1. The Virus, the Network, and the Supernatural Media Virus

"Cascades, congestions, contaminations, chain reactions, epidemics, and crises are endemic fears of the network society."
Alexander Friedrich, Metaphorologie der Vernetzung

"Thanks to sensors and internet connectivity, the most banal everyday objects have acquired tremendous power to regulate behaviour."
Evgeny Morozov, "The Rise of Data and the Death of Politics"

"These media events are not *like* viruses. They *are* viruses."
Douglas Rushkoff, Media Virus!

1.1 Theories of Metaphor

The metaphors used in Gothic fiction have always been illuminating when it comes to the concerns and anxieties voiced in such fiction. The virus and the network are both key components of the supernatural media virus and, therefore, require greater scrutiny. The logic of metaphor, generally, needs to be discussed first, in order to examine the developments and dynamics of these two terms. Different theories foreground different aspects of metaphor; while some views of metaphor regard it merely as a rhetorical ornament or as a simple substitution of one term for another, other theories ascribe far greater power to metaphor. It is fruitful to consider some essential approaches to metaphor in order to

establish a framework through which the implications and meanings of the virus and the network – and, therefore, about the supernatural media virus itself – might be grasped.

In his *Poetics*, Aristotle describes metaphor as "giving the thing a name that belongs to something else" (1995a: 4999). A specific object, person, phenomenon, or experience is circumscribed by referring to something else. Metaphors, as Aristotle claims in *Rhetoric*, are so vitally important because they allow the listener to learn something new: "strange words simply puzzle us; ordinary words convey only what we know already; it is from metaphor that we can best get hold of something fresh" (1995b: 4820). This conception, in which a metaphor functions as a vehicle for comparison, has been referred to as the "*substitution view of metaphor*" (Black 1955: 279, original emphasis). It is through the substitution of an unknown word with a familiar term that similarities between the two phenomena are pointed out and that a novel phenomenon can be made comprehensible.

One major point of critique of this substitution view is that it regards metaphor as a purely passive descriptor. However, metaphors not only describe a phenomenon, but also actively shape our perception of these experiences. It is for this reason that Max Black rejects the notion of metaphor as substitution and instead advances an "*interaction view*" (1955: 285, original emphasis),[1] which acknowledges that any metaphorical utterance affects the meaning of both terms that are linked together through the expression:

> Metaphorical statement is not a substitute for a formal comparison or any other kind of literal statement, but has its own *distinctive* capacities and achievements. […] It would be more illuminating […] to say that the metaphor *creates* the similarity than to say that it formulates some similarity antecedently existing. (ibid: 284-285, original emphases)

1 The first scholars to advance such an interaction view were Wilhelm Stählin and Karl Bühler. However, Black's notion of interaction builds upon and expands the theory of metaphor outlined by Ivor Armstrong Richards (Peil 2008: 492).

A metaphorical expression does not merely foreground a preexistent resemblance, but instead creates this resemblance, thereby affecting the meaning of each term found in the expression.

It is the potential ability of metaphor to organize and structure a worldview that George Lakoff and Mark Johnson expand on in *Metaphors We Live By*, as they introduce their conceptual metaphor theory (CMT). Metaphors are of central importance in our everyday lives, structuring most of our conceptual system and human thought according to this cognitive theory. Hence, "the people who get to impose their metaphors on the culture get to define what we consider to be true" (1980: 160). Metaphors actively shape the reality that they appear to merely describe. Lakoff and Johnson regard the process of metaphor as a mapping: a "source" domain is transferred or projected onto an abstract "target" domain. For instance, the virus metaphor applies qualities of the source domain "virus" to a new, and possibly less readily understandable, target domain; a "viral video" bears certain viruslike qualities, such as fast reproduction and dissemination. CMT captures metaphor's potential to structure both human thought and perception.

However, several problems arise from the application of Lakoff and Johnson's theory. First, the theory largely disregards metaphor's historical and cultural dimensions. Yet, every metaphor's meaning is based on "a rich cultural framework, […] a universe of content that is already organized into networks of interpretants" (Eco 1984: 269). Metaphors are subject to cultural and historical change since any metaphor depends on such cultural agreement within the "framework" or "network of interpretants" (Nünning/Grabes/Baumbach 2009: xvi). Metaphor's meanings thus shift over time; the exploration of the virus and network in the sections that follow illustrate how those two metaphors in particular have adjusted in accordance with their cultural and historical circumstances.

Second, CMT envisages metaphor as a unidirectional mapping process because the target domain cannot be mapped back onto the source. Whereas the target is transformed during the mapping, the source remains unaffected by the target. In an attempt to unsettle this unidirectionality, Mark Turner and Gilles Fauconnier advance their theory

of conceptual blending. As they explain, every metaphorical mapping creates a space in between or "blend," in which the meanings of both "inputs" – which are termed source and target in conceptual metaphor theory – are affected. Significantly, the outcome is not merely a "composition of meanings," but rather results in the generation of an entirely new meaning (Turner/Fauconnier 1999: 398). Hence, conceptual blending offers a more useful approach to the complex, bidirectional dynamics of metaphorical statements, while still acknowledging that the mapping process may be asymmetrical.

Using cognitive metaphor theory in tandem with the notion of the blend, Nünning, Grabes, and Baumbach discuss the potential impact of metaphor in their introduction to *Metaphors Shaping Culture and Theory*. They regard metaphors as "worldmaking devices" that function to structure, narrativize, and naturalize cultural phenomena (2009: xii). Metaphors do this cultural work by creating coherent systems of thought. The source domains utilized in the metaphoric mapping are bound to the culture from which they originate:

> The images that form the source domain of such metaphors do not arise out of nowhere and do not by mere chance suddenly become favoured suppliers of schemas to be mapped onto important target domains. It shows that their choice is linked to changes of culture at large and in particular in technology, social formations, and practices. (ibid: xvi)

The relationship between metaphor and culture is, therefore, bidirectional: not only does our use of metaphors shape prevailing perspectives on culture, but metaphors are also shaped in turn by their cultural and historical contexts (ibid: xii). The study of metaphors is always also a study of culture.

Metaphors are essentially "mininarrations" – narratives that are compressed into a single word (Eubanks 1999: 437; Nünning 2009b: 230). These narratives fulfill multiple functions: they impose structures on complex phenomena and provide simplified interpretive frameworks; they prescribe and legitimize specific, potentially ideologically charged responses to these experiences, and they help to both form and main-

tain collective identities. To illustrate this claim, Nünning uses the example of "crisis," a term that has been used over and over again to apparently describe every current problem encountered in the world. A certain plot pattern arises when claims are made that a certain situation constitutes a crisis – whether it be an economic crisis, a soccer club in financial distress, or any other possible scenario:

> What are in demand in a crisis are active crisis managers (physicians, politicians, management boards, 'experts,' etc.), crisis management plans, and purposeful actions (in short: successful crisis management). […] [T]he mode of speaking about a crisis always evokes conventionalized schemata and plot patterns which sketch out the future course of action. For this reason a crisis diagnosis is always already more than a specific definition of the situation and, in retrospect, oftentimes appears as a self-fulfilling prophecy. (Nünning 2009b: 243)

It is in this regard that metaphors are never merely descriptive, but instead also fulfill a prescriptive function, as ideologies and norms become naturalized and reinforced. Metaphor's influence on how we understand the world around us makes it absolutely necessary to consider the implications of the deployment of certain metaphors. For example, Nünning explains how "[t]he rapid increase of crises staged by the media […] is a clear indicator for the fact that the present culture of description significantly differs from those of earlier centuries" (ibid: 239). This "crisis inflation" (ibid) is not due to the increasing occurrence of events that may be described as crises, but rather signifies a changing world view. At the same time, such metaphors function as seemingly self-sufficient "strategies of containment" (Jameson 1983: 10; Nünning/Grabes/Baumbach 2009: xvii): they not only structure our understanding of reality, but also do this work by foregrounding some aspects of the mapping and by glossing over others.

The relationship between any metaphor and its cultural and historical context is always reciprocal. By evoking specific narrative patterns and plots, these terms impact our understanding of the world. Yet, the metaphorical potential of terms such as "virus" or "network" is seldom

considered, given that these terms have been naturalized. The following sections unpack these metaphors and the "baggage" they carry in order to tackle this task.

1.2 The Viral Metaphor: The Spread of the Virus Across Disciplines

While the virus has developed into a metaphor that has itself "gone viral," finding an application in a broad range of phenomena, the concept originally stems from the disciplines of biology and medicine. In simple terms, "viruses are collections of genetic information directed toward one end: their own replication" (Wagner/Hewlett/Bloom/Camerini 2008: 3). Behaving parasitically, viruses first infect a cell, subsequently modifying that cell to produce further, possibly mutated copies of themselves, and finally burst from the cell to infect new hosts.

Virology's beginnings date back to the end of the 19th century, when microbes were discovered that defied the assumptions hitherto put forward by germ theory. These microbes were neither visible under a microscope, nor could they be retained with bacteria-proof filters or cultivated in a petri dish. They appeared to have no cellular structure, instead replicating by hijacking the reproductive mechanisms of another cell (van Loon 2002: 117). Germ theory could not account for the existence of these microbes, given that it was grounded in the principle that the cell is the basic unit of all organic life. The term "virus" was at first used merely as a descriptor for an infectious agent that was, as yet, unknown; its Latin meaning simply translates to "venom," "poison," or "slime."

