Chernobyl as Pandemic Practice: The Appeals of Scary Media During Scary Times

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1. Introduction

On January 5, 2020, the WHO issued a statement on the discovery of a novel respiratory virus. What followed was one of the deadliest pandemics in the last hundred years. If one were to describe the first months of the COVID-19 pandemic with a single word, the word would be "anxiety". At least, that is the word that first comes to mind when I recall early 2020. I felt an intense, disempowering anxiety during the first lockdown. During this period of uncertainty, when all one could do was to sit around and wait, or learn how to make sourdough, I found myself drawn to scary media and remembered the HBO miniseries *Chernobyl*. I had already watched it six months ago, but I felt the urge to watch it again for some reason. The miniseries, which consists of five 60-minute episodes, dramatizes the 1986 disaster at the Chernobyl Nuclear Power Plant in present-day Ukraine. It portrays both the political and human consequences of the disaster, as well as the fatal decisions leading up to the reactor explosion. The story is told primarily from the perspective of chemist Valery Legasov, who was part of a commission to contain and investigate the accident. Over the five episodes, Legasov fights to get the truth about the severity of the accident out, while at the same time struggling to contain the radiation. The miniseries is absolutely terrifying. It is some of the best horror I have watched, despite it not being officially labeled as horror.

Watching the miniseries, paradoxically, reduced my anxiety and made me less worried about COVID-19. I was also not the only one seeking out scary media during the pandemic. *Contagion,* an almost 12-year-old movie about a virus outbreak scarily similar to COVID-19, saw a huge surge in popularity during the first months of the pandemic (Mack 2020). On January 6, 2020, the day after the WHO officially announced that an outbreak of a novel virus was taking place in China, *Chernobyl* (HBO) saw an uptick in Wikipedia page visits from less than 10.000 daily visitors to more than 36.000 (TelevisionStats.com 2023), as well as a spike in searches according to Google Trends (Trends 2023). Why? What does one gain from watching scary media when the world is already a

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scary place? Evidently, something about scary media during times of crisis is appealing to certain people.

Engaging with and enjoying scary media, such as horror movies or other kinds of frightening entertainment, is called recreational fear, and there is evidence to suggest that recreational fear might be good for you, potentially reducing anxiety (Scrivner and Christensen 2021). Furthermore, one study found that morbidly curious people were particularly drawn toward scary media during the COVID-19 pandemic (Scrivner et al. 2021). To further explore this relationship between horror enjoyment, anxiety, and times of crisis, I will discuss the appeals of watching scary media during a global crisis. Specifically, I will use simulation theory and morbid curiosity to argue that the appeal of watching *Chernobyl* during a pandemic is that the miniseries simulates a threat with crucial similarities to COVID-19, yet a threat that is more tangible and less unknown. This provides the audience with an alternative, concrete source of negative emotions, as opposed to the nebulous anxiety caused by the pandemic. Furthermore, a part of *Chernobyl's* appeal can be explained by morbid curiosity.

2. Recreational fear and the appeal of horror

Before diving into *Chernobyl*, I will lay the necessary theoretical groundwork needed to analyze the miniseries. I will introduce the topic of recreational fear, which includes theories on the paradox of horror, simulation theory, morbid curiosity, and psychological distance. First of all, what is recreational fear and why do we care? Mathias Clasen, director of the Recreational Fear Lab, writes that "recreational fear can be defined as behaviors where people voluntarily seek out activities that elicit negative emotions and expect to derive pleasure from such emotions" (Clasen 2023, 36). Thus, by Professor Clasen's definition, engaging in recreational fear can be anything from reading a Stephen King novel to riding a roller-coaster. Unsurprisingly, then, a lot of people engage in recreational fear of one kind or another. In fact, a study found that more than half of people "tend to enjoy horror media" (Clasen 2021c, 7). But why do so many people derive pleasure from something that is intended to elicit negative emotions? One would assume that humans evolved to avoid stimuli that elicit negative emotions, not actively seek them out. There are many potential explanations for this conundrum, dubbed "the paradox of horror," such as conversion, control, and catharsis theory (Kjeldgaard-Christiansen, forthcoming, 13–14). However, the most comprehensive answer to the paradox is simulation theory, which argues that horror functions as threat simulation. According to simulation theory, playing with fear emerged in humans as a means to simulate danger in a safe setting, allowing us to practice how to respond to adversity, thus increasing preparedness for real-world scenarios of danger (Clasen 2021c, 3; Kjeldgaard-

Christiansen, forthcoming, 14). Furthermore, simulation theorists argue that horror allows us to gain valuable insight into our psyche, as simulated threat scenarios can teach us how we respond to danger, as well as the effectiveness of different coping strategies (Kjeldgaard-Christiansen, forthcoming, 14). In other words, we enjoy horror and the threat simulation it provides because it is beneficial to our survival (Clasen 2021c, 16).

But exactly what kinds of danger does horror simulate? The means by which horror scares its audience are no coincidence, as these tend to relate to things that we have evolved to fear or be vigilant of. This is why horror often depicts super-sized versions of creatures that we would have been particularly vulnerable to in the past, such as spiders (e.g., *Arachnophobia* [Marshall 1990]). We fear that which might easily kill us, especially if it appears even bigger and more hostile than usual (Kjeldgaard-Christiansen, forthcoming, 5). Another evolutionary adaptation that horror takes advantage of is pathogen disgust, which is the disgust we feel at the depiction of open wounds, protruding bones, and bodily fluids. This mechanism protects us from potential infection and disease (Kjeldgaard-Christiansen, forthcoming, 5). The appeal of simulating bodily mutilation relates to morbid curiosity. In short, our fascination with the macabre is likely an adaptive function and most of us are morbidly curious to a degree (Clasen 2021a, 41). We seek out knowledge about what happens to the human body when it is dead or dying because it might benefit us. Knowing the symptoms or cause of a certain disease, for instance, helps us prevent or treat it in the future (Clasen 2021a, 41). According to behavioral scientist Coltan Scrivner, morbid curiosity can be roughly divided into four facets, all of which reflect specific kinds of threats: The threat of violence, the threat of dangerous people, the threat of physical damage to the body, and the threat of the supernatural/paranormal (Scrivner 2021b, 8). As we will see, *Chernobyl* utilizes the threat of physical damage to the body to great effect.

