because he, for instance, reads *Plutarch’s Lives, Sorrows of Young Werther*³ and *Paradise Lost* (86), whilst Dr Jekyll creates an evil being over which he loses control. Granted, Jekyll intends to create a purely good being as well, but fails and creates Hyde again instead (Stevenson 64-5). Moreover, Dr Jekyll starts turning into Mr Hyde without taking the potion and Dr Jekyll requires the potion to remain Dr Jekyll. The procedure to create Mr Hyde is, contrary to the procedure of the animation of Frankenstein’s monster, partly shared with other characters in the narrative. Namely, Dr Jekyll instructs Dr Lanyon to bring equipment and ingredients of his potion so Mr Hyde can change back to Dr Jekyll (52-3). Dr Lanyon describes that he finds “a simple, crystalline salt of a white colour,” (54) a “phial (...) about half-full of blood-red liquor, which was highly pungent to the sense of smell and seemed to [him] to contain phosphorus and some volatile ether” (54-5) and other ingredients of which he could not guess what they were (55). Furthermore, he also reads in Dr Jekyll’s notebook, but quickly realises that the experiments were not going as planned (55). In other words, without realising it, Lanyon learns superficial details about the method of creating the monster called Mr Hyde.

However, Dr Jekyll provides the reader with even more information about the procedure in his own account where he gives a description:

I purchased at once (...) a large quantity of a particular salt which I knew, from my experiments, to be the last ingredient required; and late one accursed night, I compounded the elements, watched them boil and smoke together in the glass, and when the ebullition had subsided, with a strong glow of courage drank off the potion.
(Stevenson 62)

Nevertheless, even this more detailed description is not enough, for the other characters or the reader, to replicate the actual procedure. It can be argued that the story is focussed on the effects of the drug, the existence of Mr Hyde, instead of its creation, but, since the method cannot be reproduced, the scientifically described procedure of the narrative is as unexplainable as the one from *Frankenstein*. Furthermore, according to Joachim Schummer, some writers took “chemistry as the embodiment of the Enlightenment ideas of science, (...) related chemistry to atheism, materialism, nihilism, and hubris, and eventually reinforced the negative view by transforming the “mad alchemist” into the mad scientist” (Schummer 101). Dr Jekyll the chemist, having lost his sense of reality, fits this profile perfectly and it could be argued that the story is a reaction against the rationalism of the Enlightenment. Although the true scariness of the story lies in the suggestion of a hidden monster in every individual, the scientific background adds to the fright of Stevenson’s narrative just like how the supernatural caused fear in other gothic stories.

In conclusion, in the post-Enlightenment world, the reader’s gap of knowledge of science and technology is used by writers as a scary device. Furthermore, science is used to contrast with old superstitions and other supernatural ideas. This gives the old uncanny a chance to re-emerge after being repressed by the rational ideas of the Enlightenment. For instance, the character Van Helsing is introduced in the novel *Dracula* as a scientist, but

ultimately uses supernatural means to vanquish evil. On the other hand, *Frankenstein* and “Strange Case of Dr Jekyll and Mr Hyde” both feature a scientist as a protagonist who intends to create something good. Nevertheless, both Jekyll and Frankenstein are destroyed by their own creation and are therefore showing the possible dangers of new science.

Chapter 3: Supernatural and Scientific Zombies

In contrast to monsters like the vampire, the zombie's origin changed from supernatural in the earliest descriptions to a scientific one in later accounts whereas, for instance, the vampire's origin was always supernatural. Nevertheless, the zombie always remained a reanimated dead person. The early zombie was raised by a Haitian wizard and was frightful to, mainly, post-colonial white audiences because it could be linked to slavery, the independence of slaves or even the retaliation of slaves. However, the contemporary zombie is usually created via a virus or by unknown means and behaves as an uncontrollable plague rather than a slave. Furthermore, it could be argued that the contemporary zombie is used to criticize consumerism. This chapter will briefly examine the voodoo zombie from Seabrook's *The Magic Island*. Furthermore, this chapter will analyse the viral zombie from Brooks' novels *The Zombie Survival Guide* and *World War Z* and the zombie with an unexplainable source from the series *The Walking Dead* and the movie *Dawn of the Dead* and its 2004 remake.