In order to understand how and why the biological virus propagated across disciplines and narratives as a metaphor, and what this metaphor's cultural dimensions are, it is essential to examine some of virality's key features. The most obvious ideas that are invoked in uses of the virus metaphor are its mechanisms of uncontrolled spread, infection or contamination, and its continuous, random mutations. In addition to these, there are several aspects that shape this metaphor

and make it so viable for application to the Gothic domain. An example for this is virus' defiance of dichotomous categories, such as visibility/invisibility as well as living/non-living. Invisible to the human eye, the virus can only be represented by means of visualization strategies and technologies such as epidemiological maps or electron microscopes (Wald 2008: 37). Representations, therefore, often relocate the threat to tangible subjects and objects: infected individuals – zombies in particular –, contaminated foods, unsanitary locations, and so on. While the pathogen always remains visually elusive, it can also reveal the structure and dynamics of its host population:

> Diseases are symptomatic of the ways cultures interact. They reveal paths of communication and commerce, of interaction and cultural hierarchies, which form the networks of a society: what affects what, who frequents whom and where, and so forth. Diseases *expose*. (Parikka 2016: xiv, original emphasis)

Hitherto unseen social ties are made visible as the invisible virus spreads along these paths, exploiting the dark side of today's interconnection and revealing potentially sensitive information.

In addition, the microbe's ambivalent ontological status is troubling: by their very nature, viruses have always contested the categories and classifications dictated by medical science. Neither living nor non-living, they are situated in a problematic space in between: "[t]hey do not grow, they do not metabolize small molecules for energy, and they only 'live' when in the active process of infecting a cell and replicating in that cell" (Wagner/Hewlett/Bloom/Camerini 2008: 11). Hence, while viruses may be biological agents that are capable of acting against other organisms, they cannot be regarded as self-sufficient living entities themselves. This ambivalence is particularly alluring in the context of Gothic fiction: fascinated by the unknowable, the invisible, the undecidable, and the interstitial, these narratives find an ideal villain in the virus.

Significantly, unlike the ghosts, vampires, and evil aristocrats of old, this villain is no longer a singular, identifiable monster, but a mass of microscopic pathogens that threaten mankind not necessarily by force,

but rather by their sheer endless numbers. This opponent's otherness is not only due to its multiplicity, but also due to its nonhuman qualities:

> [I]t is the alien, nonhuman character of epidemics that incite public anxiety – there is no intentionality, no rationale, no aim except to carry out iterations of what we understand to be simple rules (infect, replicate, infect, replicate …). (Thacker 2005)

The virus is driven solely by the logic of repetition; it does not follow any recognizable thinking pattern, it cannot be argued with, and it does not adhere to any man-made borders.

Another of the virus' key aspects that is transferred in the metaphorical borrowing of the term is the idea of coevolution, based on the complex relationship with its host population: a virus can cause widespread disease and mortality when introduced into a novel population because the host population has not yet developed an efficient immune response thereto. Over time, however, immunity occurs and the virus either genetically adapts to the evolved host or causes only low or even no levels of disease (Wagner/Hewlett/Bloom/Camerini 2008: 4-5). Virus and host are, therefore, situated in a relationship of coevolution. When it comes to Gothic fiction, such coevolution becomes apparent upon examining these tales' subject matter. The implementation of every new technology and medium inspires a plethora of uncanny narratives portraying the dangers inherent to this innovation – until a new medium comes along to induce new fears (Crawford 2015: 39). This coevolution is bound to the development of new media technologies and their surrounding social practices in representations of the supernatural media virus. In short, new media create new viruses.

However, it is not only such (co-)evolution, but also societal and technological progresses that affect the pathogen's virulence. Some viral diseases spread more efficiently – that is quicker and farther – than others, depending on a society's organization. Arguably, HIV could not have posed the problem that it does today only a century ago: with lower population densities, restricted migration as well as slower means of travel, and with little knowledge of blood transfusion, the HI virus simply would not have gained a foothold

(Wagner/Hewlett/Bloom/Camerini 2008: 7).[2] The disruption of natural ecosystems, bioterrorism, and heightened drug resistance all constitute additional factors that facilitate the virus' spread throughout the contemporary world – it is the dark side of progress, in other words. It is this idea of careless practices that represents a driving force behind the plot of most outbreak narratives.

The field of "emerging infections" came into existence at the end of the 1980s as a reaction to the realization that these modern circumstances provide ideal conditions for diseases to spread fast and far in general, as well as to the AIDS crisis in particular. After observing outbreaks of newly identified or resurfaced diseases, medical scientists concluded that such emerging infections were the result of globalization itself:

> An expanding human population worldwide meant that human beings were living and working in previously uninhabited places and coming into contact with unfamiliar or dormant microbes, which in turn globe-trotted by hitching rides in hosts—human, animal, and insect—using the variety of transportation networks that constitute the global village. (Wald 2008: 30)

However, the scientific interest in emerging infections attests not only to a feeling of pending apocalypse in a globalized, uncontrollable world, but also to the potential of counteracting disease outbreaks more efficiently. While it may be true that fast travel and communication, as well as technologization, enables the spread of diseases, it is likewise true that these same factors allow for greater success in the search for an effective vaccine through international collaboration and joint political or social efforts. It was, for instance, only through the carefully orchestrated social and political campaigns advocating vaccines created by modern medicine that smallpox was finally eradicated (Wag-

2 A similar claim can be made for the COVID-19 pandemic. The affordances of globalization enabled the rapid spread of the virus. Hence, most attempts to contain the disease have focused on restricting some of the essential aspects of globalization, such as global travel.

ner/Hewlett/Bloom/Camerini 2008: 8). Here, international collaboration, in tandem with the new achievements of medicine, wiped out a viral disease that had repeatedly wreaked havoc throughout the previous centuries. The pessimistic idea of a humanity doomed to extinction by its Promethean ambitions does not capture the whole picture; instead, the relationship between mankind and its diseases is more complex and ambiguous.

This ambivalence resonates throughout every use of the virus metaphor. Like all metaphors, the virus comprises a mininarration, evoking specific narrative schemes and plots: if there is a virus, then there are also always carriers, experts, sanitary and unsanitary locations, processes of infection, mutation, and spread. It is such a narrativization that Susan Sontag builds upon when claiming that illness metaphors are usually harmful: "Victims suggest innocence. And innocence, by the inexorable logic that governs all relational terms, suggests guilt" (2002 [1989]: 97). A single term can encompass an entire narrative, distinguishing innocent victims from guilty disease-spreaders.

In both fictional and factual outbreak narratives of the 20th and 21st centuries, these "miniplots" are developed into a larger narrative formula that seeks to provide a coherent story about the disease: first, an emerging infection is identified; subsequently, the global networks which have enabled the infection's spread are discussed; in a third step, the epidemiologists' expertise is established and their efforts of containing the epidemic are chronicled; last, the infection is successfully neutralized (Wald 2008: 2).[3] This narrative scheme covers both the factors that enabled a pathogen's spread and the affordances of globalization through which the threat may be contained. Thus, while fic-

3 This last step of Wald's formula is not applicable to many narratives in recent Gothic, horror, and science fiction. Fictions depicting the "zombie apocalypse," for instance, explicitly portray a world in which the infection was *not* contained. The final section of this chapter, "The Virus in the Network Society: The Supernatural Media Virus as a Gothic Trope," discusses the narrative formula in greater detail.

tions such as *Outbreak* (dir. Wolfgang Petersen, 1995), *Twelve Monkeys* (dir. Terry Gilliam, 1995), or AMC's *The Walking Dead* (2010–2022) oftentimes portray the deadly disease as a man-made problem, and as a symptom of modern life, they simultaneously envision these same factors as a possible antidote to the epidemic. Globalization, in other words, may be the solution to all of the problems it created in the first place.

These narratives tend to fuse myth and science, fiction and nonfiction in the process of structuring disease outbreaks around one coherent plot: large-scale outbreaks are reduced to the actions of lone individuals – the so-called "Patient Zero"[4] – who carry dangerous microbes and spread them to a large number of people, either out of ignorance or irresponsibility; scientists' efforts are portrayed as a kind of epidemiological detective work; viruses are described as cunning villains, hiding and waiting for a chance to attack. These views serve to both question and reinforce a set of social norms (Schell 1997: 114): the emergence of a new disease is imagined as being caused by some kind of transformation, such as changing urban structures, progressive sexual politics, or man-made disruptions of ecological equilibria. This simplistic perspective on the viral outbreak is utilized in outbreak narratives as well as applications of the virus metaphor in extramedical disciplines.