Horror also simulates and helps us prepare for encounters with antisocial humans, often depicted as liars, murderers, rapists, and other kinds of sociopaths (Kjeldgaard-Christiansen, forthcoming, 6). We evolved to dislike and reject antisociality due to it being detrimental to the survival of groups, which is why horror often portrays prosocial protagonists opposing antisocial antagonists (Clasen 2018, 359). This is closely related to another important function of horror and stories in general, which is the transmission and reinforcement of prosocial behavior (Clasen 2018, 359). There is often a lesson to be learned from horror, be it the value of adhering to certain social norms or not walking alone at night (Clasen 2017, 57). As evident, the situations horror simulates are no coincidence, as these are often evolutionarily rooted in human biology.

A different, but not necessarily conflicting, explanation as to why we seek out and get enjoyment from scary entertainment is the predictive processing framework (PPF). In essence, the

PPF argues that the reason humans actively seek out novel and unpredictable stimuli is that we are constantly on the lookout for environments in which error prediction is neither too fast nor too slow, which allows for optimal learning. Predictions are resolved through actions. Too much error is hard to resolve, and too little error is not useful for learning (Miller et al. 2023, 2–3). Consuming horror, then, is a way to lower the error prediction associated with stimuli that would usually be too unpredictable, such as serial killers or pandemics, or anxiety itself (Miller et al. 2023, 8). What simulation theory and the PPF have in common, broadly speaking, is that both view recreational fear as a way to facilitate learning, and learning is pleasurable due to being beneficial to our survival and well-being.

2.1 Psychological distance

A final important concept in recreational fear is psychological distance. As the name suggests, psychological distance refers to how close something feels and it can be divided into four dimensions: temporal, spatial, social, and hypothetical (Clasen 2021b, 142). Horror media utilizes these different dimensions of psychological distance to influence the viewer's experience. Decreasing psychological distance increases intensity, which can increase fear, and vice versa. Take, for instance, a horror movie that takes place in either present-day London or 1920s Copenhagen. For a viewer living in London, the former scenario exhibits both lower temporal and spatial psychological distance, which would likely translate into a scarier movie, all else being equal. Likewise, a horror movie about a high-schooler being chased by a knife-wielding serial killer would be hypothetically and socially closer to a viewer who herself is a student than a movie in which an elderly nun must fend off hordes of evil spirits.

3. A better source of negative emotions

According to simulation theory, the appeal of *Chernobyl* appears simple. The miniseries contains a threat that characters must face and overcome. This simulated threat scenario is appealing because, as we know, humans find simulation pleasurable due to its adaptive function (Clasen 2021c, 16). It is likely, then, that the appeal of engaging in certain kinds of threat simulation is even greater during times of crisis, which the popularity of *Contagion* and *Chernobyl* during the first months of 2020 suggests. As news spread about the looming threat of a virus crossing borders and leaving a trail of death and chaos in its wake, it makes sense that people turned to media that simulate a novel virus and a nation in crisis. Many people had likely never experienced a major threat like COVID-19 before and thus possessed no prior experience or coping strategies to draw from, meaning they turned to the next best thing: simulated threat. *Chernobyl's* popularity is no surprise, then. It depicts

a disaster of devastating proportions, which throws a nation into turmoil. We learn how a government might respond to an invisible, airborne threat, as well as how people react when their lives are in danger. While these are salient threat scenarios, they are not unique to *Chernobyl.* What, then, makes *Chernobyl,* in particular*,* appealing during a pandemic like COVID-19?

3.1 Fear of the unknown

H.P. Lovecraft once wrote: "The oldest and strongest emotion of mankind is fear, and the oldest and strongest kind of fear is fear of the unknown" (Lovecraft 1927). I believe this quote holds a big part of the answer to why *Chernobyl* appealed to me and others during the beginning of the COVID-19 pandemic. It perfectly encapsulates the first half of 2020, during which no one knew exactly what this new virus was. We knew that a virus was spreading, and we knew that it killed people, but that was about the extent of the public's knowledge for a while. The virus represented an intangible, nebulous threat, which was hard to quantify in any meaningful way, apart from its death toll. The fact that an invisible, airborne killer was coming undoubtedly triggered varying degrees of the fear of the unknown in many of us, causing anxiety. A more scientific term for the fear of the unknown and the anxiety that follows is intolerance of uncertainty (IU), which refers to a person's inability to cope with uncertainty in a healthy way, and people scoring high in IU are more likely to suffer from anxiety and depression than others. Furthermore, research indicates a relationship between IU and declining mental health during the 2020 pandemic (Andrews et al. 2023, 1–2). As evident, there is a link between the fear of the unknown, anxiety, and the COVID-19 pandemic.

Where does *Chernobyl* fit into this? I argue that *Chernobyl* appeals to viewers by replacing the nebulous anxiety associated with the pandemic with a more concrete and predictable source of negative emotions. The miniseries achieves this by simulating a threat that is similar to but less unknown than a virus like COVID-19. Before moving on to the analysis, we first need to understand why a concrete source of negative emotions is preferable to a nebulous one. Anxiety is characterized, as opposed to fear, by the absence of an apparent source: a lack of a tangible threat (Öhman 2007). What horror does is provide anxious viewers with a more tangible and predictable source of anxiety or negative emotions. We, mostly, know what to expect from a horror movie, and engaging with scary media is the viewer's choice, as is choosing whether or not to keep watching. Furthermore, viewers can easily decrease the intensity of the experience by increasing psychological distance, such as by turning on the lights, decreasing the volume, or keeping in mind that it is only a movie (Clasen 2021b, 141–143). This means that the viewer, even if anxious, is able to feel somewhat in control of their experience (Scrivner and Christensen 2021, 13). Furthermore,

the unease triggered by horror can in and of itself be helpful, as it decreases the emotional "mismatch" associated with anxiety. This "mismatch" occurs when we experience negative emotions without a clear source (Scrivner and Christensen 2021, 7). This can trigger a sense of powerlessness or even more anxiety, as I realized during the pandemic, which I believe is part of the reason I watched and enjoyed *Chernobyl*: It provided a predictable and palatable source of negative emotions, acting as a kind of emotional scapegoat. I will discuss the specific ways in which *Chernobyl* achieves all of this in the next sections.