The source of evil in *The Castle of Otranto* and *Dracula* is partly explained by the supernatural, but it is also partly left unexplained. For instance, the origin of the mysterious helmet in Walpole's novel is revealed, but there is no explanation given about its existence. Likewise, Stoker has one of his characters explain how vampires are created, but ignores the fact that it remains unclear where the first vampire came from. By comparison, the first popular appearance of zombies, William Seabrook's anthropological account of Haiti from 1929 in *The Magical Island*, provides a description of the, allegedly, actual method to raise the dead:

It seemed (...) that while the *zombie* came from the grave, it was neither a ghost, nor yet a person who had been raised like Lazarus from the dead. (...) People who have the power to [create a zombie via sorcery] go to a fresh grave, dig up the body before it has had time to rot, galvanize it into movement, and then make of it a servant or slave. (Seabrook 93)

The book was written after a visit to the island and describes many of the Haitians' customs. Nevertheless, Seabrook does not describe exactly how this sorcery works and the reader remains incapable of replicating the procedure for raising the dead. This fact had no effect on the rising popularity of *The Magic Island* and Seabrook's description of the zombie led to cinematic narratives with a role for the zombie as a new monster. However, it did not provoke writers of fiction to incorporate the zombie in the literary tradition of the gothic novel (Hogle "Foreword" 12-3). However, it did inspire filmmakers to create a new cinematic genre: the zombie horror movie. According to Kyle Bishop, the first true zombie movie was Halperin's *White Zombie* (Bishop 64). This 1932 film used the descriptions of the voodoo-zombie to create a monster, but, Bishop argues, the real fright was the loss of control after being turned into a zombie by a voodoo master (65).

In contrast to the early cinematic zombies based on Seabrook's anthropological description, the zombies from the universe created by Max Brooks in *The Zombie Survival Guide* and *World War Z* are reanimated by a virus which turns them into uncontrollable monsters. According to Seabrook, the Haitian zombie is reanimated by a bocor (Seabrook 99), a voodoo wizard or priest, who can control the zombie and, for instance, make it work in the fields (94). By contrast, Brooks describes how the dead are reanimated via the so-called Solanum virus (Brooks *Guide* 2). Furthermore, *The Zombie Survival Guide* tries to disprove the existence of the voodoo zombie. Although the origin of the virus remains a mystery, the creation and existence of the supernatural voodoo zombie and semi scientific viral zombie

behave as opposites. Furthermore, with the exception of the absence of a scientist in Brooks' narratives, the viral zombie can be compared to Frankenstein's monster because both their origins lie in the field of science; Frankenstein is created via a combination of knowledge of anatomy and electricity (Shelley *Frankenstein* 34) while Brooks' zombie is explained as an extremely nasty side-effect of a virus (Brooks *Guide* 2-3). Likewise, the viral zombie can also be compared to Dracula because the viral zombie behaves as a plague (23-5) and Dracula is also identified as a plague (Rogers IX). Furthermore, all these monsters, namely the viral zombie, Frankenstein's monster and Dracula, share the fact that their core origin is left unexplained. In particular, the first chapter of *World War Z* describes the events surrounding the first victim, a little Chinese boy, of Solanum which lead to the outbreak of the global infection (Brooks *World* 5-14), but it remains a mystery how exactly that first victim came into contact with the virus (10). By comparison, the outbreak of the zombie plague in contemporary zombie narratives, like the 2004 remake of George A. Romero's *Dawn of the Dead* from 1978 and the on-going 2003 horror series *The Walking Dead*, is usually left unexplained. For instance, in the series *The Walking Dead* everyone, even those who die without being bitten, is a potential zombie, while other zombie narratives require a bite from a zombie to turn into one. The protagonists in the graphic novel series of *The Walking Dead* discover this fact when another character dies without being bitten and turns into a zombie (Kirkman, ch.3). However, the protagonists in the film series adaptation discover this fact because a scientist reveals it to the protagonist (Ferland). Nevertheless, although the scientist was most likely added to the film adaptation to provide background information on the zombies, an actual origin or source of the zombies is not given. Likewise, there is no mention of any zombie origin in *Dawn of the Dead* apart from the iconic phrase: "When there's no more room in hell, the dead will walk the earth"⁴ (Romero; Snyder). This phrase suggests a link with religion, but religion plays no further role in the movie. Meanwhile, like the

zombies described by Brooks, the zombies in *The Walking Dead* and *Dawn of the Dead* behave like a plague. This can be compared to the anxieties of the first decade of the new millennium with fear outbreaks of SARS, avian flu and swine flu. Also, the zombies in *Dawn of the Dead* are gathering around a shopping mall in which the remaining survivors are hiding. Moreover, as pointed out by Jerrold Hogle, the survivors inside use the conveniences of the shopping mall and almost act like there is no zombie horde besieging them. Hogle describes this as “fun amidst the terror” (Hogle “Foreword” 23) which is supported by David J. Skal as he calls it “consumerism gone mad” (qtd. in Hogle “Foreword” 23). Therefore, it could be argued that *Dawn of the Dead* uses the zombie to criticise modern consumerism. Moreover, the global economic crisis of 2008 and the Occupy movement made the comparison between the zombie and the consumer more noticeable. In a way, consumers tend to behave like zombies when they are shopping as a mass rather than living as individuals.

