The Geography and Architecture of Horror: How Places Creep Us Out

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Abstract

It is the goal of this paper to apply what psychologists and other social scientists have learned about human emotional responses to physical surroundings to an understanding of why some types of settings and some combinations of sensory information can induce a sense of dread in humans. The hoped-for contribution is to bring empirical evidence from psychological research to bear on the experience of horror, and to explain why the tried-and-true horror devices intuitively employed by writers and filmmakers work so well. Research has demonstrated that human beings have been programmed by evolution to respond emotionally to their physical surroundings, and natural selection has favored individuals who gravitated toward environments containing the "right" physical and psychological features. Places that contain a bad mix of these features induce unpleasant feelings of dread and fear, and therefore have become important ingredients of the settings for horror fiction and films. This article applies McAndrew and Koehnke's (2016) theory of creepiness to the study of classic horror settings and explores the role played by architecture, isolation, association with death, and other environmental qualities in the experience of creepiness and dread.

Keywords: Horror; Architecture; Ghosts; Haunted Houses; Paranormal Experiences; Environmental Psychology; Evolutionary Psychology

The Psychology, Geography and Architecture of Horror: How Places Creep Us Out

Scholars in a range of academic disciplines including philosophy (Bachelard, 1964), geography (Tuan, 1974, 1977), and psychology (Proshansky, Fabian, & Kaminoff, 1983; Sommer, 1969) have long recognized the importance of "place" in human experience, as our daily physical surroundings play an important role in creating order, meaning, and stability in our lives. A sense of the place we live is closely related to our personal identity since so much of who we are depends upon where we live and the experiences that we have had there (Dovey, 1985; McAndrew, 1998).

What happens when the physical space around us creates feelings of disorientation and dread rather than feelings of comfort, predictability, and security?

Literary and film scholars have reflected on this question by examining the role played by the settings and ambient sensations experienced by characters in horror fiction and film, especially when the story grows out of the Gothic tradition (Botting, 2015; Brown, 2016; Bussing, 2016; Clasen, 2017; Presti, 2006). These literary analyses focus on fictional spaces, but I contend that fictional spaces are effective precisely because they accurately, albeit in a somewhat exaggerated fashion, reflect the components of real physical spaces that cause people to feel uneasy.

It is the goal of this paper to apply what psychologists and other social scientists have learned about human emotional responses to physical surroundings to an understanding of why some types of settings and some combinations of sensory information can induce a sense of dread in humans. The hoped-for contribution is to bring empirical evidence from psychological research to bear on the experience of horror, and to explain why the tried-and-true horror devices intuitively employed by writers and

filmmakers work so well. Let us begin with an examination of something that psychologists have only recently begun to study in a scientific way: creepiness.

The Nature of Creepiness

One of the earliest accounts of the thing now known as "creepiness" comes from Freud (1919) in his discussion of "The Uncanny." For Freud, The Uncanny represents things that are familiar to us, but also somehow frightening to us. Freud's ideas were the precursors of what would later come to be known as "The Uncanny Valley."

The Uncanny Valley is well known in the field of aesthetics, and the concept was pioneered by Masahiro Mori (1970), a Japanese Professor of robotics. As an inanimate object comes to look and act more like an actual human being, it usually becomes more attractive to us. That is, until it becomes *almost exactly like* a human – *but not quite*. Things that reach this level of proximity to humanness often prompt feelings of revulsion rather than attraction. The uncanny valley refers to this narrow band between "cute but not human" and "fully human." In other words, things that cause us to react to them as if they are human, even when we know that they are *not* human, creep us out. The fact that mannequins, ventriloquist dummies, and creepy life-like dolls frequently show up in horror films is no accident. This may also explain our ambivalent feelings about wax museums.

The uncanny valley informs our squeamishness about corpses -- just like a normal human, except not alive – as well as the fascination that we have with zombies. Unlike many of the other monsters that haunt our imaginations, zombies were once normal human beings. Zombies may even maintain their identity as the distinct individual

humans that they were in their previous life, making them all the more creepy and sinister.