3.2 Making the unknown known

As mentioned, the fact that *Chernobyl* simulates a threat that is similar to but less unknown than COVID-19 is important. The first and most noticeable similarity between *Chernobyl* and the pandemic is the nature of the threat itself: an airborne, invisible killer. In *Chernobyl*, the threat is not a virus but extreme levels of radiation from the exposed core of a nuclear reactor. While a virus remains undetectable in the air, it is easy to measure radiation levels using a dosimeter: a device that plays a significant role in the miniseries. The dosimeter tells you, in the unit of roentgen, precisely how bad things are. Knowing the severity of the threat matters greatly, as being able to quantify a threat is a way to understand it, and understanding something inevitably makes it less scary – less unknown. Imagine that we carried, instead of a dosimeter, a device able to measure how much virus is around us. It certainly would have made life easier during the pandemic. What *Chernobyl* does is offer a way for anxious viewers to simulate a threat similar to a pandemic, but with the dosimeter acting as a means to make that simulated threat less unknown.

The viewer is not told the severity of the threat right away, however. At first, all dosimeters either reach their limit of 3.6 roentgen or simply burn out. This is undoubtedly a creative choice to raise suspense. However, the suspense is released in Episode 2, "Please Remain Calm," as we learn that "it's not three roentgen. It's fifteen thousand" (Mazin 2019c, [27:44]). Increased knowledge of a threat is preferable to remaining ignorant, as it alleviates anxiety associated with IU. Furthermore, knowledge is advantageous in a survival scenario, as knowing as much as possible about a threat allows for a more informed strategy on how to manage it (Scrivner and Christensen 2021, 11, 13). Contrary to the popular phrase, ignorance is not always bliss.

Another way in which *Chernobyl* makes the threat of radiation less of an unknown is by using a tangible representation of radiation itself in the form of graphite. Graphite, a benign-looking dark mineral, was used in the reactor core to moderate the ongoing fission, which means that it is extremely radioactive. The viewer quickly learns that in *Chernobyl*, graphite means danger.

Figure 1. Firefighter holding graphite. Screenshot from *Chernobyl* (Mazin 2019b, [16:53]).

Figure 2. Firefighter burned by graphite. Screenshot from *Chernobyl* (Mazin 2019b, [18:50]).

Not long into episode one, shortly after the reactor explosion, a firefighter is seen picking up and inspecting a piece of graphite, unaware of the risk. He drops it after a few seconds, following concerns raised by a fellow firefighter. Two minutes later, we see a firefighter on the ground, screaming in pain, followed by a close-up of a burnt, blistering hand. This short sequence of events effectively conveys important knowledge about radiation: it is fast, invisible, and harmful. Although

the scene is horrifying, it provides the viewer with a tangible representation of the threat of radiation. The visual cue of graphite, just like the dosimeter, makes the unknown more known, resulting in a more palatable threat simulation. Furthermore, by immediately demonstrating the effects of extreme radiation on the human body, viewers will barely have enough time to anxiously wait for the inevitable reveal of what happened to the unlucky firefighter. It removes any guesswork on the viewer's part, making the unknown more known.

Apart from visual cues, *Chernobyl* also effectively uses sound to convey the threat of radiation. One sequence in particular stands out in this regard. Toward the end of episode 2, "Please Remain Calm," Legasov and Shcherbina learn that a catastrophic secondary explosion is imminent as hot nuclear fuel is about to reach water that has accumulated beneath the reactor. The only solution is to send divers into the depths of the contaminated power plant. The divers carry a Geiger counter, a device similar to the dosimeter, which produces a sound in the form of "clicks" to signal the current intensity of radiation. As the divers descend, moving closer to danger, the clicks of the Geiger counter become increasingly faster and louder, providing both the divers and the viewer with valuable information about the threat: distance matters. As the loudness and frequency of the clicks peak, the result is a chaotic, non-linear sound. The human brain has evolved to respond particularly strongly to non-linear sound, as it reminds us of the scream of an animal or the cry of an infant (Park 2018, 30; Fu 2016, 39). This use of non-linear sound not only makes the scene terrifying but also reinforces the connection made by the viewer between radiation and threat.

By now, the viewer has learned that both the presence of graphite and the clicks of a Geiger counter signal danger. *Chernobyl* combines these established threat cues to great effect in one particular scene in episode 4, "The Happiness of All Mankind." In the scene, workers known as liquidators must manually clear graphite debris from the highly contaminated roof of one of the reactor buildings. Each liquidator is allowed only ninety seconds to do their job due to the extreme levels of radiation.

As the scene begins, we follow a single liquidator on his ninety-second journey on the roof. Graphite is everywhere to be seen, serving as a vivid reminder of the immense threat of radiation. Furthermore, when the liquidator steps onto the roof, the sound of a Geiger counter, which has been barely noticeable background noise until now, increases drastically. Throughout the ninety-second scene, the intensity of the Geiger counter's clicks increases and decreases in correspondence with the intensity of radiation faced by the liquidator. This combination of graphite and Geiger clicks creates an intense audio-visual threat cue that offers viewers more information than either cue could provide on its own. We learn that large pieces of graphite give off more radiation than

small pieces, as well as how radiation changes as a function of distance. Knowing these things further reduces the anxiety associated with the fear of the unknown.

Figure 3. Liquidators on the reactor roof. Screenshot from *Chernobyl* (Mazin 2019d, [48:44]).

Chernobyl does not only make the unknown more known by using auditory and visual cues but also by having characters provide relevant information about the threat throughout the episodes. A notable example of this is a scene in episode 2, "Please Remain Calm," in which Legasov must convince a room of uninformed politicians, including Mikhail Gorbachev, that the radioactive contamination from the reactor explosion is far worse than they were told. Particularly interesting is Legasov's description of the radiation produced by uranium-235, the fuel used in the Chernobyl reactor, which goes as follows:

> Every atom of U-235 is like a bullet traveling at nearly the speed of light, penetrating everything in its path: wood, metal, concrete, flesh. Every gram of U-235 holds over a billion trillion of these bullets. That's in one gram. Now, Chernobyl holds over three million grams. And right now, it is on fire. Winds will carry radioactive particles across the entire continent, rain will bring them down on us. Three million billion trillion bullets in the air we breathe, the water we drink, the food we eat. Most of these bullets will not stop firing for one hundred years. Some of them not for fifty thousand years (Mazin 2019c, [11:30]).