In conclusion, the zombie can be used to portray anxieties in society. For instance, the early voodoo zombie is a reaction to equal civil rights and the post-colonial fear of former colonizers being enslaved by the former slaves. Likewise, the contemporary zombie depicts the fear of unknown fast-spreading plague-like diseases. Moreover, the contemporary zombie can be used as critique on modern consumerism.

Conclusion

Practically speaking, the Enlightenment, with its empiric rationalism, discarded the need for superstition and religion. However, the spiritual need for the uncanny and the supernatural clearly still exists as the supernatural is commonly used in the gothic tradition. Moreover, the gothic genre has gained another plot device next to the supernatural, namely the scientific.

The first gothic novel, *The Castle of Otranto*, was a clear reaction to the Enlightenment as it used spectres and other supernatural occurrences in an era of rationalism. Likewise, the evil undead count in *Dracula* is clearly supernatural and Dracula fears religious items like the cross and the wafer. Moreover, Stoker's narrative has a man of science, namely Dr Van Helsing, use the supernatural to vanquish vampires and prove the scientific practically useless. By comparison, the supernatural in *Frankenstein* is only a minor plot device, but the protagonist uses the scientific to create a monster and science is therefore shown as dangerous rather than useful or helpful. By the same token, the scientific discipline of chemistry of Dr Jekyll in "Strange Case of Dr Jekyll and Mr Hyde" creates a monster, but that same chemistry proves to be unable to destroy what it created. Therefore, the gothic narratives of Shelley and Stevenson rely on the scientific of the Enlightenment, but, since science fails miserably, these narratives use the scientific in the same manner other gothic fiction used the supernatural.

Furthermore, the supernatural and the scientific are used as similar plot devices to comment on social anxieties. For instance, Van Helsing's comparison of vampirism to an infectious disease combined with Dracula's sexual behaviourisms point towards the syphilis epidemic of the novel's age. By the same token, although zombie narratives are no longer a

reaction to the Enlightenment like earlier gothic fiction, both the voodoo zombie and the viral zombie are used to comment on society. Specifically, the voodoo zombie in *White Zombie* reflects uneasiness regarding slavery and post-colonialism and the viral zombie of *Dawn of the Dead* and *The Walking Dead* echoes the fear of contemporary plagues like the avian flu.

In conclusion, the scientific can be seen as a modern variant on the supernatural as a plot device.

Notes

¹ Professor Van Helsing is from Amsterdam and, as a foreigner, does not speak native or near-native English. Thus, Stoker has Van Helsing make various grammatical errors; these errors are copied in his quotes with the notion of *sic erat scriptum*, in short, [sic].

² According to the footnotes provided by J. Paul Hunter et al., Heinrich Cornelius Agrippa was a German physician, author of the 1531 work *De Occulta Philosophia* and reputed magician who lived from 1486 to 1535 (*Frankenstein* 22).

³ Shelley spells *Sorrows of Young Werther* incorrectly as “Sorrors of Werter” (*Shelley Frankenstein* 86). This could be a mistake made by Frankenstein’s creature. However, it could also be a mistake made by the editor of this edition. Nevertheless, it does not seem to be relevant for the points made here.

⁴ This phrase is used in the 1978 original of *Dawn of the Dead* and in the 2004 remake. It is uttered by one of the protagonists in the original, but in the remake a random news reporter, a flat character, utters it. However, this minor difference does not alter its connotation.

Bibliography

The Bible

Bishop, Kyle William. *American Zombie Gothic: The Rise and Fall (and Rise) of the Walking Dead in Popular Culture*. Jefferson: McFarland Pub, 2010.

Botting, Fred. *Limits of Horror: Technology, Bodies, Gothic*. Manchester: Manchester UP, 2010.

Botting, Fred. *Making Monstrous: Frankenstein, Criticism, Theory*. Manchester: Manchester UP, 1991.