Philosopher David Livingstone Smith (2016) proposed a "Categorical Ambiguity Thesis" to explain why we are so repulsed by things that are eerily human. According to Smith, objects that are not easily categorized combine features that do not usually occur together -- and this makes us uneasy because we cannot properly make sense of them. This results in a cognitive paralysis that we find unpleasant. It is this paralysis that gets described in common parlance as feeling "creeped out." In other words, buttons get pressed in our brain that cause us to react to something as if it is a human being, but contradictory buttons are simultaneously being pressed because we consciously know that the object in question is *not* human.

There is little doubt that Smith's theory captures an important aspect of creepiness and that it accurately describes our response to dolls, robots, and other human-like objects. As such, it helps us understand the horror appeal of films featuring villains such as zombies and evil dolls. However, this view of creepiness does not seem as relevant to our understanding of the creepiness of *places*. Instead, a theory proposed by McAndrew and Koehnke (2016) that Smith has called the "Threat Ambiguity Theory" of creepiness seems more applicable to this issue.

McAndrew and Koehnke's theory was designed to explore why some people are perceived as creepy. They tested their theory by way of an online survey of 1,341 individuals (1,029 females, 312 males) ranging in age from 18 to 77. In the first section of the survey, our participants rated the likelihood that a hypothetical "creepy person" would exhibit 44 different behaviors, such as unusual patterns of eye contact or physical

characteristics like visible tattoos. In the second section of the survey, participants rated the creepiness of 21 different occupations, and in the third section, they simply listed two hobbies that they thought were creepy. In the final section, participants expressed their level of agreement with 15 statements about the nature of creepy people.

The results of the study were consistent with the idea that creepiness is a response to the *ambiguity of threat*. Non-normative non-verbal and emotional behaviors, unusual physical characteristics and hobbies, or suspect occupations set off our "creepiness detector." Men were more likely to be perceived as creepy by males and females alike, and women were more likely to perceive sexual threat from creepy people.

Thus, we get creeped out by certain people because they behave in bizarre and unpredictable ways, violating the subtle social conventions that enable us to understand their intentions and making it difficult for us to know what to expect when we encounter them. In other words, they present us with an *ambiguity* as to whether or not they are someone to fear, and this ambiguity makes us very uncomfortable. McAndrew and Koehnke's theory has received support in experiments conducted by other psychologists as well (Watt, Maitland, and Gallagher, 2017).

The reason that threat ambiguity creates such an emotional response is related to the *agent detection mechanisms* that have been proposed by evolutionary psychologists (Atran, 2002; Barrett, 2005). Agent detection mechanisms are processes that have evolved to protect us from harm at the hands of predators and enemies. If you're walking through the woods alone at night and hear the sound of something rustling in the bushes, you will respond with a heightened level of arousal and attention. You will behave as if there is a willful "agent" present who is about to do you harm. If it turns out to be a gust

of wind or a stray cat, you lose little by overreacting. But if you fail to activate the alarm response and a true threat is present – well, the cost of your miscalculation could be high.

Thus, we evolved to err on the side of detecting threats in ambiguous situations.

It is my contention that places can seem creepy to us for the very same reason that people can seem creepy to us, and this may explain why very different settings can elicit the same chilly reactions from us. Let us now turn our attention to the psychological features of places that matter for their ability to instill horror.

We are programmed to respond emotionally to our physical surroundings.

It is well established that the environmental preferences of animals are under genetic control (Alcock, 1993) and, at least to some extent, the same appears to be true for humans. Research by environmental psychologists has confirmed that the most attractive natural environments contain things such as running water and open meadows surrounded by woods, the very features that would have been beneficial for the survival of early humans (Kaplan, 1987). In other words, people who were drawn to the "right" places did better than those who were not, and over time their genes were favored over those of individuals who spent too much time in sparser, more barren landscapes.

It turns out that being drawn to the "right" *psychological* features of places may have been just as important for our ancestors' survival, and places that lack the right psychological features set off our creep detectors and instill a sense of dread and horror.