This monologue is remarkably effective at communicating the scale and nature of the threat at hand. Knowing that you are up against "three million billion trillion bullets" is far more worrying than being told that the threat is simply "radiation," especially if you know little about nuclear physics like the men in the room with Legasov. The description of radioactive particles as "bullets" dramatically increases the tangibility and quantifiability of the threat, making the unknown more known, thus decreasing anxiety. This might also increase fear, which is not necessarily a bad thing, as fear is arguably preferable to anxiety. As we know, a concrete source of negative emotions, such as fear, is preferable to one that is less tangible. One might also liken these dangerous "bullets" to the airborne droplets by which a virus spreads, making the scene particularly salient during a pandemic. Furthermore, by describing how radioactive particles will be carried across the entire continent and not stop firing "bullets" for thousands of years, Legasov effectively conveys the scope of the threat, which is not only massive in scale, but in time as well: The radioactive particles will not stop being dangerous for generations to come. This information might further alleviate the fear of the unknown, which, as we know, is triggered by the absence of information.

3.3 Wrapping up on the unknown

The first part of the explanation for *Chernobyl's* appeal is that it offers viewers an alternative, concrete source of negative emotions during the uncertain times of a pandemic by simulating a threat that is similar to but less unknown than a virus. In *Chernobyl,* the threat is made less unknown by the use of visual and auditory threat cues, as well as by having characters provide relevant information about the threat, all of which alleviates anxiety associated with the fear of the unknown. In other words, *Chernobyl* offers viewers a better source of negative emotions.

This does not mean that *Chernobyl* will magically erase all of your pandemic anxieties. For some, however, watching *Chernobyl* during a pandemic might be cathartic, as it provides an efficient way to experience and process negative emotions associated with the fear of the unknown and airborne threats. There is even evidence to suggest that some people feel more relaxed after engaging in recreational fear (Scrivner and Christensen 2021, 17) which supports the idea of catharsis. Furthermore, Scrivner and Christensen (2021) argue that viewers experiencing feelings of anxiety rooted in real-world events might be able to transfer those anxieties to the fictional world created by horror (Scrivner and Christensen 2021, 17). This would also appear to support the argument of *Chernobyl* as a better source of negative emotions: The transfer of anxieties to *Chernobyl* is made easier by the fact that the miniseries is not overwhelmingly anxiety-inducing, leaving "enough room" for the viewer's anxieties. If *Chernobyl* were extremely scary and anxiety-inducing, it would be difficult for an anxious viewer to transfer their own anxieties to the fictional world, as

they would be overwhelmed by both reality and fiction. This can be explained by the so-called "sweet spot of fear" and the PPF. The sweet spot of fear is, as the name suggests, when we experience fear at just the right intensity. Error is resolved at an optimal rate, which means that pleasure is at its peak (Clasen 2021a, 59; Miller, White, and Scrivner 2024, 3). I argue that viewers are easily able to reach this sweet spot of fear when watching *Chernobyl*, as it is undoubtedly scary, but never overwhelmingly uncertain or unpredictable. It feeds the viewer resolvable error at just the right rate, i.e., making the unknown known, which reduces anxiety and increases pleasure.

4. Morbid appeals

We have now determined the first part of the explanation for *Chernobyl's* appeal. The second part of the explanation, I argue, relates to morbid curiosity – the desire to obtain knowledge relating to things like death, injury, and disease. Specifically, *Chernobyl* utilizes the threat of physical damage to the body, one of the facets of morbid curiosity as described by Coltan Scrivner. One study found that people scoring high in trait morbid curiosity are more likely to seek out scary entertainment than others (Scrivner 2021a, 5). We also know that morbidly curious people showed increased interest in scary media specifically during the COVID-19 pandemic (Scrivner 2021a, 8). It seems likely, then, that morbidly curious people would seek out something like *Chernobyl*, which contains an abundance of frightening and morbid imagery. In this section, I will discuss the specific morbid appeals of *Chernobyl* during a pandemic.

4.1 Radioactive realism

The first way in which *Chernobyl* appeals to morbidly curious individuals is by depicting the effects of radiation on the human body. This knowledge is particularly salient during a pandemic, as both radiation and viruses are invisible and airborne. Of course, radiation and viruses do not affect the human body in the same way but, as I have argued, there is still value in simulating something that shares only some of its properties with the real-life threat: it scratches that evolutionary itch, even if only subconsciously. Morbid imagery and themes, then, do not have to mimic the "real" threat to be appealing, either. In fact, even if a threat scenario has no ties to reality, humans are still predisposed to find the error prediction and resolution associated with the scenario enjoyable (Miller, White, and Scrivner 2024, 3).

Let us revisit the scene in which an unlucky firefighter is burned by a piece of radioactive graphite. The scene is not only interesting on an epistemic level, conveying important knowledge about a specific threat, but it also has significant morbid appeal due to its apparent realism: it looks convincingly real. This is no coincidence, as the show's creators thoroughly researched the topic at

hand to accurately depict what radiation does to the human body. Furthermore, the show's artists used practical effects in the form of makeup and prosthetics (Grobar 2019). When used well, as in *Chernobyl,* practical effects are able to achieve a more tactile, gritty sense of realism than computer-generated imagery. Watching *Chernobyl,* I did not once think that any of the practical effects looked unconvincing. In fact, it was sometimes easy to forget that these were not real people suffering from the effects of radiation.

As mentioned, morbid curiosity most likely originates from a desire for knowledge about the human body that might be beneficial to our survival. If this is the case, then realistic depictions of death, injury, and disease are arguably more morbidly salient than less realistic depictions because there is more potentially useful knowledge to be gleaned from such depictions. Whether or not these depictions are completely accurate is not important, only that we believe them to be. There is also evidence to suggest that we sometimes prefer realism in fictional depictions of violence and gore. A 2004 study on violence in film found that participants saw value in realistic depictions of violence, some citing the importance of showing violence "as it really is" (Shaw 2004, 136), as well as the opportunity for learning about the violent sides of life. However, this was only the case if said violence was not perceived as gratuitous (Shaw 2004). Furthermore, a more recent study on violent media content found that, in some participants, a "perceived lack of realism resulted in emotional disengagement" (Bartsch et al. 2016, 757). In other words, exaggerated and gratuitous violence or injury is not always as compelling as realistic depictions of said things. *Chernobyl* does not shy away from depicting realistic injuries. Compared to what is coming, the firefighter's burns seem mild.

In episode 3, "Open Wide, O Earth," we see the progression of acute radiation syndrome: the result of a high dose of radiation in a short amount of time. The imagery is not pleasant.

Figure 4. Acute Radiation Syndrome. Screenshot from *Chernobyl* (Mazin 2019a, [22:19]).