One possible factor behind the metaphor's rising popularity as well as its spread to other discourses is the rise of digital technology. In "The Biopolitics of the Killer Virus Novel," Dougherty explicitly links the

4 The term "index case" refers to the first case of a disease to be discussed in medical literature, regardless of whether this person is the first person to have been affected. In popular terms, this is often simplified to the idea of a "Patient Zero," the initial carrier of a disease and, hence, the ideal scapegoat. Perhaps the most famous example of a "Patient Zero" is Gaetan Dugas, the airline steward who, up until this day, is popularly believed to have brought the HI virus to North America and spread it to an incredibly large number of people – regardless of the fact that it is not only highly unlikely that such a large-scale outbreak was caused by a single person, but furthermore also impossible to identify the source of each new infection. For a more detailed discussion of this, see Chapter 5: "'The Columbus of AIDS': The Invention of 'Patient Zero'" in Wald (2008).

boom of large-scale disease narratives to the rise of modern information and communication systems. As Dougherty puts it, the contemporary world is characterized by the paradoxical opposition of biologization and debiologization: while biology and biomedicine have risen to the status of powerful sciences, the human body itself has been debiologized, turned into an information system and reduced "to the universal currency of information" (2001: 2). In popular fiction, this paradox and the question of what it means to be human in a technologized age is negotiated through the genre of the "killer virus novel,"[5] which is fixated on the representation of bodily crisis and disintegration (ibid: 4). This genre is "classic Gothic terrain […]: the place of the undead, where the reign of the *who* is suspended – the reign of the liberal, autonomous subject, the counterpart of the organic self – and the *what* threatens to take over" (ibid: 9, original emphases). This who/what opposition is exploited explicitly in fictions of the zombie apocalypse. A "zombie virus" is released and, consequently, transforms the liberal human being into a mindless creature driven by a single instinct: hunger. The zombie is, thus, the macroscopic representation of the microscopic, invisible virus that has created it. In killer virus fiction, the biological human body decays viscerally once attacked by the horde of invisible microbes:

> The infectious scenario is one wherein the body is besieged by a glut of information that threatens not only to overwhelm the immune system, but at the same time to transform the nature of what it means to be human. The virally infected and desecrated body thus becomes a metaphor for the fate of the human in the information age. (ibid: 10)

The virus captures both sides of the paradox through its transgressive and ambivalent nature: it is both a biological organism and pure information. As such, it is the ideal villain in contemporary Gothic fiction.

Portrayals of the supernatural media virus often simultaneously build upon several metaphorical connotations of the virus as they flourish in distinct disciplines. It is, therefore, important to take

5 While Dougherty restricts his analysis to novels, his arguments can be applied to other media as well.

a closer look at some of the scientific fields that have adopted the metaphor: contagion as a sociopsychological model for group dynamics; the computer virus as a technological application; and virality as the key logic behind certain media phenomena. These examples illustrate how the concept of the biological virus developed into a surprisingly flexible metaphor that traveled across disciplines, in order to be eventually consolidated into a fully developed concept once again. Significantly, the supernatural media virus tends to draw on the virus' manifold metaphorical meanings that arise from these diverse fields, as subsequent chapters exemplify.

Social psychologists were turning to the concept of contagion in order to investigate group behavior and community formation at roughly the same time that virology came into being. Sociologists, such as Gustave Le Bon, attempted to explain phenomena such as riots through the notion of moral or social "contagion," claiming the contagious potential of ideas and emotions in crowds to be as powerful as that of microbes (Le Bon 2002 [1895]: 78). The emergence of social contagion theory is linked intimately to a changing social structure evoked by processes of modernization and urbanization as well as the development of mass media (Mitchell 2012: 60). In addition to the easy and far-reaching dissemination of information via newspapers, increasing population densities within cities impacted the nature of social interactions between people. Contagion provided the ideal metaphor for grasping group dynamics as it uncovered hitherto unnoticed social ties, hence laying bare the oftentimes invisible interdependence of persons within one social group.

According to Mitchell, the belief in contagious group behavior flourished during both the 1890s and the 1990s, thus hinting at a recurrent *fin de siècle* anxiety (ibid). While it appears to be true that this fascination with contagion increased in both of those two decades, it must be emphasized that the preoccupation with all things contagious/infectious/viral, even with regard to group dynamics, is still growing today. Limiting it to an end-of-century sentiment would not serve to appreciate the phenomenon's entire scope. Additionally, this fascination may have less to do with a *fin de siècle* anxiety than with

profound changes to the social structure that happen to coincide with these decades. Whereas the 19th century ended with modernization, urbanization, and the development of mass media in Western cultures – in short, the implementation of mass society – those same societies were restructured again through a process of technologization, digitalization, and globalization at the close of the 20th century. Each restructuring affected the social ties between human beings and, hence, called for a rethinking of these interdependencies. While social contagion theory itself is regarded as outdated nowadays, many of its ideas still loom large.

Computer studies adopted the virus metaphor during the second half of the 20th century. To give an indication as to the earliest point at which computer viruses where perceived as a public concern: By 1949, computer scientist John von Neumann had published a theory of self-reproducing automata (Parikka 2016: 257). The first noteworthy incident with a computer virus occurred in the early 1970s, when the Creeper virus was released in the ARPANET (ibid: 258). In the early 1980s, the first large-scale dissemination of a computer virus took place with the emergence of Elk Cloner (ibid: 21). The "evolution" of computer viruses sped up considerably, with new viruses being created on a daily basis and with malware becoming ever more complex. Today, we witness massive, coordinated cyberattacks on large institutions on a regular basis. The European Computer Emergency Response Team (CERT-EU) observed "[w]aves of ransomware" that concluded the year 2019 with a flood of attacks on governments, administrations, universities, and other high profile institutions throughout the world (2020: 1). Of course, not only did 2019 end with those computer viruses, but it primed us for things to come in the future, where an increasing number of such massive ransomware attacks are to be expected.

Fred Cohen is among the first to provide an in-depth discussion of computer viruses. Cohen focuses on the virus' ability to infect other programs in his definition of this type of malware (1987: 23). Unlike other malware, such as computer worms, a computer virus does not merely propagate through a network – it modifies other programs to do so and to possibly produce evolved copies of itself: "Every program that gets in-

fected may also act as a virus and thus the infection grows" (ibid). This is why computer viruses – particularly those that are programmed to execute their damaging payloads under specific circumstances, such as a set date – are a major security concern:

> As an analogy to a computer virus, consider a biological disease that is 100% infectious, spreads whenever animals communicate, kills all infected animals instantly at a given moment, and has no detectable side effects until that moment. If a delay of even one week were used between the introduction of the disease and its effect, it would be very likely to leave only a few remote villages alive, and would certainly wipe out the vast majority of modern society. If a computer virus of this type could spread through the computers of the world, it would likely stop most computer use for a significant period of time, and wreak havoc on modern government, financial, business, and academic institutions. (ibid: 24)

Such viruses cannot be prevented if networking and data sharing is desired, given that it is impossible to control all of users' activities on a network. The only solution, hence, lies in finding ways of detecting and disabling computer viruses before they can do damage. Thus, what is needed is a type of vaccine, an antivirus. Of course, Cohen deliberately exaggerates the potential danger of such malware through the analogy above. At the same time, his paper is an excellent example of the cultural work that metaphors do, actively shaping our perspective on a specific phenomenon: not only is a certain type of computer program defined through the logic of infection, spread, and evolution, but the virus is also specifically envisioned as an invisible piece of perilous – potentially even lethal – information that may operate at a large scale due to the actions of a few users.

Cohen's paper was published long before the launch of the highly interactive and densely networked Web 2.0. Today's Internet topology deviates from the structure originally implemented during the 1960s. First designed as a random network with a highly redundant distribution (Parikka 2016: 212; Sampson 2009: 49-50), the Internet eventually adopted the structure of a scale-free network. In such designs, new

nodes have a higher probability of connecting to those nodes that have a high number of links (van Dijk 2012: 41-42). Therefore, connectivity on the Internet follows a rich-getting-richer model. For example, people are more likely to sign up to Facebook or WhatsApp than to other comparable platforms, simply because they know that a larger number of acquaintances are using this specific service. If, for some reason, such a service is not functioning correctly at a given time, then the consequences of the outage will be felt throughout the entire net almost immediately. Their clustering is both the greatest benefit as well as the greatest weakness of such scale-free networks when compared to random designs. An attack focused on its hubs can disable large parts of the network. The potential impact of computer viruses must be reconsidered in light of this new network topology. Jussi Parikka maintains that computer viruses constitute a central part of network culture today (2016: xvii), thus already hinting at the codependence of the virus and the network that is at the heart of the supernatural media virus. Users experience an almost paranoid feeling of having to interact with untrustworthy users and the potentially malicious code they disperse throughout the net in this network culture (ibid: 23). Today, computer viruses are the anomalous element that has the potential to throw the entire networked system into chaos.

In fiction, the potential impact of a computer virus was recognized as early as in the 1970s. In the 1973 film *Westworld*, written and directed by Michael Crichton, amusement park androids begin to malfunction, and the faulty programming spreads like a disease. The invisible, yet potentially life-threatening, computer virus is hence given a bodily form in this narrative by having murderous robots revolt against their creators. *Star Trek*'s Borg, who made their first appearance on the TV series *The Next Generation* in 1989, are yet another bodily configuration of the computer virus. As cyborg-like creatures, they do not procreate, but rather assimilate other individuals into their collective hive mind by injecting so-called nanoprobes into their bloodstream. Not only are the Borg marked by their uncanny biotechnological hybridity, but they are also specifically portrayed as a type of disease: infecting other beings with their nanoprobes and turning them into a mindless drone of the

larger collective; the Borg spread from one spaceship or planet to the next. Significantly, their networked hive mind is also their fatal weakness, given that they are ultimately destroyed while assimilating a single individual carrying a pathogen specifically designed to wipe out the entire race. King's novel *Cell* comprises yet another take on the dangers of computer viruses for human life in which the human brain is "reprogrammed" by means of a hazardous signal transmitted via cellular networks. While King's novel portrays neither robots nor biotechnological hybrids, as *Westworld* and *Star Trek* do, it questions whether there is any difference between the human brain and a computer's hard drive in the first place; it does so by employing a disease created by means of the one effortlessly attacking the other (Schmitz 2020a: 201-202). These narratives observe and explore the cultural impact of computer viruses, and how they might affect our understanding of human nature.