British geographer Jay Appleton (1975) was the first to describe two qualities of physical space that determine whether a place is attractive or frightening to humans: "Prospect" and "Refuge." Refuge means having a secure, protected place to hide where

one can be sheltered from danger, while prospect refers to one's clear, unobstructed view of the landscape. Attractive places offer us a lot of prospect and a lot of refuge, or what landscape architect Randolph Hester (1979) refers to as a "Womb with a View."

Our love of such spaces shows up everywhere. Universally, children love playing in enclosed spaces such as cardboard boxes, tree houses, and in bushes or other dense vegetation where they feel hidden; the concepts of prospect and refuge may help explain the almost magical quality of the feelings evoked by memories of favorite childhood hiding places and the richness of detail that can often be recalled about them decades later. Similarly, diners in restaurants usually prefer to occupy tables in corners or nooks, especially when these locations allow them to sit with their backs against a wall, and they will usually only settle for tables in the center of the room when all of the more desirable seats have been taken (McAndrew, 1993).

In the words of Appleton, we love the feel of these spaces because they are, evolutionarily speaking, places where "you can see without being seen, and eat without being eaten." Research has confirmed that places that offer bad combinations of prospect and refuge for us are perceived as unsafe and dangerous (Fisher and Nasar, 1992). Such places offer us very little in the way of prospect *or* refuge, and they may offer a lot of hiding places for people or things that may intend to do us harm.

Scary places may also lack what environmental psychologists refer to as "legibility." Legibility reflects the ease with which a place can be recognized, organized into a pattern and recalled – in other words, a place that we can wander around in without getting lost (McAndrew, 1993).

Let us consider the architecture of a haunted house as a classic example of a place that creeps us out because it deprives us of the reassuring psychological features that we crave.

Why haunted houses creep us out

The Haunted House is a time-honored horror setting, and it is not only at the movies that we pay good money to be frightened by them; commercial haunted houses are an integral part of 21st-century Halloween theatre, with an estimated 5,000 such attractions operating in the United States each year (HauntedHouseAssociation.org, 2018). While it is true that commercial haunted houses are not "real" haunted houses but rather "scare attractions" that have been artificially engineered to scare us, their design has been inspired by the familiar tropes of horror films as well as by the features associated with the legends surrounding houses reputedly haunted by actual spirits. Thus, for a discussion of architecture there is little to be gained by making a distinction between scare attractions and real haunted houses, and I will use the term "haunted house" to refer to both.

The portrayal of cinematic haunted houses has remained remarkably consistent across time, and the architects of our annual Halloween spook houses incorporate all of the same bells and whistles (okay – creaks and groans) that we've come to expect. From a psychological point of view, the standard features of haunted houses trigger feelings of dread because they exploit psychological mechanisms that evolved long before houses even existed. These mechanisms warn us of potential danger and motivate us to proceed with caution.

Haunted houses give us the creeps not because they pose a clear threat to us, but rather because it is *unclear* whether or not they represent a threat; this ambivalence leaves us frozen in place, wallowing in unease. It could be perilous to ignore your intuition and remain in a place that is dangerous, but it would also be a bit embarrassing to run screaming out of the house if there is actually nothing to fear. This is the psychology behind feeling "creeped out," and it is a reaction that may be useful if it helps you maintain vigilance when threat is uncertain (McAndrew & Koehnke, 2016).

The "agent detection mechanisms" discussed earlier are on full alert in the standard haunted house, and for good reason. Things that activate hypervigilance for malevolent supernatural (or natural) forces abound in large, drafty old houses: rattling or creaking sounds in upstairs rooms; the sighing and moaning of wind passing through cracks; ragged curtains fluttering in the breeze; echoes; and cold spots. Consequently, it is very easy to imagine that one is not really alone in such a place.

People who explore caves report a similarly unsettling experience that they refer to as the "voices in the cave." According to one of my colleagues, an accomplished caver, this most frequently occurs in caves that contain water. The sounds created by wind passing through narrow passages and the sounds of moving water create low-pitched, muffled sounds that sound remarkably like distant human voices. On more than one occasion my friend reported that his caving team would stop in a passageway to await the arrival of another group that they thought was gaining on them from behind, only to discover that there was no one else there. In fact, one of his caving buddies has the annoying habit of humming incessantly when he is caving, which is something that he does to avoid getting freaked out by hearing the voices.

