

Infectious Vampires: Analyzing Media Portrayals of Infectious Disease in Vampire Films Using Content Analysis

By

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Abstract

Multidisciplinary approaches are able to provide holistic analyses and results. Many would not inherently put public health and media studies together for a project. However they are related because the unknown, especially disease, has always frightened people. Stories about disease continue to be a part of the human experience, teaching social conformity or acting as warnings against specific places or behaviors. The vampire character has consistently been a metaphor for infectious disease. This study incorporated the media studies and public health disciplines to analyze ten of the top grossing American vampire films from 2000-2012 to understand whether or not vampire film narratives portray infectious disease realistically, supporting public health positions. Results indicate that these movies do not enforce the idea that infectious disease are preventable, instead promoting the audience to empathize with the vampire character. This potentially has significant application for the public health industry, specifically for understanding and predicting how the public views infectious disease.

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The unknown has always frightened people. Humans have most feared the unfamiliar, which may include the dark, the unexplainable, or the different. One of the most enduring human fears revolves around sickness and disease. Historically, fear of sickness and disease has been perpetuated regardless of medical advancements and scientific endeavors made to understand them. Deadly microbes continue to arise unpredictably, making themselves known in the form of unpleasant ailments to the human body. The persistence and relevance of disease to humans engenders its study.

Multiple belief systems have been created to explain disease, such as animism. Stories have always been at the heart of these explanations, providing rationalizations of the unknown to teach general truths. Narratives are used to make sense of the world, phenomena, events, and people. By and large stories have no boundaries, making them as malleable as the imagination of the author and those listening; anything can happen in stories. No matter where or when stories are created or told, they are “culturally, historically and economically relevant to a very tangible social reality” (Cavallaro, 2002). Many times, stories are used to encourage social conformity or provide warnings against specific places or behaviors (Bettelheim, 1975). A classic example would be *Little Red Riding Hood* (Grimm 1826/2009); one of the many lessons this story offers is to not go into the woods alone, or stray from the path.

The monster, as the wolf in *Little Red Riding Hood*, has been one of the most enduring characters in narratives. Monsters express social fears



Figure 1. Visual of Little Red Riding Hood.

surrounding behaviors such as scandal and insult, or sexual promiscuity, to establish societal rules (Cavallaro, 2002; Ingebretsen, 2001).

One of the most persistent monster characters has been the vampire. The vampire has been and continues to be the primary metaphor for infectious diseases, including sexually transmitted infections (Castel et al., 2013; Choi, 2012). This metaphor is influential because of the continued use of and mainstream popularization of the vampire character. Contemporary portrayals of vampires are now less frightening, taking on more human-like characteristics and behaviors. Because of the humanization of the vampire, one must wonder whether the infectious disease metaphor vampires embody has changed. The association between how the vampire character relates to American cultural views of infectious disease has not been established.

Current disease adaptation may in part be explained by the expectation of illness within American culture. The current views of infectious disease will influence and help explain the already high expectations of medicine in America (Kravitz et al., 1994). Diseases such as measles and polio are rising within the United States (US), bringing back once eradicated diseases (CDC, 2014; Levine, 2011). While being an initial study, if carried further, this project could possibly help inform infectious disease trends based on popular culture; the American public and public health professionals will be able to view popular culture for how it may influence communal and national health trends.

The vampire character over time has been thoroughly studied for how it has adapted to the social zeitgeist. This study will explore the association of vampire portrayals in film to

infectious disease as a tangible and influential matter to everyday life, analyzing whether these films and characters support public health policies.

Center for Disease Control (CDC) protocols for measles, influenza, or sexual diseases, etc. will act as general public health policies to consider when establishing whether infectious disease is viewed to be a preventable or inevitable experience. I will do this using media content analysis methodology to code for how the vampire, as infectious disease, is portrayed in ten of the top grossing vampire films from 2000-2012. This coding will then be evaluated against public health guidelines to prevent infectious disease. Only American films will be analyzed because of the differing cultural context seen within foreign films. Grounded in the fear-based metaphor of the character, vampires should be consistent with public health protocols.

In media, the directors, producers, actors, etc. aim to incite the audience's emotions rather than their reason. Monster movies all aim to frighten, alarm, and upset the audience. Now more than ever, the mainstream media is pushing boundaries with more intense gore, sex, death, and realism. This directly contrasts public health risk communication tactics. Risk communication is used by public health officials to relay information about disease in a calm, reassuring, and comforting manner. In general, there are two avenues risk communication utilizes, the first being precaution advocacy and the second being outrage management. Precaution advocacy tries to alert the public who are not sufficiently concerned of hazards that experts have deemed serious, while outrage management aims to calm groups of the public who are distraught about minor risks (Abraham, 2009). Overall, risk communication is meant to communicate information that will help the public act rationally, not emotionally, in difficult

situations (Abraham, 2009; Adil, 2008). This directly contrasts the media's intentions and messages. In most movies, the public acts instinctively, impulsively reacting to the threat. While this is a valuable narrative tool to help the protagonist(s), the idea holds that, because of the protagonist/ larger entity (i.e. the CDC), there will always be a savior, that the public needn't take responsibility.