However, the kind of damage radiation is able to inflict on the human body is, arguably, intriguing to the morbidly curious. Furthermore, seeing how the body reacts to an invisible killer during a pandemic might help satiate morbid curiosity related to COVID-19, even if what we see does not reflect the effects of the virus itself. If this sounds similar to what I have argued using simulation theory, that is because it is. I would argue that what can be explained by morbid curiosity can also, often, be explained by simulation theory. Both theories seek to explain our enjoyment of recreational fear as stemming from a desire to seek out knowledge that might benefit us. Nonetheless, being able to discuss things related specifically to morbid curiosity is useful when analyzing *Chernobyl,* given the morbid nature of the series.

Continuing, *Chernobyl* does not only contain morbidly appealing imagery but also provides salient morbid information which appeals to the morbidly curious viewer. One scene in episode 3, specifically, provides the viewer with extremely disturbing but interesting knowledge regarding the effects of radiation. In the scene in question, a concerned Shcherbina asks Legasov: "What will happen to our boys? … what does the radiation do to them, precisely?" (Mazin 2019a, [12:39]), "our boys" referring to the workers and liquidators affected by the accident. In response, Legasov provides a lengthy answer that contains increasingly disturbing descriptions, such as "the skin blisters, turns red, then black" (Mazin 2019a, [13:02]), "the organs and soft tissue begin to decompose" (Mazin 2019a, [13:33]), and finally: "The arteries and veins spill open like a sieve, to the point where you can't even administer morphine for the pain, which is unimaginable" (Mazin 2019a, [13:37]).

While unpleasant to read, these detailed and disgusting descriptions of acute radiation syndrome's effect on the human body are high in what we might call "morbid value" to the morbidly curious viewer. What is meant by "morbid value" is how much morbidly salient information one can glean from it. To give an example, the depiction or description of a light bruise holds little morbid value as there is not much to learn from it. The depiction or description of a compound fracture, on the other hand, holds high morbid value. From it, one is able to glean heaps of information about human anatomy, such as knowledge about bone structure, tendons, and muscle tissue. Legasov's detailed answer also holds more potential for error prediction and resolution than something less descriptive, and humans, as we know, find pleasure in the right amount of error minimization. Furthermore, the fact that we are, once more, provided information about the effects of an invisible killer during a pandemic only adds to the morbid value. This is not to say, however, that all viewers will find equal value in Legasov's vivid description of acute radiation syndrome. As we know, some people show little to no interest in the morbid, while others are very morbidly curious (Clasen 2021a, 41). In other words, your mileage may vary.

4.2 Ghosts from the past

Morbid imagery and information are not the only morbid appeals of *Chernobyl.* Occasionally, the viewer will be met with genuine Soviet broadcasts and phone calls related to the accident. These authentic pieces of media hold morbid value by decreasing the psychological distance between the viewer and the accident, as well as by being historical relics of an infamous and deadly event. In Episode 2 of *Chernobyl,* we see a news segment concerning the accident, originally broadcast on April 28, 1986, two days after the disaster. From the way it is presented, most viewers will likely realize that it is, in fact, archival footage of a real broadcast. This can be inferred from the original 4:3 aspect ratio which has been preserved, as well as the poor quality of both audio and video. Additionally, the news anchor speaks Russian, whereas other characters in *Chernobyl* speak English, further hinting at the authenticity of the clip.

Figure 5. Authentic news broadcast about the power plant accident. Screenshot from *Chernobyl* (Mazin 2019c, [45:48]).

This insertion of an authentic piece of media reminds the viewer that, although *Chernobyl* is a fictional series, the disaster it portrays is very much real. This dramatically decreases psychological distance. Specifically, temporal and social distance are decreased by forcing the viewer, for a brief moment, to "relive" the event from the perspective of a common Soviet citizen in 1986. Furthermore, hypothetical distance is decreased as the viewer is reminded that this was a real event: It could happen again, and it might happen to you. The United Nations estimates that 31 people died from acute radiation syndrome as a direct result of the Chernobyl disaster, while 4000 people might die from radiation-related cancer. Others predict tens of thousands of deaths (Imanaka 2016; Baverstock and Williams 2006). Whatever the true number might be, the death toll of Chernobyl is inarguably massive. Even if most people do not know these numbers, they most likely know that the Chernobyl disaster claimed many lives. This means that, while the news broadcast does not contain anything explicitly morbid, what it represents is very much morbid. It is a relic of a disaster that claimed thousands of lives: a ghost from a deadly past. By decreasing psychological distance and acting as a stark reminder that this was an actual disaster, the scene burdens the viewer with profound, morbid knowledge – a knowledge that the morbidly curious viewer might find appealing.

Viewers encounter another ghost from the past in Episode 1. Shortly after the reactor explosion, the episode cuts to black and a dial tone is heard. Then, we hear frantic voices, all speaking Russian, accompanied by red Cyrillic script on an old monitor. Subtitles reveal that this is a phone call regarding the Chernobyl power plant. We hear someone talking to the military fire

station about "an explosion in the main building" (Mazin 2019b, [10:17]). Then, another dial tone is heard, signaling that we are listening to a new call. Someone from the fire department is called to the power plant, the reason being that "the roof is on fire" (Mazin 2019b, [10:43]).