Margee Kerr is a nationally recognized expert on the design of professional haunted houses. In her book *Scream* (2015), she identifies an interesting phenomenon called the "Hum" that can be produced by a variety of things in the physical world, including drafty old buildings. In a nutshell, the "Hum" is a sensation that is caused by exposure to low frequency sounds of 20 hertz or less. These sound waves, known as "infrasound," are inaudible to humans but their slight vibrations may still register as an unidentifiable, ambiguous signal that can set off our creep detectors. In some people, the "Hum" can produce sleeplessness and even nausea. According to Kerr, large old buildings full of rotting wood, exposed ductwork, and other structural defects can produce infrasound and make what is already a creepy experience even spookier. Two British scientists conducted an experiment on the Hum at a concert in London in 2003 (described by Lallanilla, 2013). In this experiment, they exposed an unsuspecting crowd to infrasound through loudspeakers, resulting in widespread reports of uneasiness and chills from the concertgoers, and studies by scientists have been able to replicate the same effects under controlled laboratory conditions (Persinger, 2001).

Research has consistently shown that we need more personal space while seated than while standing, more space when we are in the corner of a room rather than in the center of it and more space in rooms with low ceilings (McAndrew, 1993). We feel uncomfortable when our personal space is violated anywhere, but especially so in situations where we feel as if escape will become difficult. Such feelings of discomfort are symptomatic of the fact that we are constantly – even if unconsciously – scanning our surroundings and assessing our ability to flee if it should become necessary.

Consequently, the typical Hollywood haunted house is our worst nightmare as it makes fleeing difficult. The darkness and confusing layout of the house may cause us to get lost; at the very least, it would slow us down. Escape could further be impeded by hedges, iron fences, or crumbling stairways - all of which feature prominently in haunted houses in movies. Unfortunately, haunted houses also lack "legibility;" most haunted houses make for the bad combination of very low prospect for us, and very high refuge for the creepy-crawly things that are lying in wait to get us. The typical haunted house is large, dark, surrounded by overgrown vegetation, and full of surprising architectural features such as secret rooms and closets under staircases. Attics and basements are also must-have items, and, of course, spider webs, bats, rats and insects make nice accessories.

One of the most famous real-life haunted houses possesses the aforementioned characteristics in spades. The Winchester Mystery House in San Jose, California is reputed to be the most haunted house in the world and it allegedly houses more than one thousand different ghosts. This house was the inspiration for the movie *Winchester* (Spierig & Spierig, 2018), starring Helen Mirren. This house was originally the home of Sarah Winchester, who was the widow of William Wirt Winchester, the gun manufacturing magnate. Construction of the house began in 1884, completely unguided by any sort of coherent building plan, and it continued unabated until 1922. At least part of the construction was driven by the need to repair extensive damage from the 1906 San Francisco earthquake.

Rooms, whimsical architectural features, and different wings and floors were added haphazardly, resulting in a rambling, bizarre puzzle of secret passageways,

stairways and doors that do not go anywhere, and windows with views into other interior rooms. There is even a room constructed specifically for conducting séances. At its peak, the house had over 500 rooms, more than 10,000 windows, and many dozens of fireplaces and stairways.

In short, the Winchester Mystery House is the epitome of illegibility, and it is not surprising that ghosts took up residence there in very short order.

A recent study (Gray, et al., 2018) reveals another reason why dark foreboding places come across as less than hospitable to us. In a series of seven experiments, Gray and his colleagues discovered that people most easily imagine extremely moral good people *and* extremely immoral evil people as having an afterlife, but the types of afterlives they experience are quite different. Specifically, good people are pictured in "transcendent immortality,' inhabiting a spiritual paradise such as heaven, or if their spirits remain on Earth, as inhabiting expansive, open places such as mountaintops and deserts. The malevolent spirits of deceased evil-doers, on the other hand, are most easily conceptualized in a "trapped immortality" where they exist in highly circumscribed surroundings such as a particularly dense forest, a haunted house, or even a single room. Given these new data, it is not at all surprising that spiritual presences that we encounter in old houses and other settings that lack legibility scare us rather than comfort us.