Because the influential nature vampire film narratives may have concerning infectious disease has not been studied, this project offers a new perspective to identify how Americans understand infectious disease through film and how public health officials could use this research to promote risk communication. This project may be able to establish general awareness of infectious disease, with vampire films expressing a form of general population risk to infectious disease—if people are less vigilant, infectious disease could become more prevalent. Coupled with the mass consumerism of film/ media, public health groups/ organizations may need to take this into consideration to build and implement counteractions for how people may react based on the popular culture zeitgeist of society. Just as humans have evolved so has infectious disease, making this project applicable to the public health sector because the primary goal is disease prevention. The comprehension of infectious disease based on how people perceive it as being an inevitable or preventable experience is invaluable to the public health discipline; by understanding, both how diseases behave and how people understand disease, prevention campaigns may become more specialized. More holistic interpretations about how stories have influenced humans can be better appreciated and made more available.

Background

Scope and Definitions

Because of the vampire character's consistency within mythology across the globe the scope of this research has the potential to reach far and wide (Castel et al., 2013). This study took a Western ideological and American film perspective, specifically of vampires, the medical system, and sexual and infectious disease. Full length feature films were examined because they encompass an entire story, from start to finish. Within a film, an alternate universe may be defined and experienced, whereas in television or other forms of media, multiple sessions are needed to fully understand the outcomes and themes.

Definitions are provided as:

The vampire is a creature that is neither living nor dead that feeds on the blood or vital force of the living (Castel et al., 2013; OUP, 2012). Vampires (typically) can only reproduce via bite, needing to infect another person to reproduce (Castel et al., 2013; Faivre, 1993).

Infectious diseases, including sexual disease, are caused by various organisms such as bacteria, viruses, fungi or, mirroring the vampire, parasites. Bites from insects or animals, or ingesting contaminated food, water, or environmental exposures pass infection from person to person (Mayo Clinic, 2013). Health care is defined as "the maintenance and improvement of physical and mental health, especially through the provision of medical services" (AMA, 2013; OUP, 2012).

Public Health

During health threats, societies generally evaluate an outbreak within the scope of Philip Strong's "epidemic of fear" (1990). The epidemic of fear reaction is characterized by the suspicion of friends or neighbors, and of the environment, and aims to understand the cause, scope, and consequence of the disease (Abraham, 2009; Strong, 1990).

The epidemic of fear is heavily linked to moral blaming within society (Abraham, 2009). Moral blaming can be seen throughout history, such as in rape culture, which emphasizes victim blaming (i.e. "She was asking for it..."). To express this moral blaming, stories of specific individuals or places may be created (e.g. *The Masque of the Red Death* by Edgar Allan Poe, 1842/2010). Accompanying moral blaming, the public often attempts to understand the health threat using traditional explanations, including stories (Abraham, 2009). Moral stories are often used as a platform to criticize authority, whether social, corporate, or governmental (Abraham, 2009). Because the morals and norms are culture and society specific, risk communication has been and needs to be tailored to specific groups of people and areas; as stated by Abraham (2009) "the way people respond to health communication messages is dependent on whether their cultural construction of the disease is similar to that of the communicator." Only American film will be used because of the cultural specificity of risk communication.

Vampire stories are appropriate evidence to evaluate how the public understands infectious disease because they are unbridled narratives of people's basic understanding. Embedded within risk communication is the understanding that the public are both the prize, whose attention societal groups pay for, and the active participants of political processes (Abraham, 2009; Adil, 2008). As active participants, the public exemplifies their understanding

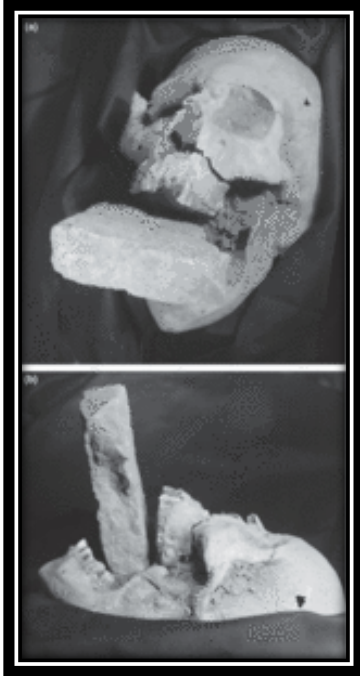
of disease through their daily actions and reactions to risk communication. While most people do not literally believe in vampires, the fact that some embody vampiric behaviors hinders public health initiatives. For example, one person may spread the threat by exposing themselves and others to an infection (Alaszewski, 2005). It therefore stands that through evaluating the public's worldview towards infectious disease and medicine, their understanding can be inferred.