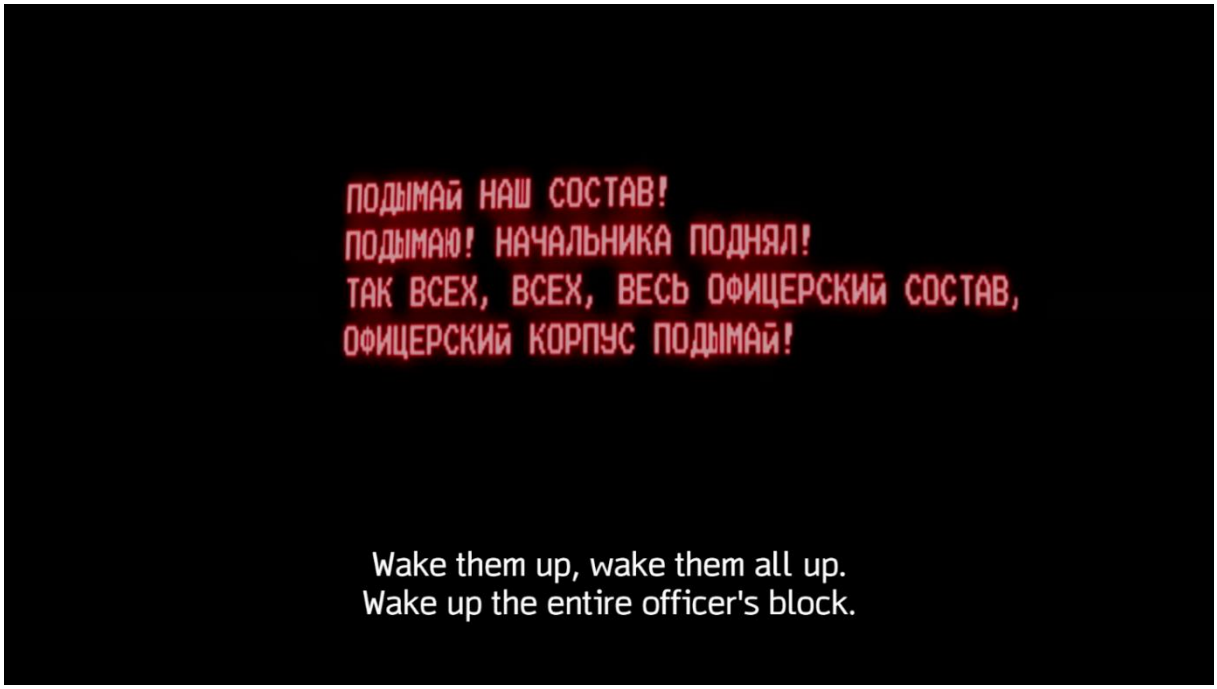

Figure 6. Transcription of phone calls on old monitor. Screenshot from *Chernobyl* (Mazin 2019b, [10:30]).

The official *Chernobyl* screenplays confirm that these are, in fact, real phone calls made on the night of the accident (Mazin and August 2019). However, most viewers will likely realize that these are actual calls without having to consult the script. The language spoken, as in the news broadcast, is Russian instead of English, and the audio quality is poor. Furthermore, the inclusion of the CRT monitor on which the calls appear as text indicates that this is real audio from the night. The omission of the usual on-screen action with actors and a set tells us that what we hear is not dramatized or fictional, just raw history.

The calls are haunting, even more so knowing the fate of the Chernobyl firefighters, many of whom died within weeks. The voices possess a sense of terror and urgency that is hard to communicate with words. The first YouTube search result for "Chernobyl phone calls" is a video containing the same audio file as used in *Chernobyl,* titled "самый страшный телефонный разговор 20го века" (Peredova 2013), which translates to "the scariest phone conversation of the 20th century" – a fitting description, given the enormous socio- and geopolitical consequences of the disaster.

For viewers with limited knowledge about Chernobyl, the phone calls may not be as interesting from a morbid perspective as to those more familiar with the accident. Retrospectively, however, the scene holds immense morbid appeal. Throughout the five episodes, viewers learn more about the catastrophic consequences of the disaster, including the fate of first responders like Vasily Ignatenko who suffered from acute radiation syndrome. As viewers gain this knowledge, they will undoubtedly recall the phone calls in a more morbid light. Morbidly curious viewers, especially, will appreciate the significance of the calls. The knowledge that some of the voices may belong to people who are now dead or suffering because of the accident is saddening but also fascinating – fascinating in the same way as hearing a 9-1-1 call or passing the site of a serious accident. There is a desire to know more, to see or hear for yourself. Of course, the phone calls in *Chernobyl* are not graphic in the same way as the scene of an accident, but they are morbid in nature, nonetheless. They provide rare insight into an important historical event and a glimpse into the minds of the people who lived it and those who died because of it.

4.3 Wrapping up on morbid curiosity

The second part of the explanation for *Chernobyl's* appeal during a pandemic is that it appeals to morbidly curious viewers by containing morbid imagery, information, and audio. Realistic depictions of acute radiation syndrome provide viewers with valuable knowledge about the human body. Viewers motivated by morbid curiosity will find pleasure in obtaining this knowledge – knowledge that is especially salient during a pandemic, given the invisible and airborne nature of both radiation and viruses. Furthermore, Legasov's detailed description of the effects of acute radiation syndrome holds immense morbid value due to the sheer amount of morbidly salient information one can glean from it. Finally, the incorporation of authentic media, such as phone calls and a news broadcast, serves as a stark reminder of the morbid reality of the accident.

However, as mentioned, some people are less morbidly curious than others. While people with a lesser morbid curiosity might find less appeal in morbid imagery and information, those people may still find appeal in the simulation such depictions provide. As I have argued, what can be explained by morbid curiosity may often be explained by simulation theory. In any case, morbid curiosity and threat simulation are most likely linked. Coltan Scrivner argues that morbid curiosity is a product of threat simulation and the reduced cost of learning about threats it provides (Scrivner 2022b, 9). Furthermore, Scrivner writes that morbid curiosity can function as "motivation" to simulate particularly unpleasant scenarios (Scrivner 2022a, 9) In other words, morbid curiosity is the "push" to threat simulation's "pull." Viewers lacking the push of morbid curiosity might still

find the pull of threat simulation sufficient to engage with or derive something of value from the morbid imagery and information in *Chernobyl*.

5. The perfect storm

We have now unpacked some of the reasons behind *Chernobyl's* appeal during a pandemic like COVID-19. In short, my argument is that the series provides viewers with a better source of negative emotions compared to the nebulous anxiety of the pandemic, while also appealing to morbidly curious viewers with its salient morbid contents. However, I also believe certain factors surrounding the miniseries created what we might call the "perfect storm" for *Chernobyl*. The first and most obvious aspect of this perfect storm is the fact that *Chernobyl* aired relatively close to the COVID-19 outbreak, the final episode airing on June 3, 2019. This 7-month gap gave the series enough time to become part of mainstream popular culture before the pandemic hit. In fact, more than 6 million people had watched *Chernobyl* by June 2019 (Adalian 2019). I believe the fact that so many people watched *Chernobyl* before the pandemic meant that they were more easily drawn to it again when COVID-19 arrived due to remembering, perhaps subconsciously, the appeals of the series as described in this article. There is, after all, comfort in revisiting something you know you enjoy, something predictable, especially during challenging times like a pandemic. This is the same reason many of us have a so-called "comfort show" to watch when we are sick or sad. *Chernobyl* was my comfort show during the pandemic, as I believe it was for many others as well.