As the subsequent chapters illustrate, the supernatural media virus carries forward the connotations of these diverse disciplines; however, as its name already implies, it is the phenomenon of media viruses in particular that is essential when discussing the trope. Discussing such media viruses, Douglas Rushkoff explicitly states that "[t]hese media events are not *like* viruses. They *are* viruses" (1996: 9, original emphases). Rushkoff glosses over the meanings and characteristics that are selected, modified, and transported in the mapping process in his denial of the term's metaphorical status. While he is not the first to discuss the phenomenon, Rushkoff's book is noteworthy in that it covers a wide range of assumptions about how modern media are popularly thought to impact upon everyday life. Rushkoff explains how the "datasphere" has become the new territory for human interaction by starting from the claim that a person's influence is less bound to their material wealth than to the amount of media attention gathered. This datasphere is a complex, far-reaching, and self-sustaining "breeding ground for new ideas in our culture," allowing certain media events to thrive and spread (ibid). As Rushkoff has it, these media viruses flourish in and ultimately promote chaos; they disable efforts at oversimplification, distraction, and marginalization utilized in a culture's dominant discourse and as promoted by politics and public relations (ibid: 36).

The virus' ability to spread depends on its host's susceptibility – popular culture – to the topics and themes conveyed by the virus. The more a society adopts an ambiguous attitude towards these topics, the higher the chances are of spread (ibid: 11). While not made explicit, the notion of coevolution resonates with Rushkoff's theory here: the media virus needs to be interesting if it is to continue propagating; after a while, popular culture will develop an immunity against it. By exploiting potential tipping points in public opinion, media viruses "infiltrate the way we do business, educate ourselves, interact with one another – even the way we perceive reality" (ibid: 10). It is noteworthy to observe how metaphorically charged Rushkoff's language is: if the datasphere is a "breeding ground," then it follows that culture, too, is a type of living organism; at the same time, the media virus is envisaged as a scheming, spylike "infiltrator" that exploits culture's weakest points.

While foregrounding the media virus' multiple fascinating and central aspects, Rushkoff's theory is rather dated today and no longer holds up to the (social) media events of the 21st century. While he claims that media viruses are neither good nor bad, but simply part of the media as a kind of virtual ecosystem (ibid: 320), he nevertheless tends to view these phenomena as an empowerment of the masses, subverting dominant discourses, and creating participatory spectatorship instead of passive consumption. Yet, the media spectacle surrounding the 2016 US presidential elections in particular – in which complex political matters were successfully reduced to platitudes such as "America First"; where extremely discriminatory statements against marginalized groups did not prevent the Republican candidate Donald Trump from being elected; where platforms such as Facebook made it possible for so-called "fake news" to become viral phenomena; where questionable firms such as Cambridge Analytica purposefully orchestrated media phenomena, thereby shaping the outcome of the vote – places these assertions in a different light. These elections are only one example of how media viruses can also be powerful weapons in the *facilitation* of oversimplification, distraction, and marginalization.

A different approach to media, one which considers the implications of the virus metaphor, is put forward in *Spreadable Media: Creating*

Meaning and Value in a Networked Culture by Henry Jenkins, Sam Ford, and Joshua Green (2013). The underlying logic of media circulation, as the authors understand it, is simple: "if it doesn't spread, it's dead" (ibid: 1). Those media that are the most successful in reaching large audiences in today's media landscape are those that can easily be shared with others and retrofitted in unanticipated ways – these media are "spreadable." In this context, "spreadability" is defined as

> the technical resources that make it easier to circulate some kinds of content than others, the economic structures that support or restrict circulation, the attributes of a media text that might appeal to a community's motivation for sharing material, and the social networks that link people through the exchange of meaningful bytes. (ibid: 4)

Thus, the concept of spreadability[6] essentially describes a media product's potential of being shared, factoring in technical, economic, cultural, and social variables.

The authors place greater emphasis on a bottom-up participatory model of culture through their use of spreadability; for instance, how some spreadable content is used in the sharing process is often unpredictable and uncontrollable. Furthermore, such activities often blur the distinctions between "producer" and "audience," as collaboration between these roles increases (ibid: 7). The phenomenon of the Slender Man online myth, discussed in the Introduction, is an excellent example of this fusion of producer and audience: while the origin of the myth can be pinned down to one specific person, the myth in its entirety is the result of crowdsourcing.

Jenkins, Ford, and Green have specifically designed the concept of spreadability in order to avoid using phrases such as "viral media." As they purport, the virus metaphor may be able to capture the speed at

6 Some scholars have criticized the term, arguing that "spreadability" is too suggestive of spreads such as peanut butter (Jenkins/Ford/Green 2013: 3). According to Jenkins, Ford, and Green, this connotation is not necessarily unfitting: like such spreads, spreadable media are "sticky" – they motivate deep audience engagement (ibid: 4, 9).

which content is now dispersed via the Internet – yet, beyond this, the assumptions that come with the metaphor are too simplistic and deceptive; to that end, it not only hinders, but outright harms our understanding of the media landscape. It is furthermore a paradox that the notion of media viruses – and, with that, the idea of a passive audience infected by that virus – has coemerged with the acknowledgement that audience members are *not* passive recipients, but active participants in networked media (ibid: 20). This is where the crux of the metaphor lies: the term "viral media" allegedly presupposes a passive audience, ignoring how individuals actively shape a media text, share it with a number of carefully selected people for whom this text might be interesting and, in turn, consume or reject what others share with them. In order to avoid such deceptive assumptions, Jenkins, Ford, and Green demand that the modifier "viral" should only be used to describe media phenomena that truly are viral in that they "deploy automated ways to induce audience members to unwittingly pass along their marketing messages" (ibid: 21). For all other phenomena, the term "spreadable" should be preferred, given that it avoids metaphors such as "infection" or "contamination."

As justified as these goals are, there are some difficulties that remain in substituting what they define as the "spreadability model" for what – in the context and for the purposes of this book – may be called the "virality model." First and foremost, it is too simplistic to demand that only those media phenomena be defined as "viral" that somehow force audiences to unwillingly, or even unknowingly, pass along marketing messages. Incidents like the political involvement of Cambridge Analytica or the opacity of those algorithms structuring Facebook and other web services illustrate that the agency that facilitates the manner in which media content spreads is often undecidable. Additionally, some viral texts create such a buzz that they become omnipresent; it is almost impossible to avoid contents such as the plethora of cat videos. If a person cannot avoid being confronted – or "infected" – with these contents, would it be so wrong to think of them as being viral? Furthermore, most of these contents are eventually forgotten again – almost as if a metaphorical immune response had disabled their initial im-

pact. Jenkins, Ford, and Green reduce the virus metaphor solely to its implications of spread and agency, while disregarding other aspects of the metaphor in their criticism of the virality model.

Furthermore, and most importantly, it is highly questionable whether the term "spreadability" *truly* avoids potentially harmful metaphors of infection or contamination. After all, when we discuss viruses – regardless of which kind – we always also discuss their *spread*: by what means they spread from host to host, how fast they spread throughout a population, and so on. "Spreadability" hence does not successfully replace "virality" – instead, it simply foregrounds a singular aspect of the virus metaphor. Instead of abandoning the modifier "viral," it is more fruitful to consider which of the metaphor's meanings are transferred, which are not, and how this metaphorical expression fundamentally affects our understanding of both viruses and of the media ecology. In short: we need to unpack the virus metaphor to better grasp its cultural significance. In popular fiction and especially in fictions featuring the supernatural media virus, the metaphorical use of the virus is turned into a literal one, thereby giving visible forms to those diverse meanings of the term.

1.3 The Ubiquity of the Network Metaphor and the Emergence of the Network Society

In recent decades, the virus and the network have become co-constitutive terms. Mitchell describes this as "a 'network' turn in the study of infectious disease and an 'epidemiological' turn in network theory" (2012: 124). While Weinstock, writing within the context of US culture during the 1990s and restricting his analysis largely to the rise of AIDS and computer viruses during the preceding decade, observed the development of a "Virus Culture" (1997: 83), Mitchell claims that this culture has since been supplanted by a "viral *network* culture" (2012: 135, original emphasis). Situated within this viral network culture, the Gothic trope of the supernatural media virus hinges not only upon the logic of virality but is additionally intricately linked to the notion of intercon-

nection and strongly resonates with the concept of the network society. Any discussion of the trope, therefore, depends upon an analysis of the network metaphor in general as well as an in-depth examination of the network society in particular.

A brief historical overview of the network metaphor's development hints at several themes that resonate throughout portrayals of the supernatural media virus. Metaphors of webs and nets have a long tradition. The cosmology of ancient mythologies, for instance, frequently features a wide array of "spinning and weaving goddesses of fate wielding power over death of life" (Friedrich 2009: 287).[7] Reality and existence are considered in textile terms: fabrics that can be woven, expanded, reshaped, or torn apart. Like the "web of life" metaphor, the net as a tool used for hunting or fishing evokes associations with a superior authority controlling the web (Friedrich 2015: 335). These ancient uses of the metaphor rely on a godlike entity that determines the shape of the net.