Regardless of the public's understanding of infectious disease, the CDC represents and confirms the position that infectious diseases are largely preventable within the U.S. How the CDC defines disease incidences exemplifies the preventable stand point; an epidemic is more cases of a disease within a community or region than would be expected. As a preventable experience, guidelines and precautions against infectious disease are offered by the CDC, oftentimes explaining steps people can take to avoid specific ailments or disease in general. Preventative measures include hand washing, maintaining a healthy weight, exercising, condom use, and not sharing fluids (through a toothbrush, needle, etc.). Although, adages such as: "in that one movie so and so survived because of blank" are used too often. Phrases like this imply that, from any type of media, the basic information is reliable. Furthermore, something generally always saves the universe, suggesting that there is always a solution or cure, regardless of the logistics of the situation, which is simply neither reliable nor accurate. Implications like these encourage ignorance of medical realities.

History of Vampires

Disease and the vampire have gone through a long and sordid history. Examples easily come to mind (Ann Rice, SARS, the plague, Dracula) and are found across the world (Burkhart, 2010; Jaffe and DiCataldo, 1994; Joshi, 2011; Nanos, 2010). Each version varies in representation; however, traditional stories are consistent in describing them as heinous and deformed, dark creatures, noxious to the living, spreaders of disease, while being widely blamed for epidemics such as the plague and tuberculosis (Joshi, 2011; Smith, 2009). Simplified, the vampire is the “other” of society. In line with Strong’s epidemic of fear, the moral suspicion individuals and communities have against one another highlights the differences between them, sometimes isolating specific people and groups (1990).

Because vampires reproduce via bite, they can be directly compared to the inoculation mode of transmission of a microbial contagious disease (Castel et al., 2013). Specifically, the vampire has been associated with certain diseases throughout history: plague was one of the first associations; others include tuberculosis, syphilis with vampire’s close relation to sex and promiscuity, and recently, AIDS being transmitted through bodily fluids (Castel et al., 2013).



This metaphorical bleeding into reality can be seen throughout history. Archaeologically, the Venetian vampire confirms people's belief in vampires during plague time Europe. As illustrated in Figure 2 below, a 16th-century woman's remains were discovered among medieval plague victims in Venice.

Demonstrating the pervasive vampire metaphor: "Her jaw had been forced open by a brick—an exorcism technique used on suspected vampires in Europe at the time" (Dell'Amore, 2010).

Contemporary belief held that the brick was to exorcise the corpse to prevent a vampire from further ravaging Venice with plague (Borrini, 2008; Nuzzolese and Borrini, 2010; Choi, 2012).

Several historic individuals have also been likened to the vampire, with at least a small reference to their health. We now associate two historical individuals, Vlad Tepes or "Vlad the Impaler" and Count Elizabeth Bathory or the "Blood Countess," with the vampire. While they were not always associated with the myth, they are now incorporated into the legend surrounding the vampire (Dayan and Dayan, 2011; Joshi, 2011; Radford, 2012).

Figure 2 Figure 2. The Venetian vampire remains as it appeared in excavation, courtesy of Nuzzolese and Borrini, 2010

Vlad Tepes was the 15th century Wallachian (Romanian) war lord, who defended his land against invading Ottomans (Dayan and Dayan, 2011; Joshi, 2011; Radford, 2012). He gained the name "impaler" once it became publicized that his favored method of dispensing torture or executions was by impalement (Dayan and Dayan, 2011; Joshi, 2011; Radford, 2012). His association to the vampire extends outside his cruelty to his adopted name of "Dracul," (meaning dragon) which

Bram Stoker used for the name of his vampire count (Dayan and Dayan, 2011; Joshi, 2011; Radford, 2012). Since the publication of *Dracula* (Stoker), Vlad continues to be a prime example of the vampire. Stories of the Blood Countess, or Elizabeth Bathory, have also been linked to the vampire. Countess Elizabeth Bathory, a Hungarian royal and contemporary to Vlad Tepes, is believed to have tortured, killed, and bathed in or consumed the blood of more than 500 girls/women (virgin or otherwise) to preserve her youth (Joshi, 2011). It is believed that Stoker incorporated Bathory's lore into *Dracula* by making him appear younger after consuming human blood (Joshi, 2011).

Accompanying the horrific tales of people embodying the vampire it is now thought that a particular disease helped create the blood sucking creature in the form of congenital porphyria—a blood disease that drastically alters an individual's appearance and behavior (Burkhart, 2010; Dayan and Dayan, 2011; Lane, 2002). In this disease, heme (the oxygen carrying molecule in blood) production is not completed correctly, resulting in excessive secretion of porphyrins (ring-shaped molecule that binds to metal ions necessary in chemical pathways such as cellular respiration) (Burkhart, 2010; Dayan and Dayan, 2011; Lane, 2002). During heme production some or all of the eight pathways that porphyrins use to create heme are blocked, producing various forms of the disease (Lane, 2002; Dayan and Dayan, 2011). The body's inability to use the porphyrins results in the unusual and sometimes toxic buildup of red and purple pigments in the body (Lane, 2002). This disease results in altered appearances, including disfigurement, light sensitivity (light readily activating the porphyrin proteins), skin discoloration, burns, blisters, and lesions, darkened teeth, hallucinations or trance-like states, bodily hair growth, and others (Burkhart, 2010; Dayan and Dayan, 2011; Lane, 2002; Mayo

Clinic). These noticeable symptoms of porphyria are also hallmarks of the traditional vampire legend— light sensitivity and paleness, skin lesions resulting from seemingly harmless things (i.e. light, food, etc.), delusions of power, and body disfigurement/ unsightliness. Porphyria was made famous by King George III of England. Otherwise known as the “Mad King,” he was prone to fits of madness, including hallucinations (Dayan and Dayan, 2011). This disease fueled the belief in and gave people physical, observable, evidence of vampires.