The second aspect of the perfect storm relates to the 2019 and 2020 U.S. political climate, characterized by intense polarization and "fake news" in light of the upcoming presidential election. *Chernobyl* does not shy away from commenting on this post-truth era. One of the major themes of the miniseries is the question "what is the cost of lies?" (Mazin 2019b, [00:37]; 2019e, [1:00:12]). The fact that *Chernobyl* aired before and not after the pandemic is surprising, as it can easily be viewed as a commentary on certain nations', especially the United States', poor handling of the crisis, along with the disinformation surrounding COVID-19 and vaccines.

6. Conclusion

In this article, I have explored the appeal of the HBO miniseries *Chernobyl* during a pandemic. My main argument is that *Chernobyl* appeals to viewers by providing a more concrete and tangible source of negative emotions compared to the nebulous anxiety brought on by the pandemic. *Chernobyl* achieves this by, first of all, simulating a threat with crucial similarities to a virus. This threat is then made more tangible and less unknown as the viewer is provided knowledge about radiation. The use of the dosimeter makes the threat of radiation more quantifiable by providing a

number that reflects the intensity of the threat, making the unknown more known and reducing anxiety. Graphite acts as a visual representation of radiation, signaling danger, as exemplified by a scene in which a firefighter is burned by a piece of graphite. *Chernobyl* also combines auditory and visual threat cues to great effect in one scene where liquidators must clear graphite from the contaminated reactor roof. In the scene, the sound of the Geiger counter combined with the visual threat cue of graphite conveys more information about the threat than either cue alone. Furthermore, *Chernobyl* makes the unknown more known by having characters provide the viewer with valuable information, such as Legasov's monologue about the severity of the disaster in which he describes radiation as "bullets" – a far more salient descriptor than simply using the term "radiation."

Apart from being a better source of negative emotions, *Chernobyl's* appeal during the COVID-19 pandemic can also be explained by its use of morbid imagery, such as realistic depictions of acute radiation syndrome. Such depictions are intriguing to the morbidly curious, especially during a pandemic, given the airborne and invisible nature of both radiation and viruses. Furthermore, Legasov's detailed description of the effects of acute radiation syndrome on the human body is high in morbid value, as there is much useful information to be gleaned from it. Furthermore, *Chernobyl's* incorporation of authentic media serves as a stark reminder of the morbid reality of the disaster. Lastly, certain socio- and geopolitical factors may also have played a role in *Chernobyl's* popularity, such as the fact that it aired just seven months before the pandemic, amidst the post-truth political landscape of the United States.

As evident, there are many reasons why watching *Chernobyl* might be appealing during a pandemic. However, I doubt that all of the reasons listed above would have been as effective if *Chernobyl* were not simply very good television. The miniseries is exceptionally well-executed on all fronts, including direction, production, writing, and casting, not to mention the haunting score by Hildur Guðnadóttir. If, for instance, the dialogue or special effects were subpar, the threat simulation would have been less convincing and effective, and the morbid appeal would have diminished. The fact that *Chernobyl* is, arguably, near perfect on all levels of production creates an optimal environment for immersion and threat simulation. With all of these things in mind, *Chernobyl's* popularity during the pandemic comes as no surprise.

Today, the message of *Chernobyl* is more relevant than ever, as polarization, misinformation, and propaganda continue to shape our world. If we do not learn from the mistakes of our past, we are doomed to repeat them, and the last thing the world needs right now is another nuclear disaster. As such, we must do our best to remember the most important lesson from Chernobyl: "Every lie we tell incurs a debt to the truth. Sooner or later, that debt is paid" (Mazin 2019e, [52:15]).

Reference List

Adalian, Josef. 2019. "How Chernobyl Became HBO's Surprise Monday-Night Hit." TV Ratings. Vulture. Accessed 03.01.23. https://www.vulture.com/2019/06/chernobyl-hbo-monday-ratings.html.

Andrews, Jack L., Meiwei Li, Savannah Minihan, Annabel Songco, Elaine Fox, Cecile D. Ladouceur, Louise Mewton, et al. 2023. "The Effect of Intolerance of Uncertainty on Anxiety and Depression, and Their Symptom Networks, During the COVID-19 Pandemic." *BMC Psychiatry* 23 (1): Article 261. doi:10.1186/s12888-023-04734-8.

Bartsch, Anne, Marie-Louise Mares, Sebastian Scherr, Andrea Kloß, Johanna Keppeler, and Lone Posthumus. 2016. "More Than Shoot-Em-Up and Torture Porn: Reflective Appropriation and Meaning-Making of Violent Media Content." *Journal of Communication* 66 (5): 741–765. doi:10.1111/jcom.12248.

Baverstock, K., and D. Williams. 2006. "The Chernobyl Accident 20 Years On: An Assessment of the Health Consequences and the International Response." *Environmental Health Perspectives* 114 (9): 1312–7. doi:10.1289/ehp.9113.

Clasen, Mathias. 2017. "Fear for Your Life: The Appeals, Functions, and Effects of Horror." In *Why Horror Seduces*, 53–62. Oxford University Press. doi:10.1093/oso/9780190666507.001.0001.

Clasen, Mathias. 2018. "Evolutionary Study of Horror Literature." In *The Palgrave Handbook to Horror Literature*, edited by Kevin Corstorphine and Laura R. Kremmel, 355–363. Cham: Springer International Publishing. doi:10.1007/978-3-319-97406-4.

Clasen, Mathias. 2021a. "I'm Nervous about Horror Films and My Mental Health." In *A Very Nervous Person's Guide to Horror Movies*, 31–61. Oxford University Press. doi:10.1093/oso/9780197535899.001.0001.

Clasen, Mathias. 2021b. "Okay, I'm Ready to Watch a Horror Movie. What Now?" In *A Very Nervous Person's Guide to Horror Movies*, 136–150. Oxford University Press. doi:10.1093/oso/9780197535899.001.0001.

Clasen, Mathias. 2021c. "What's the Big Deal about Horror Movies, and Who Watches Them, Anyway?" In *A Very Nervous Person's Guide to Horror Movies*. Oxford University Press. doi:10.1093/oso/9780197535899.001.0001.

Clasen, Mathias. 2023. "The New Science of Recreational Fear." *AngloFiles 207*: 36–41. https://cc.au.dk/fileadmin/dac/Projekter/Recreational_Fear_Lab/2023_AngloFiles_207_RF_MC.pdf.