The metaphor modernized during the eighteenth and nineteenth centuries, in light of scientific and technological progress, becoming intertwined with the biological metaphor of the organism. It was in those days that the network as a metaphor for connection and organization first emerged (ibid: 336). The network metaphor detaches itself from the organic metaphor as a cultural key metaphor for grasping societies and communities during the 20th and 21st centuries (ibid: 342). Significantly, whereas ancient notions of the web metaphor usually envision some higher authority holding and controlling the net, this is no longer the case today (ibid: 368). There is no superior entity; there is only the network seemingly controlling itself. These questions regarding (a lack of) control and the naturalness of the network are negotiated in fictions about the supernatural media virus.

The metaphor's ubiquity – what may be called the network paradigm – reveals itself in its proliferation across several disciplines that have adopted networks or network-like phenomena as the key metaphor around which theoretical advancements are organized.

7 Examples of this are Moirai, Parcae, and Norns, the Fates in Greek, Roman, and Norse mythology, respectively.

Borrowing from biology, Gilles Deleuze and Félix Guattari introduce their concept of the rhizome in *A Thousand Plateaus* (2005 [1980]) to advance a theory of knowledge and thought as horizontal, heterogenous, and processual. The verb "to be" is inadequate to describe the rhizome, which is always in the process of becoming, shifting and re-shifting, growing and collapsing (ibid: 25). Another central theory that builds upon the idea of networks is actor-network-theory (ANT). Bruno Latour defines actors as "*anything* that does modify a state of affairs by making a difference" (2005: 71, original emphasis). Speed bumps that slow a car down, a hammer that enables the hitting of a nail, the remote that allows for control over the TV, all qualify as actors. They are "mediators and translators linked in extended constellations of cause and effect" (Felski 2015: 164). Networks complicate simplistic, constraining conceptions of causality and instead allow for the observation of linkages between actors and patterns of interaction (Latour 2005: 8). Thus, ANT does not attempt to describe set structures, but rather attempts to make complex processes of associations visible.

Both the rhizome and ANT exemplify the network's potential as a dynamic, processual, and highly complex structure. In her discussion of the network as a narrative form, Caroline Levine points out how the term's etymology already rejects any unidirectionality:

> The term *network* derives from the language of metallurgy and textiles used in the sixteenth century to describe objects made out of fabric or metal fibers interlaced as in a net or web. Something like *text*, the roots of the term imply interwoven strands moving in multiple directions rather than directed toward a single end. (2015: 113, original emphases)

She suggests that one of the most vital affordances of networks, next to their connectedness, is that they "usefully confound containing forms" and that they "do not fit formal models of unified shape or wholeness" (ibid: 112). The totality of the networked form cannot be comprehended fully at once.

It is this confounding complexity and the notion of object agency that Florian Sprenger and Christoph Engemann build upon in their ex-

amination of the changing relationship between human subjects and their (networked) technologies. Computers are no longer isolated "black boxes," but are "invisible, smart, miniaturized, spatially distributed, and omnipresent" (2015: 7, my translation). As such, they not only collect data, but are also able to process this information and make decisions based upon them – they are actors (ibid: 8). While great potential of efficiency increase and personalization of content lies in this powerful type of computing, it also brings into existence the fear of surveillance and of external control: "[t]hanks to sensors and internet connectivity, the most banal everyday objects have acquired tremendous power to regulate behaviour" (Morozov 2014). Today's smart technologies purport to offer solutions for all sorts of problems, from obesity to climate change; however, they do so by encouraging peer surveillance and continuous self-monitoring (Morozov 2013: 3, 227). It is anxieties such as these that are an intricate part of the sociological concept of the network society.

The extent to which networks supposedly pervade society and change the human condition becomes apparent in a claim put forward by van Dijk in his introduction to *The Network Society*:

> With little exaggeration, we may call the 21st century the age of networks. Networks are becoming the nervous system of our society, and we can expect this infrastructure to have more influence on our entire social and personal lives than did the construction of roads for the transportation of goods and people in the past. (2012: 2)

This somewhat bold statement resonates with a more general sentiment of the late 20th and 21st century that everything is connected to everything else; that we are constantly surrounded and possibly even monitored by networked communication technology; that the world is shrinking in an ongoing process of globalization and digitalization. It is significant that the concept of the network society not only expresses, but also actively shapes a specific worldview. Networks are regarded as the underlying structure of almost everything, while networking itself has become a behavioral paradigm. This double function is foregrounded in van Dijk's metaphor of a societal "nervous system": a healthy nervous system is a well-connected network and only such a

nervous system can guarantee an organic body's efficient functioning as a whole. The descriptive and prescriptive potential of the network metaphor is, hence, transferred into the sociological concept.

This concept is one particular instance of what may be called the network paradigm: the current tendency to see and to impose networks as the basic organizational principle in all matters. Networks as structures and networking as a process are regarded as an almost natural imperative. However, what are those networks that supposedly constitute the nervous system of society in actuality? Financial networks, media networks, the Internet, transport networks; these are all extremely diverse types of networks that impact our everyday lives in very different ways. While entire books have been written about the network society, the concept remains abstract, ill-defined, and difficult to grasp. Similarly, the key concepts used in theorizing the network society, such as information and the network, are insufficiently delineated.[8] The network society exemplifies the fact that "we use network metaphors colloquially to label the ways things are connected in our daily existence – while not really understanding all these relationships in detail" (Friedrich 2009: 291). Regardless of how vague it is, the network society as a concept continues to shape our worldview: how we perceive of the social structures we live in; how we engage with media technologies; how we understand globalization processes are taking place, and so on. It is, therefore, vital to disentangle the sociological concept from its metaphorical implications.

In his trilogy, *The Information Age: Economy, Society, and Culture*, Castells advances the idea that humanity has entered the "Information Age," bringing about a new social structure (the network society), economy (the informational or global economy), and culture (a culture of "real virtuality"). The network society is characterized by its being

8 Frank Webster has discussed this definitional problem in detail in his *Theories of the Information Society* (2014), dedicating an entire chapter to Castells' trilogy. As Webster further discusses at length in the second chapter of his study, many theories focusing on the concept of the "information society" offer only insufficient definitions of "information."

organized around networks in all dimensions of social structure and practice (2010b: xviii). Yet, as Castells goes on to explain, networking in itself is not a really novel form of social organization; the one feature that truly distinguishes this type of society from previous societal forms is its "informational mode of development": "the action of knowledge upon knowledge itself as the main source of productivity" (ibid: 17). It is not the quality or quantity of knowledge or information, in itself, that is new; elsewhere, he emphasizes that information in its widest sense has always played a key role in all societies (ibid: 21). Instead, it is the fact that information has now become the main source of productivity in society – the "raw material" (ibid: 70). Consequently, a large segment of labor is now moving towards information-processing activities, with these types of employment being more valuable to the network society than others (ibid: 81). The success of these informational types of employment, and the network society as a whole, was made possible by the rise of modern computer communications technologies which allow for the interlinking of businesses, locales, and economies.

The everyday lives of individual persons are affected by the network society as well. Castells focuses on changes in space-time relations and claims that the Information Age is characterized by the emergence of the "space of flows":

> In this network [of interactions made possible by information technology devices], no place exists by itself, since the positions are defined by the exchanges of flows in the network. Thus, the network of communication is the fundamental spatial configuration: places do not disappear, but their logic and their meaning become absorbed in the network. (ibid: 442-443)

In a similar manner, the concept of time is also profoundly changed by digital communication networks, doing away with the notion of linear, predictable time. Instead, according to Castells, the Information Age is characterized by "timeless time" (ibid: 465). Biological rhythms, such as life expectancy, can be manipulated; electronic management systems monitor stock markets around the clock; working hours become flexible. Thus, we are currently witnessing "the supersession of space and

the annihilation of time" (ibid: 502). The emergence of a "real virtuality" is a consequence of this drastic modification of space-time relations in connection to the omnipresent network logic and is, "*a system in which reality itself (that is, people's material/symbolic existence) is entirely captured, fully immersed in a virtual image setting* [...] *in which appearances* [...] *become the experience*" (ibid: 404, original emphasis). Cultural expressions become detached from specific historical or geographical contexts, due to fast and far-reaching information or communications technologies.

Multiple aspects of Castells' theory of the network society find expression in portrayals of the supernatural media virus. Castells' understanding of time and space, as well as his Baudrillardian conception of "real virtuality", resonate in these fictions and are expressed through motifs such as displacement, disembodiment, repetition, and replication, as well as the agency of virtual images. Furthermore, while the main focus may lie on one or the other, it is usually both the macro- and the microscopic effects of the network which are negotiated in fictions that feature the trope: while most of the narratives that I discuss here focus on the struggles of the individual, many of them carry apocalyptic undertones, implying that the virus may cause large-scale societal breakdown. Finally, the alleged inseparability of networks and information travelling through those connections is exemplified by the fact that the supernatural media virus is pure information: a broadcasting signal; a manuscript; a video clip; a piece of computer code.