Another direct relation between vampires and disease is the exhibition of clinical vampirism. In this rare mental disorder, individuals feel the compulsive need to consume blood or life force, sometimes associated with sexual pleasure (Haines, 2011; Jaffe and DiCataldo, 1994; Olry and Ramsland, 2012). Popularly known as Renfield’s syndrome, it is not seen as a true psychological disorder and cannot be found in the DSM-IV (Ramsland, 2012). This belief is exhibited by multiple chat rooms and information websites such as *vampirewebsite.net*, *vampirerave*, *sanguinarius*, and others where people profess to be a part of the vampire community. These sites imply that the vampire character’s relation to infectious disease has changed, presenting them as fashionable within society. However, it may be inconsequential whether or not Renfield’s syndrome is recognized as a true disorder because the literal myth is seeping into reality; people are displaying vampiric behavior, plainly living in a fantasy.

Public Health and the Vampire

Just as the vampire legend is bleeding into reality, disease may be drifting farther from people’s minds. This may be due to a perception change of infectious disease, and people

readily relying on the medical system to cure any ailment. From personal experience and observation, I have noticed that during times of seasonal sickness the first advice given to people is to get treatment; the idea being that medicine has and will continue to be a quick and final solution to make you better. We are now closer than ever to dominating even our oldest fear of disease with vaccinations for cancer and HIV (Janes et al., 2012; Weiner and Kim 2002). There is now a medication for almost everything. While the over medicalization of society is not our concern, it does exemplify medical reliance.

While treatment development is important and useful, preventative measures have become less prevalent (Leask, 2000). This is reflected in the global trend surrounding preventative-disease vaccinations; around the world there has been an increased concern of vaccine safety, resulting in a shift of “public tolerance of vaccine risk” (Leask, 2000). This means the public are more likely not to get vaccinated, accepting the risks of the disease for the security of not being exposed to the vaccines’ possible or supposed side effects. The contrived side effects concern the idea that not getting the vaccine will prevent an individual from developing a more severe disease/illness than the vaccination could prevent. While some of this vaccine denial may be due to ignorance, it may also in part be due to the reliance on therapeutic medicine rather than preventive measures because of how people view infectious disease and the health care system today (Kravitz, 1994). Just like infectious disease, the vampire has never left popular culture; instead it has adapted to it (Doniger, 1995).

Methodology

In order to conduct this study, I selected ten mainstream Hollywood movies. Mainstream Hollywood films were used because of their large circulation, being likely to reach many people. They were then narrowed to the top grossing, PG-13 or R films, regardless of year. Each was selected based on its opening weekend box office grossing between 2000 and 2012, grounding it as a proxy for the films' initial public popularity (Table 1, Appendix I). The Motion Picture Association of America's rating system specifies the PG-13 and R ratings as dependent on the viewer, suggesting self-awareness and agency, whereas the G and PG ratings are for children, who are fully dependent on their parents. Multiple movies from the same series were disregarded based on the idea that each movie is within the same universe and is expressing the same overarching message and themes (e.g. only one *Twilight* movie was viewed).

With these variables in place, content analysis was used to analyze the films. Briefly, content analysis can be defined as the analysis of messages in a systematic, objective, and quantitative manner (Neuendorf, 2002). This methodology tries to meet the standards of the scientific method. Content analysis does this by trying to avoid biases, having predesigned categories that are replicable, valid, applicable, reliable, hypothesis-based, and quantitative (Neuendorf, 2002). Content analysis relies on symbolic qualities to "trace antecedents, correlates, or consequences of communications" (Krippendorff, 2013). This distills the invisible context of a subject analyzable. The newly analyzable content has "cognitive consequences or their sender, their receivers" making it influential to its audience (Krippendorff, 2013). The ability of content analysis to elucidate unobservable context(s) makes it ideal for this study for recognizing and inferring metaphors of the vampire.

Category Definitions

Categories were established based on the above literature review, primarily the vampire character's history. Six categories were established for content analysis (see below). Coding definitions may be found in Appendix I.

Sex- The sex of the main vampire will be established as either male, female, or other.

This category will be used to establish whether there is an overall bias towards males or females within vampire film narratives. This is important because if the genre is biased one way or the other gender autonomy may be inferred, providing a social narrative of how the sexes are thought of in relation to infectious disease.

Frequency of the Infected- The scope of the infectious disease within the film will be established using epidemic, pandemic, localized, outbreak, or bio-terrorism definitions (see Appendix I for definitions). This will exemplify whether the public perceives infectious disease to affect their daily lives.