I shall now consider features other than architecture that make places more likely to feel haunted.

Things are scarier when we are isolated and alone.

Humans are a highly social species with a strong need for interaction with others, especially during times of stress; when we go through a trying ordeal alone, a lack of emotional support and comradeship can increase our anxiety and hinder our ability to cope. Therefore, everything seems creepier to us when we are alone.

Horror writer Stephen King was once asked after a lecture in 1979 if he believed in ghosts and the other paranormal things that he wrote about. He responded "no," but then quickly added that when he "*was alone, late at night, yes, always*."

The tendency of isolation to amplify creepiness is forcefully driven home in the film *Shut-In* (Blackburn, 2016). Naomi Watts plays a widowed child psychologist who lives in isolation in rural New England with her son, who is comatose and bedridden as the result of an automobile accident. Snowed in and withdrawn from the outside world, Watts' character descends into a desperate existence. It soon becomes difficult for her to distinguish the phantasms of her imagination from the reality of the creepy goings-on in her apparently haunted house.

Shut-In, of course, is not the first movie to use isolation as a vehicle for madness (Clasen, 2017). The characters played by Jack Nicholson in *The Shining* (Kubrick, 1980) and Tom Hanks in *Cast Away* (Zemeckis, 2000) found themselves in similar predicaments. Although movies like *Shut -In* are fictional, the toll on the protagonist's psyche from being so alone for so long is based on the science of social isolation.

When we are alone in an unusual environment, the way in which we process sensory information can change in unpredictable ways (Suedfeld, 1987). For example, we normally spend most of our time attending to and processing external stimuli from the

physical world around us. However, monotonous or tedious stimulation from our surroundings may cause us to turn our attention inward – within ourselves – which most of us have much less experience handling.

This may lead us to lose confidence in our understanding of what's going on in our surroundings; Is that creaking sound upstairs just an old house pushing back against the wind, or is it something more sinister? When we're uncertain, the first thing we usually do is to look to the reactions of others to figure out what is going on. Without others with whom to share information and reactions, ambiguity becomes very hard to resolve. When this happens, our mind may quickly race to the darkest possible conclusions.

Hence, it is no accident that the prototypical Hollywood haunted house is in a remote, isolated location, far removed from the rest of society (think of the off-season resort hotel in *The Shining*, for example). If bad things *do* happen, help would be a long time coming, even if communication with the outside world were possible. And conveniently, in old horror movies the telephones *always* stop working. Isolation in natural environments such as the woods in *The Blair Witch Project* (Sanchez & Myrick, 1999) provides the same enforced helplessness that is so often a prerequisite for horror (Clasen, 2017).

Given all of this, it is not surprising that remote structures such as lighthouses are frequently thought of as a bit creepy in spite of the natural scenic beauty that usually surrounds them. Most old lighthouses have at least one ghost story or legend associated with them. The lighthouse at Plymouth Bay in Massachusetts is reportedly haunted by the ghost of Hannah Thomas, the first official female lighthouse keeper in America,

while the Big Bay Point lighthouse in Michigan is haunted by the spirit of one of its former keepers, William Prior, a man who hanged himself in the nearby woods following the death of his son. The Penfield Reef Lighthouse near Fairfield, Connecticut is the site of frequent appearances by the ghost of Frederick Jordan, the keeper of the lighthouse who drowned after his boat capsized in a storm less than 200 yards away from the lighthouse. Jordan's ghost is not all bad. Two boys were rescued by an unidentified man after their boat capsized near the lighthouse in 1942. They later identified their rescuer as Jordan after seeing a picture of him; the only problem is that Jordan had drowned in 1916. Moans, shrieks, ghostly footsteps, and phantom smells are also reported to be common experiences in lighthouses throughout North America.