The disputed aspects of his theory are revealing and relevant in the context of the supernatural media virus as well, since it is those precise points in which the metaphorical impact of Castells' concept becomes most apparent. Central points of criticism are that the theory is too technology-focused and that it portrays the network as a self-expanding omnivore. An underlying technological determinism arises from Castells' focus on technology as the engine driving the restructuring of society. Two quotes are especially conspicuous in this context:

> Toward the end of the second millennium of the Christian era several events of historical significance transformed the social landscape of human life. A technological revolution, centered around information

> technologies, began to reshape, at accelerated pace, the material basis of society. (ibid: 1)

Moreover:

> [T]he ability or inability of societies to master technology, and particularly technologies that are strategically decisive in each historical period, largely shapes their destiny, to the point where we could say that while technology *per se* does not determine historical evolution and social change, technology (or the lack of it) embodies the capacity of societies to transform themselves […]. (ibid: 7)

Here, technology – or the supposed "technological revolution" – is an *event* that is expected to reshape society. While Castells denies that technology determines social change, it nonetheless appears as if, in his conception at least, technology itself is an autonomous phenomenon independent of such changes. It is this view of a unidirectional influence of technology on society – the idea of technology *controlling* society – that becomes a driving force in representations of the supernatural media virus.

Resulting from this focus on technology is Castells' view of the network as all-embracing and self-expanding (2010a: 372), which comprises the second major point of criticism. The network appears to be an outside force invading the social structure, unstoppable, and ultimately inescapable:

> The social construction of new dominant forms of space and time develops a meta-network that switches off non-essential functions, subordinate social groups, and devalued territories. By so doing, infinite social distance is created between this meta-network and most individuals, activities, and locales around the world. Not that people, locales, or activities disappear. But their structural meaning does, subsumed in the unseen logic of the meta-network where value is produced, cultural codes are created, and power is decided. The new social order, the network society, increasingly appears to most people as a meta-social disorder. Namely, as an automated, random sequence of

> events, derived from the uncontrollable logic of markets, technology, geopolitical order, or biological determination. (2010b: 508)

The network is portrayed as an "automated," "random," and "uncontrollable" omnivore that simultaneously threatens to subsume anything and everyone, while also "switching off" those units that have become irrelevant. This notion of the network vividly exemplifies how the metaphor today no longer features an exterior, superior controlling entity, but instead portrays the network itself as a self-controlling agent, which is incomprehensible in its totality – a truly Gothic vision.

Van Dijk provides another theory of the network society that differs vastly from Castells' theory. Not only does his theory have different focal points, centering more on communication media networks and their influences on diverse social spheres instead of economics, but van Dijk is also quite a bit more optimistic when it comes to the network's controllability (2012: 295-297). He differentiates the network society from two other societal forms, namely the information society and the mass society, by defining the network society as a "modern type of society with an infrastructure of social and media networks that characterizes its mode of organization at every level: individual, group/organizational and societal" (ibid: 24).[9]

Van Dijk takes what he defines as the "seven 'laws' of the Web" for his starting point in his conceptualization of the network society (2012: 37): these include the law of network articulation, the law of network externality, the law of network extension, the law of small worlds, the law of limits to attention, the power law in networks, and the law of trend amplification. Each of these tightly interconnected laws essentially describes the structural properties that govern human behavior in the network society; to that end, they serve to foreground the network's complexity while also offering some understanding of the underlying mechanisms of that complex network. Each of these laws touches upon one or several points that are highly relevant when it comes to the portrayal

9 Van Dijk's conception of the mass society is discussed in greater detail in Chapter Two: "*Ghostwatch* and the Advent of the Network Society."

of the supernatural media virus, in particular the relationship between human subjects and the apparently omnipresent media networks. It is, therefore, worthwhile to have a brief look at each of these seven laws.

The law of network articulation – the most important of the seven laws, according to van Dijk – postulates that "social *relations* are gaining influence as compared to the social *units* they are linking" (ibid: 37, original emphases). In other terms, links are becoming more important than nodes in the network society insofar as these relations deeply affect all of life's domains.

The law of network externality refers to the fact that objects or people outside of the network do not remain unaffected by it. While media networks may facilitate an increase in sociability, there is also a social pressure to become, and to remain, part of the network: "new media access is necessary for an increasing number of jobs […]. In social networking, access is required to create new ties and to maintain old ties […]. Those without access will be isolated in future society" (ibid: 196-197). The more people are part of a network, the higher the incentive is to join in as well.

The third and fourth laws, focusing on network extension and small worlds, describe the consequences of network growth:

> When networks such as the Web grow, they tend to become too big. Network units lose oversight and do not reach each other anymore. To solve this problem, *intermediaries*, such as search engines, portals and social networking sites are necessary. (ibid: 39, original emphasis)

Intermediaries become a necessity as it becomes impossible to link every node to every other node. These intermediaries bridge the distance between diverse clusters – that is, between tightly interconnected groups of nodes – thereby creating so-called "small worlds." Even though most units are not neighbors in large-scale networks, they can nonetheless reach every other node through a small number of

intermediaries.[10] As a consequence, the majority of network units, therefore, have to rely on such expert information agents.

The law of the limits to attention emphasizes the disparity between the capacity for sending and receiving messages in networks. While it may be easy to say something, being heard is much more difficult (ibid: 40). Not only does this result in increasingly shallow media content (ibid: 216), but participants in the network are further confronted with an information overload constantly, in which "the glut of information no longer adds to our quality of life, but instead begins to cultivate stress, confusion, and even ignorance" (Shenk 1997: 15). Trying to alleviate this flood of content, much of the network's attention is governed by intermediaries – the "Googlearchy" and social media influencers being two pertinent examples. Thus, popular websites are usually ranked at the top of a result page and, therefore, become even more popular. The consequence is a "rich getting richer" dynamic that van Dijk conceptualizes as the "power law in networks": "In large, scale-free networks those units already having many links acquire even more, while most units keep only a few links. The mechanisms are a continuous growth of links, preferential attachment and contagion" (2012: 41).

The last of these three mechanisms, contagion, is central to the seventh and final law: trend amplification. It is often claimed that the Internet in general, and social media in particular, have a revolutionary potential, enabling the overthrowing of established norms and institutions. According to van Dijk, however, the exact opposite is true: while the technology of new media might be regarded as revolutionary, its social effects are instead evolutionary. These networks reinforce existing social trends and relations, rather than dismantling them (ibid: 42-3). Thus, one central risk of the network society is the rise of "echo chambers" (Sunstein qtd. in van Dijk 2012: 231), which leave no room for new impressions, but instead echo and amplify already existing opinions,

10 This refers to the phenomenon of the six degrees of separation, according to which all human beings are connected to one another through a maximum of six intermediaries. For more on this, see Barabási (2002) as well as Watts (2004).

frequently allowing for a faster proliferation of such opinions and beliefs in the place of hard facts.

As a result of the structural properties described by van Dijk's seven laws, the network society is governed by the seemingly paradoxical dynamic of simultaneous scale extension and scale reduction (2012: 45): small communities arise in the network in the form of clusters, even while the network grows continuously in the processes of nationalization, internationalization, and globalization. Independently of the rise of these clusters, the network society is less inclusive than the mass society, given that individuals have to continuously prove their value to the network in order to remain connected thereto (ibid: 46). It can become more difficult to find a place to fit into a society that is no longer dependent on collectives structured around geographical proximity.

Of course, while van Dijk's account of the network society may be more nuanced than Castells' account in parts, his theory is not unproblematic either. Again, an insufficient definition of concepts and the failure to consider the metaphorical baggage carried by these distinct terms need to be emphasized at this point. Additionally, van Dijk's claim that the network could theoretically be designed before its implementation, and that the network is controllable even after its establishment, is dubious. For instance, legal systems are always one step behind as the interests of multinational corporations are opposed to those of individual states. One indication of this is the fact that the algorithms of services such as Facebook or Google, which ultimately determine any user's online experience – which contents they see, which websites or friend connections are suggested to them, etc. – are often untransparent and subtly enforce those aforementioned echo chambers. The network seemingly evolves more quickly than the legislature governing it.

What becomes apparent is one of the central problems of discussions concerning the network society and which, in turn, is a fulcrum in the present book: it is impossible to ever reach a satisfactory understanding of the network society due to the complexity of the network paradigm in general and the network society in particular – as both the concept and the claimed condition of society. Most discussions of the network society, for instance, overlook the fact that there is not *one*

network governing all social structures. Instead, there is a multitude of overlapping networks – transportation, political, media networks, and more – that all work simultaneously (Levine 2015: 121). It is impossible to accurately foresee the consequences of life in such an interconnected society. Therefore, it is vital to focus instead on the *perceived* dangers of the network society for this monograph: the fears and worries that are coded into imaginations of this type of society as they appear in contemporary Gothic fiction. These perceived, oftentimes simplistic, anxieties are the driving force behind the supernatural media virus.

As Friedrich explains, "cascades, congestions, contaminations, chain reactions, epidemics, and crises are endemic fears of the network society" (Friedrich 2015: 376, my translation). Each of the network's benefits may also yield disadvantages. For instance, today's communication networks may enable speedy communication between people across vast distances as well as easy access to information; at the same time, however, these media can also disseminate harmful information or facilitate fearmongering. Likewise, these networks may allow for an increase in social relationships and interactivity, but this increase may come at the cost of privacy or encourage people to withdraw into completely self-chosen environments, thereby decreasing some types of social relationships and causing the fragmentation of some social units. Every positive development that is enabled by the network society can have a negative side effect.