Choice- This category will explore whether or not the disease is a preventable or inevitable experience. This will be done by assessing whether or not characters have a choice to become a vampire; is the transformation a conscious decision or is it out of the character's control? Without choice, the transformation (or disease) is inevitable.

Point of View- This will note whether the main character is a vampire, evaluating whether the audience may be influenced to have sympathy for the infectious disease as the vampire character or whether malice is generated towards the vampire/ infectious disease as the villain.

Epidemic of Fear- Qualitative notes on whether characters/ citizens are trying to understand the disease. This will explain whether the public is trying to understand the scope and consequence of the infectious disease. This category differs from the frequency of the infected because it focuses specifically on the actions of the characters as how they understand the situation, not how the audience does.

Comments- Qualitative notes will be taken on any elements related to public health measures, whether literal or metaphorical (e.g. use of needles, quarantines, presence of doctors or medical organizations etc.)

Results

Each of the ten analyzed films was among the top 100 films the year it was released.

Four of the top ten films during the twelve year period were released in 2012.

Sex- Only two of ten films featured female leads (Table 2 Appendix I).

Frequency of the Infected- While placing the films into a definite category was possible, there was not a clear distribution, with three of the films also having bio-terrorism elements. Three films classified as having an epidemic degree, two expressed pandemic scopes, three films expressed outbreak status, while only one film fit the localized category (Table 3 Appendix I).

Choice- Eight of the ten films were classified as inevitable, with vampirism able to be forced upon people. Only two of the films had vampirism as a choice, suggesting it to be a preventable experience (Table 4 Appendix I).

Point of View- Six films had vampire main characters (Table 5 Appendix I). While this is the majority in this study, a larger sample size would be more telling.

Epidemic of Fear- All of the films implied the scope and consequence of the disease, as well as having multiple references toward disease or health (Table 6, Appendix I). With the exception of *Daybreakers* (2010), the films consistently emphasized the suppression of or specialized knowledge of vampires. Albeit *Underworld: Awakening* (2012) forced monsters (vampires and werewolves) into mainstream attention, it was evident that before that point, vampires were a secret and unknown group within the population. However, characters that were aware of vampires within these films were not able to fully understand the entire scope of the vampire presence/ disease. Especially in *Dracula 2000* (2000), *Abraham Lincoln Vampire Hunter* (2012), and *Blade II* (2002) the continuation or branching out of vampires was related to how disease may spread; with one bite the new vampire could infect an unknown number of people, exponentially spreading the infection. Although, the consequences were able to be extrapolated by the characters that were conscious of the vampire presence in the results of world and social breakdown. Most evident in *30 Days of Night* (2007) social breakdown directly related to survival of the vampires. In *Daybreakers* (2010) or *Abraham Lincoln Vampire Hunter* (2012), the vampires either had or wanted to be in control, directly threatening the protagonist as the character embodying the right ideology and morals.

Comments- These results were movie specific.

Break Dawn Part 2 (2012) had heavy moral implications related to being a vampire. On the surface, vampires could either be good or bad depending if they drank animal or human blood. Characteristic of the narrative, vampirism was akin to marriage, needing the singular love and devotion of and to an individual to be happy. The disease also affected people differently, with individuals having different supernatural abilities. Essentially exemplifying how disease can manifest differently in different individuals.

Underworld: Awakening (2012) had very overt references to health and medicine. The beginning narration refers to vampirism as an infection that needed to be "purged" from society. This purge was systematic and unbiased.

Van Helsing (2004) was one of the films with elements of bioterrorism in it. While it was focused on a particular region (Transylvania) the vampires planned to spread the disease as far as possible through their offspring. The morality of the characters was also evident in the film's heavy relation to religion (Catholicism). However science was also emphasized, with a cure being a significant trope within the narrative. Specialized technology was also used to combat the illness, similar to vaccinations and quarantine measures.

Blade II (2002) emphasized the genetic modification of the vampire disease, resulting in a new threat that affected both vampires and humans. This new threat was treated and viewed like an addiction, complete with distorted physical transformation. In addition to genetic modification, an autopsy was a central element to learning how to defeat the threat. By conducting the autopsy, the characters were able to use a dead infected vampire's pheromones to destroy them. Blade, the main character, also circumvented blood lust by injecting a serum, effectively vaccinating himself against this behavior.

Dark Shadows (2012) centered on an ancestral curse, with each generation experiencing some sort of ailment (e.g. werewolf Carolyn). Psychology was applied to the main vampire—Barnabus—when testing the validity of his “fantasy”/ disease of being a vampire. Within the narrative, blood transfusions were used as a hypothetical cure and infection transmitter, changing one character into a vampire without being bitten, suggesting that choice is relevant.

Isolation was key in *30 Days of Night* (2007). The isolation of the town helped the survival of vampires—once they began to feed, the entire town became infested with the disease—effectively destroying the town completely before moving on. Furthermore, it is evident by the dried blood on the vampires’ faces that they had decimated a town before, slowly spreading from town to town (however, how long ago that was is not clear). People needed to avoid all contact with the afflicted to avoid getting the disease, indicating that the disease was inevitable.