Brooks, Max. *The Zombie Survival Guide: Complete Protection from the Living Dead*. New York: Three Rivers Press, 2003.

Brooks, Max. *World War Z*. New York: Three Rivers Press, 2007.

Brown, Marshall. *The Gothic Text*. Stanford: Stanford California UP, 2005.

Butler, Marilyn. "Frankenstein and Radical Science." *Frankenstein*. New York: W.W. Norton, 1996.

Clery, E. J. "The Genesis of 'Gothic' Fiction." *The Cambridge Companion to Gothic Fiction*. Ed. Jerrold E. Hogle. Cambridge: Cambridge UP, 2002.

Dawn of the Dead. Dir. Zack Snyder. Universal Pictures, 2004.

Dawn of the Dead. Dir. George A. Romero. United Film Distribution Co., 1978.

Dziemianowicz, Stefan. "Might Of The Living Dead." *Publishers Weekly* 256.28 (2009): 20-4.

Edwards, Justin and Agnieszka Soltysik Monnet. *The Gothic in Contemporary Literature and Popular Culture*. New York: Routledge, 2012.

- Elferen, Isabella van. *Nostalgia or Perversion? Gothic Rewriting from the Eighteenth Century until the Present Day*. Newcastle: Cambridge Scholars Pub, 2007.
- Ellis, Kate. "Female Empowerment: The Secret in the Gothic Novel." *Phi Kappa Phi Forum* 90.3 (2010): 8-9.
- Hogle, Jerrold E. "Introduction: the Gothic in Western Culture." *The Cambridge Companion to Gothic Fiction*. Ed. Jerrold E. Hogle. Cambridge: Cambridge UP, 2002.
- Hogle, Jerrold E. "Foreword by Jerrold E. Hogle." *American Zombie Gothic: The Rise and Fall (and Rise) of the Walking Dead in Popular Culture*. Jefferson: McFarland Pub., 2010.
- Johnson, Barbara. "My Monster/My Self." 1982. *Frankenstein*. Ed. J. Paul Hunter. New York: W.W. Norton, 1996.
- Kirkman, Robert. *The Walking Dead. Compendium One*. 2003-12. Berkeley: Image Comics, 2012.
- Lewis, W.S. "Introduction." *The Castle of Otranto*. Oxford: Oxford UP, 1964.
- Parker, James. "Our Zombies, Ourselves: Why We Can't Get The Undead Off Our Brains." *Atlantic Monthly* 307.3 (2011): 32-3.
- Reed, Thomas L. *The Transforming Draught: Jekyll and Hyde, Robert Louis Stevenson and the Victorian Alcohol Debate*. Jefferson: McFarland Pub., 2006.
- Rogers, David. "Introduction." *Dracula*. Hertfordshire: Wordsworth, 2000.
- Schummer, Joachim. "Historical Roots of the Mad Scientist: Chemists in Nineteenth-century Literature." *Ambix* 53.2 (2006): 99-127.
- Seabrook, William. *The Magical Island*. New York: Harcourt, Brace & Co., 1929.
- Shelley, Mary. *Frankenstein; or, the Modern Prometheus*. 1818. *Frankenstein*. Ed. J. Paul Hunter. New York: W.W. Norton, 1996.

Shelley, Mary. "Introduction to *Frankenstein*, Third Edition." 1831. *Frankenstein*. New York: W.W. Norton, 1996.

Stevenson, Robert Louis. "Strange Case of Dr Jekyll and Mr Hyde." 1886. *Dr Jekyll and Mr Hyde and Other Stories*. London: Vintage Books, 2007.

Stiles, Anne. "Literature in Mind: H.G. Wells and the Evolution of the Mad Scientist." *Journal of the History of Ideas* 70.2 (2009): 317-39.

Stoker, Bram. *Dracula*. 1897. Hertfordshire: Wordsworth, 2000.

Toumey, Christopher. "The Moral Character of Mad Scientists: A Cultural Critique of Science." *Science, Technology, and Human Values* 17.4 (1992): 411-37.

Townshend, Dale. *The Orders of Gothic*. New York: NY AMS Press, 2007.

"TS-19." *The Walking Dead*. Dir. Guy Ferland. AMC. 5 December 2010.

Walpole, Horace. *The Castle of Otranto*. 1764. Ed. W.S. Lewis. Oxford: Oxford UP, 1964.

White Zombie. Dir. Victor Halperin. United Artists, 1932.

Wilt, Judith. *Ghosts of the Gothic: Austen, Eliot & Lawrence*. Princeton: Princeton UP, 1980.