All these factors contribute to the perception of the network society as an obscure entity that follows complex, incomprehensible rules and which controls seemingly every aspect of human life. Van Dijk captures this sentiment in the following sentences:

> The social environments made by humans increasingly adopt the character of a natural environment. Individuals therefore feel that they face an anonymous, opaque, inaccessible and uncontrollable reality. Symptoms of alienation and uprooting are widespread. Social and economic crises begin to resemble natural disasters. (2012: 175)

This notion of the crisis within the network appearing almost as a natural catastrophe – that is, as something outside of human control and

which is unintelligible – resonates with Castells' arguments in *Rise of the Network Society* and hints at the network metaphor's overall cultural impact. Regardless of how accurate these theories may or may not be, they pick up on numerous anxieties regarding life in a networked, technologized world: the fear of being "switched off" by the network when no longer valuable; the idea of a sudden technological revolution that is both too complex to be fully understood and so pervasive that it reshapes the very basis of society; and the notion of a self-expanding and all-embracing network that follows its own rules.

1.4 The Virus in the Network Society: The Supernatural Media Virus as a Gothic Trope

The virus and the network metaphor are often used unquestioningly as established concepts without any regard for their metaphorical potential. How well these terms fit the phenomena they are used to refer to, or what the implications of the metaphorical mapping are, is something that is seldom questioned – in short, what ideological "baggage" these terms carry. As with all metaphors, they are worldmaking devices: they shape a worldview and enforce certain behavioral paradigms associated with it. The supernatural media virus as a contemporary Gothic trope builds upon these metaphors' interdependency and their worldmaking potential. In my book, metaphor serves as a conceptual and methodological tool to unpack the trope and its diverse implications.

The supernatural media virus connects both metaphors to the idea of uncanny media technologies that possess a will of their own. Such a conception of the media as a source of terror is by no means new. In *Haunted Media*, Jeffrey Sconce discusses the metaphysics of electricity and electronic presence, exploring the relationship between diverse technological innovations and their surrounding discourses of uncanniness and haunting. As he explains, "the cultural construction of electronic presence is always inextricably bound to the social application of a technology within a given historical moment" (2000: 10); each medium and its corresponding fears, therefore, need to be read within

this specific context. Sconce identifies medium-specific imaginations and metaphors by analyzing the common imaginations of ghostliness that are associated with the telegraph, radio, and television. The parallel rise of the telegraph and spiritualism invoked metaphors such as "celestial telegraphy" or the "spirit battery" (ibid: 28-29), foregrounding the newly available long-distance communication methods that were enabled by electricity. Radio, in contrast, was framed using oceanic metaphors: the "etheric ocean," and the feeling of being "adrift on the new century's social currents" (ibid: 63). While radio offered a means of contacting distant worlds across this vast ocean, television seemed to comprise an independent world or dimension of its own, blurring the boundaries between the real and the virtual: "televisionland" (ibid: 177). The television set itself becomes a kind of "gateway to oblivion" within the domestic space of the living room (ibid: 166). Different media invoke different metaphors, and these metaphors, in turn, reinforce specific narratives.

All of these imaginations that are discussed by Sconce utilize metaphors of "flow," "suggesting analogies between electricity, consciousness, and information that enable fantastic forms of electronic transmutation, substitution, and exchange" (ibid: 7). The contents transmitted – the information flowing through a medium – influence the technology itself:

> In these scenarios, media technologies are more than just media; they are affected by the material that passes through them. Narratives of haunted media suggest that this material – messages, images, voices – does not merely pass through; parts of it remain and leave traces. Further, since these technologies act as extensions of human consciousness and perception, aspects of those faculties begin to rub off as well, resulting in narratives of technologies and technological devices imbued with their own will. The "other side" thus stores much more than the spirits of the dead; it provides the murky borderland for all sorts of other-intrusions to disturb the distinctions a society holds dear: conscious/unconscious, known/unknown, domestic/for-

> eign, reality/unreality, life/death, mind/body, self/other. (Jackson 2013: 33-34)

Significantly, *Haunted Media* only briefly touches upon the development of the personal computer, even though it was published in 2000; Sconce does not discuss the discourses surrounding digital media in greater detail. Expanding on his theory, I claim that viruses and networks are the key metaphors through which today's media, and their ghostly presences, are envisioned. Both metaphors are deeply imbued with the notion of flow as well: while the virus represents the uncontrolled flow of harmful information; the network provides the points and pathways for this flow. As fictions of the supernatural media virus exemplify, it is not just relatively recent technologies – the Internet, digital communication networks, and so on – that have been conceived of as networks, but even older media, such as analog network television or the print novel, that are becoming reconsidered through the lens of interconnection. "Network" here denotes both the structure and the process: these media are understood as being structured as networks, while they are also seen as continuously undergoing the process of networking, changing their shape, incorporating new nodes, and disconnecting other nodes. Viruses travel through these networks with ease, infecting every node and affecting the shape and growth of the entire structure. It is these narratives of interconnection and contagion that evolve alongside today's digital, networked media.

In some cases, the network paradigm is taken to the extreme by organizing the narrative itself as one such network, as is the case in *House of Leaves* or *Kairo*. Aris Mousoutzanis describes such texts as "network fictions" or "narratives of interconnectedness" (2014: 95). These fictions are characterized by the narrative patterns that result from their thematic preoccupations:

> The "global network" in particular would be one of the most persistent motifs of the 1990s that has emerged during the last decade as a paradigm to organise a set of fictions consisting of different interlocking narratives set in different times and places around the globe, involving many characters, often in a constant state of travel and mo-

> bility as they find themselves involved in or affected by incidents from a distant time, place or storyline. (ibid: 223)

In short, networks comprise such fictions' subject matter as well as storytelling strategy. David Bordwell advances a similar theory of narrative, albeit one specifically for film. Like Mousoutzanis, he maintains that the "form's recent popularity may also owe something to the emergence of network theory in the 1980s and 1990s" (Bordwell 2006: 100). In popular culture, the idea of the "butterfly effect" in particular, as well as that of the "six degrees of separation" took hold, inspiring films such as *Six Degrees of Separation* (dir. Fred Schepisi, 1993) and *Love Actually* (dir. Richard Curtis, 2003). However, as Bordwell explains, most of these narratives remain comprehensible and are structured according to "principles of causality, temporal sequence and duration, character wants and needs, and motivic harmony that have characterized mainstream storytelling (not just in cinema) for at least a century" (2006: 100). Discussing Bordwell's ideas, Levine explains that films can never realize the full potential of network narratives, since they are too restricted in terms of length; therefore, films can only portray more simple chain networks of cause and effect (2015: 127).[11] Nonetheless, the trend to simulate a network – the narrative's subject matter – by dividing the fiction into multiple narrative strands that converge at some point is apparent.

11 Levine's point is somewhat undermined by interactive films such as *Black Mirror: Bandersnatch* (dir. David Slade, 2018). Released on Netflix, *Bandersnatch* asks viewer to make decisions for its main character that lead to different results. Thus, the film's run time is highly variable. Since the movie invites viewers to explore several narrative paths, it establishes a narrative network that is far more complex than those chain networks discussed by Levine. A similar claim could be made for the growing number of video games that can be classified as interactive dramas. Well-known examples of these in the Gothic/horror genre include *Until Dawn* (2015) as well as the *Dark Pictures Anthology*, which so far includes the games *Man of Medan* (2019) and *Little Hope* (2020), all developed by Supermassive Games. These games all rely on the butterfly effect and feature surprising levels of complexity.

Significantly, these fictions often focus on seemingly small events that spread throughout the entire network. One concrete example for this is what Mousoutzanis deems the "network apocalypse": "the impending apocalypse as a result of a major event or accident that escalates due to the connectivity and interconnectedness of different narratives, events, computers, machines or individuals" (ibid: 94). The centrality of the global network and the network apocalypse in fiction looms large today, even though Mousoutzanis restricts his own analysis to *fin de siècle* fictions from the 20th century.

A viral outbreak is one possible cause for such a cataclysmic network event. The outbreak narrative scheme advanced by Wald (2008: 2) relies on a number of ingredients, the most important of which are: the establishing of scientific expertise and the global networks used by these experts; the identification of certain people who are *at* risk and the identification of other people *as* risk; the delineation of sanitary and unsanitary zones; and the description of the channels through which the pathogen travels. While the supernatural media virus is not always explicitly described in viral terms, the narratives featuring the trope nevertheless adhere to the outbreak formula and negotiate these central concerns. By modifying some of the scheme's ingredients, nonmedical contagions such as the supernatural media virus can be grasped using the formula: first, the notion of expertise is deeply affected. In the texts discussed, it is neither medical scientists, biologists, nor military experts, but instead media-savvy people who identify the emerging media infection. At the same time, it is often these people who are also among the first to be put at risk by the supernatural media virus. The role of expert, victim, and host can all be assumed by one person.

Second, the global networks that enhance and inhibit the virus' spread need to be reconsidered: while the supernatural media virus may utilize routes of physical travel, it predominantly spreads through those media networks that are central to the network society: piggybacking on a television signal; inscribing itself into the words of a book; hiding as a visual artifact on a videotape, or traveling along the information highway of the Internet. These media networks have their

own dynamics and rules concerning what can spread, how far, and how fast.