Bioterrorism was a blatant element in *Abraham Lincoln Vampire Hunter* (2012). Vampirism was used as a weapon by the Confederate vampires to win battles. An extraneous source was needed to stop the infection—only a human could kill vampires; the dead could not kill the dead. Without fully draining a person, an individual would automatically become a vampire, removing choice and establishing it as a contact based infection. These vampires could also walk in the sun, which may suggest a nonspecific time for transference. With only a few individuals working to stop vampirism, the narrative relies on few to save many, negating the herd mentality that many vaccinations require.

Dracula 2000 (2000) also uses the concept of filtration, or transfusion. By filtering Dracula’s blood through leeches and then injecting it into himself, the Van Helsing character

gained an extended life. If in contact with a vampire, one bite was enough to change an individual. Although, there could be discussions on the penetration theme seen throughout the film as a means of transference and lack of choice of the disease. The primary emphasis centered on religious beliefs as an explanation and solution for the vampire plague.

Queen of the Damned (2002) was very removed and fanciful. Other than the hallmark characteristics of the vampire character, only a particular family could be linked with vampirism through eternity. This may suggest a genetic element or predisposition to the disease, while also implying that there are methods for trying to understand the disease.

Daybreakers (2009), conversely, had vampirism as the norm. The majority of people were vampires, glamorizing disease and valuing humans only as food. However, the audience understood that vampirism was a threat, because with a vampire majority, vampires essentially annihilated themselves by depleting their food source. The fact that vampirism could be reversed reinforced the idea that an alternative/ saving grace will always swoop in at the last second to make the universe right again.

Discussion

Over-all, vampire films contradicted public health preventative policies. Specifically seen in the choice category frequencies, the analyzed films largely imply that disease is an inevitability. Due to the vast preventative measures public health and medical initiatives promote, with many of them being simple everyday tasks and habits, such as washing your hands or not sharing needles, makes the portrayal of inevitability counterproductive to public

health policies. Because these films contradict the traditional precautions of vampire tales, we must refute the proposed hypothesis.

While the act of being infected is also very simple, prevention is essentially neglected in the ten analyzed films confirming and propagating the idea that disease is inescapable—expressing disease and sickness as an unstoppable Big Brother entity. Furthermore character autonomy within these films is removed, making it the individual's responsibility to resist or avoid the disease. Thinking of infection in this way plays to America's reliance on medicine; with disease being an uncontrollable force it makes sense that prevention would seem pointless, therefore shifting medical focus to treatment measures. This is evident in the numerous advertisements and prescription of pharmaceutical drugs, such as *Lunesta*, which largely treat an ailment rather than overall health.

Similarly, the audience is continually meant to sympathize with the vampire character. As the main character of the narrative, the audience is brought into their feelings and plights, relating the characters' experiences to themselves. While being internalized within the audience this way, this also makes the characters and their experiences, no matter how unrealistic or terrible they may be, attractive. In light of the vampire's historic metaphor as infectious disease, this is damaging to the original purpose of the character, specifically for promoting preventative measures. It instead undermines the significance and consequences of infectious disease, while also possibly making risky behavior seem more attractive or less consequential.

In the context of gender studies, featuring a strong female vampire may be beneficial. In *Underworld: Awakening* (2012), the female lead is virtually equal or superior to all other

vampires; she is able to do anything male vampires can. However, only two films featured female leads, possibly specifying a social or genre bias towards male vampire characters; however, such bias may not be limited to vampire films. This male bias could indicate a social dynamic of patriarchy within a vampire community, where power would be implied to flow through males. Relating to infectious disease, this could demonstrate perceptions of how the disease affects the sexes differently, such as with females dying more frequently than men rather than being successfully turned.

In analyzing the frequency of the infected, only one film demonstrated a localized scale; each of the other categories were evenly distributed by classification. This is encouraging because it would seem that people are aware of disease. Both the audience and the characters understand that disease could come to them. However, with each of the definitions, and due to the medium, people are able to remove themselves from the possibility of the monster/ disease affecting them directly. Especially in the outbreak and pandemic definitions, the idea is that monsters and disease manifest in places outside of the audience's interaction zone, including in another universe that is separated by a screen.

Some films demonstrated more disease knowledge than others. Seen in the epidemic of fear category, most of the analyzed films have moved to a more rational line of thinking, incorporating scientific methods, and if-then conclusions. Specialized knowledge and suppression of disease was seen throughout the films, corresponding to public health entities seen in the real world. Furthermore, the entire scope of the vampire presence/ disease could never be fully understood by the characters or the audience. In this way, the films take on a realistic perspective and approach to disease. Because of the partially realistic approach to the

vampire/ disease in the films, drawing the line between genuine information and extended story elements becomes difficult. The lay person would not be able to decipher the extended versus the real elements without having a background knowledge of medicine before viewing these films. But how could everyone? These films are meant for the masses as a form of escape from everyday life. Vampires aren't real. Situations seen in these films will never literally occur. But the crux is in the basis of storytelling, as a means to convey truths or social rules, and the media's ability to glamorize people, places, actions, or things makes them exceedingly influential because people like and relate to the stories. Albeit, relating to the characters and morals is what makes a good story, the media has bypassed the purpose of narrative (to tell truths) for the interest of commercializing the fantastic story elements which stretch the truth. Only *30 Days of Night* (2007) showed how disease can, has, and will ravage a population, mirroring the devastation of the plague or other outbreaks.