Fu, Xiangyi. 2016. "Horror Movie Aesthetics: How Color, Time, Space and Sound Elicit Fear in an Audience." Masters thesis, Department of Art + Design, Northeastern University. doi:10.17760/D20211378.

Grobar, Matt. 2019. "How 'Chernobyl' Makeup Designer Daniel Parker Captured Horrific Bodily Decay Resulting From Catastrophic Event." Deadline. Last Modified August 13, 2023. Accessed 19.12.2023. https://deadline.com/2019/08/chernobyl-makeup-designer-daniel-parker-emmys-hbo-interview-1202660877/.

Imanaka, Tetsuji. Oct, 2016. "Number of Deaths by the Chernobyl Accident." Kyoto University, Research Reactor Institute, Kumatori, Osaka (Japan) (Japan: inis.iaea.org). https://inis.iaea.org/search/search.aspx?orig_q=RN:49089634.

Kjeldgaard-Christiansen, Jens. Forthcoming. "Horror as Entertainment." In *Entertainment Media and Communication*, edited by Nicholas D. Bowman. Berlin: De Gruyter Mouton.

Lovecraft, H. P. 1927. *Supernatural Horror in Literature*. The Recluse.

Mack, David. 2020. "Everyone is Watching 'Contagion,' a 9-Year-old Movie about a Flu Outbreak." Accessed 09.11.2023. https://www.buzzfeednews.com/article/davidmack/contagion-movie-coronavirus.

Marshall, Frank. 1990. *Arachnophobia*. United States: Buena Vista.

Mazin, Craig. 2019a. *Chernobyl*. Episode 3, "Open Wide, O Earth." Directed by Johan Renck. Aired May 20, 2019. http://tinyurl.com/3tzdsxyd.

Mazin, Craig. 2019b. *Chernobyl*. Episode 1, "1:23:45." Directed by Johan Renck. Aired May 6, 2019. http://tinyurl.com/yc4btfjm.

Mazin, Craig. 2019c. *Chernobyl*. Episode 2, "Please Remain Calm." Directed by Johan Renck. Aired May 13, 2019. http://tinyurl.com/yc3b7fx5.

Mazin, Craig. 2019d. *Chernobyl*. Episode 4, "The Happiness of All Mankind." Directed by Johan Renck. Aired May 27, 2019. http://tinyurl.com/49djptbz.

Mazin, Craig. 2019e. *Chernobyl*. Episode 5, "Vichnaya Pamyat." Directed by Johan Renck. Aired June 3, 2019. http://tinyurl.com/bdvf3p9x.

Mazin, Craig, and John August. 2019. "Read the Chernobyl Scripts from Writer and Executive Producer Craig Mazin." HBO. Accessed 28.12.2023. https://www.hbo.com/chernobyl/episode-scripts.

Miller, Mark, Marc M. Anderson, Felix Schoeller, and Julian Kiverstein. 2023. "Getting a Kick out of Film: Aesthetic Pleasure and Play in Prediction Error Minimizing Agents." In *Worlding the Brain: Neurocentrism, Cognition and the Challenge of the Arts and Humanities*, edited by Stephen

Besser and Flora Lysen, 49–62. Leiden, The Netherlands: Brill. doi:10.1163/9789004681293_005.

Miller, Mark, Ben White, and Coltan Scrivner. 2024. "Surfing Uncertainty with Screams: Predictive Processing, Error Dynamics and Horror Films." *Philosophical Transactions of The Royal Society of London. Series B. Biological Sciences* 379 (1895): 20220425. doi:10.1098/rstb.2022.0425.

Park, Michelle. 2018. "The Aesthetics and Psychology Behind Horror Films." Undergraduate Honors College Theses Psychology, Long Island University. https://digitalcommons.liu.edu/post_honors_theses/31.

Peredova, Студія. 2013. "Самый страшный телефонный разговор 20го века." [Video]. Youtube. Accessed 30.12.2023. https://www.youtube.com/watch?v=ttpzZXDNKQ8&t=7s.

Scrivner, Coltan. 2021a. "An Infectious Curiosity: Morbid Curiosity and Media Preferences during a Pandemic." *Evolutionary Studies in Imaginative Culture* 5 (1): 1–12. doi:10.26613/esic.5.1.206.

Scrivner, Coltan. 2021b. "The Psychology of Morbid Curiosity: Development and Initial Validation of the Morbid Curiosity Scale." *Personality and Individual Differences* 183: 111139. doi:10.1016/j.paid.2021.111139.

Scrivner, Coltan. 2022a. "Curiosity: A Behavioral Biology Perspective." *PsyArXiv Preprints*. doi:10.31234/osf.io/rqa5b.

Scrivner, Coltan. 2022b. "The Psychology of Morbid Curiosity." Ph.D., Department of Comparative Human Development, The University of Chicago (AAI29162798). doi:10.6082/uchicago.3996.

Scrivner, Coltan, and Kara A. Christensen. 2021. "Scaring Away Anxiety: Therapeutic Avenues for Horror Fiction to Enhance Treatment for Anxiety Symptoms." *PsyArXiv Preprints*. doi:10.31234/osf.io/7uh6f.

Scrivner, Coltan, John A. Johnson, Jens Kjeldgaard-Christiansen, and Mathias Clasen. 2021. "Pandemic Practice: Horror Fans and Morbidly Curious Individuals are More Psychologically Resilient During the COVID-19 Pandemic." *Personality and Individual Differences* 168: 110397–110397. doi:10.1016/j.paid.2020.110397.

Shaw, Rachel Louise. 2004. "Making Sense of Violence: A Study of Narrative Meaning." *Qualitative Research in Psychology* 1 (2): 131–151. doi:10.1191/1478088704qp009oa.

TelevisionStats.com. 2023. "Television Stats: Chernobyl." [Web]. Televisionstats.com. Accessed 09.11.2023. https://televisionstats.com/s/chernobyl.

Trends, Google. 2023. "Google Trends: Chernobyl (Miniseries), Search Results 2020, World." Google. Accessed 09.11.2023. https://trends.google.com/trends/explore?date=2019-12-01%202020-02-01&q=%2Fg%2F11f2wbnm51&hl=da.

Öhman, A. 2007. "Anxiety." In *Encyclopedia of Stress (Second Edition)*, edited by George Fink, 236–239. New York: Academic Press. doi:10.1016/B978-012373947-6.00039-8.