This leads to the third point: the novel nature of the vector, host, and environment. The vectors of a fatal infection are neither mosquitoes nor ticks, neither contaminated needles nor unhygienic doorknobs, but rather everyday media. Everybody who interacts with these dangerous media contents can become a host to the supernatural media virus – possibly even without realizing it at first. The environment through which the virus spreads is not predominantly described in terms of its climate or population density, but rather in light of its technologization, digitalization, medialization, and networkedness. While the delineation of safe, sanitary zones, and unsanitary places in narratives of biological pandemics oftentimes hinges upon a "thirdworldification" – the portrayal of infected regions as primitive, backward, and poor (Wald 2008: 45)[12] – it is instead highly modernized and technologized metropolises, in which the network society already seems to have been fully implemented, which serve as the danger spots of the supernatural media virus.

The degree to which fictions featuring the supernatural media virus make the contagious potential of their antagonist explicit varies, as I show in the following chapters. *House of Leaves*, for instance, repeatedly foregrounds the physical symptoms that the virus induces in its victims. *Ring* dwells on the pattern of the virus' spread and how fast it might disseminate on a global scale. *Pulse* even features animated epidemiological maps in its opening credits. In comparison, *Ghostwatch* and *Kairo* introduce the idea of viral infection more subtly, instead focusing on the social environment of the supernatural media virus. Significantly,

12 These processes of thirdworldification and othering could also be witnessed during the COVID-19 pandemic. Xenophobia and anti-China sentiment arose, expressing themselves in derogatory jokes, false rumors about "primitive" Chinese cuisine, warnings to avoid Asian-populated quarters, and outright dehumanizing hate. These discourses largely built upon age-old racist imaginations associating the Chinese with filth, dirty/contaminated food, and disease.

the trope frequently bears connotations of diverse types of viruses: biological, digital, and media-related variations. Through the confluence of diverse virus metaphors and the impending bodily disintegration, the trope of the supernatural media virus emphasizes the impossibility of disentangling the technological and the biological. Examining the extent to which each of these fictions follows the conventions of the outbreak narrative, how they adapt its ingredients to fit their purpose, and how they frame the nature of the virus is a necessary step in discussing the trope.

Fears regarding the network society are translated into the language of outbreak narratives and are given a recognizable shape in the form of the supernatural media virus. In his afterword to the special issue *Contagion and Infection*, Arnold Weinstein writes: "literary texts about disease are revelatory and can tell us something about the repressed fears and the emerging fault lines of a culture in ways that the epidemiologist as such cannot chart" (2003: 109). Fictions about disease are a kind of thought experiment that represents the reaction of individuals and societies to an outbreak and involve more than merely charting the outbreak and progress of a disease. Whereas a scientific model tends to focus on the hard facts – places, dates, numbers of infections and deaths – fiction can represent the hypothetical lives of people confronted with disease. Representations of the supernatural media virus function in a similar way, posing vital questions regarding the effect of the network society and its media technologies.

The network society takes center stage through the portrayal of highly interconnected and densely populated urban spaces in some of the fictions that I discuss; here, it is vital to examine the interplay of the virus and its environment (e.g., *Ghostwatch*, *Ring*, *Kairo*, *Pulse*). In other cases, such as the *Ring* franchise, the analysis of the virus-host interaction is more important, exploring how the virus enforces certain behaviors in its victims and adding a moral dimension to media consumption and spread. Yet another set of fictions still revolves around the impact of digital media on our everyday lives: how deeply such technologies pervade society and how even the simplest tasks and actions are performed with the aid of devices such as cell phones or

computers (e.g., *Kairo* and *Pulse*). In these fictions, the analysis of the relationship between virus and viral vector is particularly fruitful. Every narrative, in short, highlights different aspects of the supernatural media virus. The metaphorical potential of the trope of the supernatural media virus can be uncovered, by focusing on the three aspects of host, vector, and environment, thereby revealing not only how it responds to, but also actively forms, certain imaginations regarding increasing interconnection and mediatization.

Several of the narratives chosen here have been adapted to a new medium and/or culture. In treating these texts, I follow Linda Hutcheon's notion of adaptation as both a product and a process (2006: 9). Hutcheon rejects the idea of reading adaptation exclusively in terms of a fidelity discourse, which implies that any such text is the inferior derivative of some original: "an adaptation is a derivation that is not derivative – a work that is second without being secondary. It is its own palimpsestic thing" (ibid). The process of adaptation is neither parasitic nor vampiric; it neither drains the source text, nor is it necessarily "paler" than the original (ibid: 176). Using the metaphor of evolution, Hutcheon instead suggests regarding adaptation as a type of mutation which can give valuable insights into the cultural context of a text:

> Some [stories] have great fitness through survival (persistence in a culture) or reproduction (number of adaptations). Adaptation, like evolution, is a transgenerational phenomenon. […] Stories do get retold in different ways in new material and cultural environments; like genes, they adapt to those new environments *by virtue of* mutation – in their "offspring" or their adaptations. (ibid: 32, original emphasis)

By tracing the evolution of a text over time and across cultures, it is possible to uncover the ideologies and social values of a culture. Therefore, the analyses that follows never focus on one text exclusively, but, where possible, also take its adaptations into consideration. Of course, some of the narratives discussed do not have any adaptations – even these fictions, however, have some form of prequel/sequel and/or transmedia extension. The metaphor of evolution applies to this process of franchis-

ing as well, given that the narrative mutates over time and spawns additional installments. In the case of the *Ring* franchise, for instance, this process has reached a level where the narrative itself is oftentimes described as being viral (Lacefield 2010b: 21). Other fictions, such as *House of Leaves*, are multimodal constructs that exploit the characteristics of multiple narrative media and even create a complex, singular narrative dispersed across multiple media. Tracing these complex narrative structures is key to understanding how anxieties regarding the network society and conceptions of virality are written into the franchise. No straightforward, linear analysis of these narratives would prove sufficient, given that they challenge traditional forms of narration.

Significantly, I approach these fictions as they appear in a wide range of media with similar tools, taking the specificities of the narrative medium into consideration. In so doing, I draw on the concepts and methods developed in the field of transmedia narratology, or, as Marie-Laure Ryan calls it in her later work: a "media-conscious narratology" (2014: 30). Such a narratology examines the interplay of narrative and medium: how a story and its structure change when migrating between media through, for instance, the act of adaptation; how narrative meaning is created in diverse media; how the particular properties of a medium affect the narrative. Just as metaphors are mininarrations that evoke specific narrative schemata and plots, so too is the supernatural media virus a mininarration. On the diegetic level, the virus is always a story to be decoded: its origins must be discovered (was there a gruesome crime?) and its motivations found out (does the virus seek revenge?). This is all undertaken in the hopes of finding a cure or to contain the infection. Borrowing heavily from detective fiction, for instance, hosts of the Ring virus race against the seven-day incubation period in an attempt to decode the cursed videotape's secret messages, discovering the tragic history of Sadako/Samara. Hence, the virus can be regarded as a narrative that is inscribed into a corruptive medium. Each of the selected fictions is a text about another text, with one medium remediating another. In some examples, the narrative medium and the viral vector are conflated, playing with the fourth wall and implying that the reader/viewer of the fiction might be infected

by the supernatural media virus in the process. Such portrayals are relevant to our understanding of the supernatural media virus and how it reflects on the media environment and network society in which it thrives. A media-conscious narratology makes it possible to approach these points, particularly through its focus on narrative/medium interactions.

One approach to reading network fictions is what Jessica Pressman calls a "networked reading strategy" (2006: 116). This strategy foregrounds both the internal structure of a narrative and the nature of the narrative as a network comprised of a multitude of singular texts and demands that close attention be paid to the intra- and intertextual networks of a text. A networked reading strategy can, therefore, cope with rhizomatic fictions that either lack a stable center, such as *House of Leaves*, or have evolved far beyond their original center, such as *Ring*. For this reason, I regard each individual text of a franchise to be a node belonging to a larger narrative network. Similarly, in adopting actor-network-theory for literary criticism, Rita Felski calls for a rethinking of conventional approaches to a text:

> Texts are objects that do a lot of traveling; moving across time, they run into new semantic networks, new ways of imputing meaning. What Wai Chee Dimock calls "resonance" is this potential to signify and change across time, to accrue new meanings and associations, to trigger unexpected echoes in unexpected places. (2015: 160)

Furthermore: "Reading, in this light, is a matter of attaching, collating, negotiating, assembling – of forging links between things that were previously unconnected" (ibid: 173). Whereas Pressman's networked reading strategy focuses on narratives, which might be regarded as networks in some way, Felski's ANT-inspired reading practices instead demand that any text be read as an actor-network: accruing new meanings in new contexts, invoking new interpretations, and acting on its readers. The network becomes not only the structure to be studied, but also a method to be adopted, something very befitting of this study's topic.

This discussion has, until now, only foregrounded key characteristics of *the* supernatural media virus, postulating the existence of a singular, uniform, and easily identifiable trope. Of course, this is something of a generalization and simplification. As the following chapters intend to show, the trope is highly changeable in terms of both its appearance and its key themes. Every analysis in the subsequent sections, therefore, highlights different aspects of these supernatural media virus*es*, discussing the topics and anxieties negotiated through the trope.