Breaking Dawn Part 2 (2012) was sixth of the top ten grossing films of 2012, indicating high interest and viewing rates, bringing the vampire character even more into mainstream consciousness. Each of the films was within the top 100 films of its release year. In the 2012 year, four of the studied films were released. This lends weight to the prevalence of specific monsters becoming prevalent at certain times, depending on widespread cultural fears of the time. This indicates that because monsters move in and out of cultural zeitgeists, that they are indeed influential. Tracking vampire viewership could be an indicator of larger health understanding or problems within America or American communities.

Conclusion

Media and public studies remain complex. This study was no different, perhaps invoking more questions and concerns than were answered. However, viewing vampire films under a public health lens has been informative on the importance of these narratives and the vampire character. As some of the most watched films in America, these characters and narratives are influencing how people view and approach infectious disease.

Future directions include analyzing earlier vampire films for how they portray infectious disease and then comparing results with this study or others. Another avenue would be to correspond vampire film popularity with actual disease anxieties, such as SARS. This would be difficult to control for when actual disease concerns occurred compared with the time it takes to plan and release a movie—it taking years to complete a movie, often times being conceived years before the health concern. Exploring how other monster characters as metaphors represent their metaphors in the real world is another potential study. With much more area for exploration, the influential potential of narratives can be better understood. A larger sample would also be able to illuminate whether the analyzed frequencies change at different times, such as pre and post 9/11. While these narratives largely contradict public health intentions for preventative measures, they do show the variation among the character and how the specific narratives interact with medicine. To better understand how these films reflect public understanding, more subcategories and classifications are needed. Further classifications may include period pieces or modern-day settings. The list and potential goes on.

While this method and sample may only confirm or loosely inform public health policies, it may be a good technique for initial study of the goth, punk, emo, etc. subcultures. These results also enforce the influential nature and potential of the media. With each film being within the top 100, public health officials could use the film medium to more positively influence people's perceptions away from treatment based to more preventative mindset. It is obvious that people will view these narratives despite the film quality. If public health officials were able to have a heavier hand on the production of these narratives or produce media that plays off the vampire metaphor, they may be able to turn the vampire character back into the infectious, disgusting, and feared entity it was in history.

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Appendix I

Coding definitions:

Sex: Male- prescribing to normative heterosexual dogma of having a penis

Female- prescribing to normative heterosexual dogma of having breasts, a figure, and the ability to be pregnant

Other- Any individual that does not prescribe to the dominant heterosexual behaviors or physicality of male or female, possible displaying both parts and behaviors

Frequency of the infected (how the extent of the disease expressed):

Epidemic- more cases of a disease within a community or region than would be expected

Pandemic- is an epidemic that spreads throughout the world's populations

Localized- a specific group of people singled out for having the disease for either social or genetic reasons

Outbreak- rise in the occurrence of a disease

Bio terrorism- when a biological agent is intentionally released to cause illness

Choice: Preventable- there is a counter-measures to the disease (i.e. eradication, not being promiscuous, etc.) and steps to avoid it, it is avoidable, individuals choose to become a vampire—some narratives may place emphasis on how characters did not have a choice, making it an accident.

Inevitable- the disease is an overwhelming force over someone or community, easy transmission (i.e. it is not a ritual/ process to get the disease of vampirism), rapidly spreading

Point of View: Vampire- Is the main perspective of the narrative a vampire?

Non-vampire- Is the main perspective of the narrative not a vampire?

Epidemic of fear: This will be qualitative data assessing the scope and consequence of the disease. This includes the generalized rate of infection and whether the disease threatens morals or society. This is meant for the entire narrative.

Comments: Qualitative notes on whether specific elements relate to public health measures, whether literal or metaphorical

Raw Data:

Table 1. Analyzed movies by year, movie ranking within its release year, rating, and gross earnings, as organized by year of release.

Movie	Year	Rank w/in Year	Rating	Gross earning (USD\$)
Breaking Dawn Part2	2012	6	PG-13	754,000,000
Underworld: Awakening	2012	52	R	160,000,000
Dark Shadows	2012	39	PG-13	79,727,149
Abraham Lincoln Vampire Hunter	2012	85	R	37,519,139
Daybreakers	2010	96	R	30,101,577
30 Days of Night	2007	69	R	39,568,996
Van Helsing	2004	16	PG-13	120,177,084
Blade II	2002	32	R	82,348,319
Queen of the Damned	2002	85	R	30,336,800

Dracula 2000	2000	78	R	33,022,767
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Table 1. Sex of the main character frequency by movie.

Movie	Sex		
	Male	Female	Other
Breaking Dawn Part2		1	
Underworld: Awakening		1	
Van Helsing	1		
Blade II	1		
Dark Shadows	1		
30 Days of Night	1		
Abraham Lincoln Vampire Hunter	1		
Dracula 2000	1		
Queen of the Damned	1		
Daybreakers	1		
Total	8	2	0

Table 2. The estimated scope of the disease through the frequency of the infected persons in the narrative.

Movie	Frequency of the infected				
	Epidemic	Pandemic	Localized	Outbreak	Bio-Terrorism
Breaking Dawn Part2				1	
Underworld: Awakening		1			0
Van Helsing	1				0
Blade II				1	
Dark Shadows			1		
30 Days of Night	1				
Abraham Lincoln Vampire Hunter	1				0
Dracula 2000				1	
Queen of the Damned		1			
Daybreakers		1			
Total	3	3	1	3	3

Table 3. Choice frequencies by movie.

Movie	Choice	
	Preventable	Inevitable
Breaking Dawn Part2		1
Underworld: Awakening	1	
Van Helsing		1
Blade II		1
Dark Shadows	1	
30 Days of Night		1
Abraham Lincoln Vampire Hunter		1
Dracula 2000		1
Queen of the Damned		1
Daybreakers		1
Total	2	8

Table 4. Perspective of the main character by movie

Movie	Perspective	
	Vampire	Non-vampire
Breaking Dawn Part2	1	
Underworld: Awakening	1	
Van Helsing		1
Blade II	1	
Dark Shadows	1	
30 Days of Night		1
Abraham Lincoln Vampire Hunter		1
Dracula 2000		1
Queen of the Damned	1	
Daybreakers	1	
Total	6	4

Table 5. Qualitative notes on the scope and consequence of the disease

Movie	Epidemic of Fear
Breaking Dawn Part2	Kept completely hidden, but used to save life of Bella- cure for humanism/ being weak.
Underworld: Awakening	Preventable if destroyed, or will be killed/"infected"
Van Helsing	Disease is a threat, unknown extent throughout the world, well hidden.
Blade II	Hidden. Could be born or turned. Scope is much bigger than expected. Threatens integrity of vamp "race"
Dark Shadows	People unaware until brought to the attention of the public through the police.
30 Days of Night	Inevitable- survive until next dawn. If don't stop them there- will continue to next town/world.
Abraham Lincoln Vampire Hunter	Pervasive throughout society. Have no choice- bitten= vamp or killed. Related to power struggle/ morality- Lincoln must win for the sack of the nation (select few know of them= specialization). Related to ability to protect self and family
Dracula 2000	Believe to be myth, directly related to Christianity (Judas)- if not impaled or decapitated= vampire from bite alone. Couldn't avoid= had to be "released"
Queen of the Damned	Calls out all vamps of the world to challenge him. Eternity as black hole of loneliness. Consuming it all- take death into self- gluttony? Continuous over time (Queen as ancient) comes back without regard for value or change in society- has no morals.
Daybreakers	"outbreak" as a good thing. Human race becoming extinct because of farming. Had to avoid all contact or else would be infected, both into vampires and back to humans. At very end, its treated vampire blood that is the cure>> infection to cure the rest of the population.

Table 6. Qualitative notes on additional public health measures (literal or metaphorical).

Movie	Comments
Breaking Dawn Part2	Heavy moral implications. Need love to be happy and to be happy need the ONE. Disease affect people differently- different powers/manifestations.
Underworld: Awakening	Refers directly to vampirism as an infection, the "purge"
Van Helsing	Epidemic framework but has the intentions of bioterrorism. Heavy relation to religion (Catholicism). Use of science to defeat illness- cure- and specialized technology
Blade II	Genetic modification, called pathogen. New vamp treated as addict. Autopsy/medicine (pheromones) used to attract or injected as serum.
Dark Shadows	Ancestral curse, doc Hofman use blood transfusions to make her immortal/ vampire. Idea of phycology used- Barnabus' fantasy never broken= real. Individualized- familial emphasis, enduring through time. Preventable- fluid transfer- if Barnabus had loved the witch/ inevitable because was not
30 Days of Night	Isolation key to survival of vamps= rely on people thinking of them as bad dream/myth. Epidemic/ unknown- temporally dependent on whether they left before the month of darkness but do not know if this group is the only one. inevitability- contact based
Abraham Lincoln Vampire Hunter	Used as a weapon in war. Can only be human to kill vamps/ dead cannot kill dead. Walk in the sun/ nonspecific time transference? Inevitable, relies on few to save many- herd mentality not a part of it.
Dracula 2000	Van Helsing does use his blood "filtered through leeches" and by injection to continue living. Emphasis directed to religious beliefs. Could kill them with decapitation, sun, stake through heart.
Queen of the Damned	Was much removed- tracing family through eternity= genetic interest, deposition. Those infected cannot be known- used as new agent to transmit disease or kill people.
Daybreakers	Vampirism as the norm- majority of people do not understand that it is wrong- glamorized.