Professional investigator of the paranormal Joe Nickell (2012) has studied haunted lighthouses and concluded that most of these experiences can probably be traced to the more mundane combination of active imaginations, wind blowing through old pipes, and the settling sounds made by old buildings. However, once a legend begins, it becomes self-perpetuating.

The older the place, the more likely it is to feel haunted.

Most haunted houses have some sort of "legend" associated with them. It usually involves a story about a macabre death or accident. There may even be a history of suicide and murder, as in the famous house in Fall River, Massachusetts where Lizzie Borden allegedly murdered both of her parents with an ax. A less well-known ax murder house is located in the small town of Villisca, Iowa. In June of 1912, eight people (including six children) were murdered with an ax, and the crime was never solved. The

house still stands, and it is widely believed by the locals to be haunted by the ghosts of the children who can be heard laughing, crying, and warning each other to hide.

The elegant but haunted Lemp Mansion in St. Louis is haunted by the ghost of a man who killed himself in the house, along with the ghosts of three of his children who each committed suicide in the very same house at different times in the years that followed the suicide of their father. Leap's Castle in Ireland is haunted by the ghost of a priest who was stabbed to death by his own brother while saying mass, with his entire family in attendance; the room of the grisly murder is now appropriately known as "The Bloody Chapel."

Hence, one of the main reasons why we think that older places are more likely to be haunted is simply because there has been much more time for tragic things to have taken place. Stimuli such as moldy odors, antiquated Victorian or Gothic architecture, wood interiors and old portraits on the wall reinforce an ambiance of great age and make the place seem creepier.

Assuming that the house is no longer occupied, signs of life suddenly interrupted and frozen in time only amplify the fear factor; remnants of a half-eaten meal on a kitchen table or clothing laid out on a bed waiting for a homeowner who has apparently vanished without warning create a frightening ambiguity about what may have taken place in the house. For example, in Belgium there is an abandoned estate, and it is clear that its residents fled in quite a hurry because many valuable items of furniture dinnerware, artwork, and other personal artifacts were left behind. What makes this seem all the creepier is the fact that after decades of being empty and unattended, no one has

looted the place and there is little evidence that very many have even explored it (Enkivillage, 2018).

Similarly, the abandoned city of Pripyat in the Ukraine has become the poster child for the creepiness of life frozen in time. This city of 50,000 people was evacuated very quickly following the Chernobyl nuclear accident in 1986 and its residents were never allowed to return. All of the clocks in the city are frozen in time at 11:55 and the trappings of interrupted everyday life are everywhere to be seen: toys and schoolbooks lay where they were dropped long ago by children who are now middle-aged people; amusement park rides are seemingly stopped in mid ride; kitchens are still full of unwashed dishes. The city is slowly being reclaimed by the surrounding forest and wildlife, and it will eventually be completely unrecognizable as the vibrant place that it once was.

While the empty Belgian estate and the city of Pripyat are not actually all that old, their abandonment and decay convey a sense of the passage of time that confers an aura of creepiness upon them that other locations of similar age do not possess.

Institutions that once housed troubled populations are especially likely to seem haunted.

Sociologist Margee Kerr (2015) has noted that places that isolate people without their consent such as prisons and insane asylums are often considered scary. I would take this one step further and propose that any institution that once housed any "troubled" population of people may become "contaminated" by this association in the minds of imaginative individuals and thereby be believed to more likely to visit trouble upon

visitors who dare to explore such places. So, it is not surprising to find that prisons, orphanages, and hospitals are ubiquitous on virtually every list of creepy places.

Pennsylvania's Eastern State Penitentiary is a famously creepy place. The prison opened in 1829 and it was one of the first places to experiment with a range of "rehabilitation" techniques such as solitary confinement. It is gigantic, dark, gloomy, and altogether foreboding. In its day, it housed some of the most violent and troubled people in the country. According to Kerr, it has become the most popular American haunted attraction outside of an amusement park, and it runs an annual spooky event known as "Terror Behind the Walls." Other old U.S. prisons, notably the old West Virginia State Penitentiary, have also reopened for business as haunted houses.

The building reported to be the most haunted place in Sydney, Australia, is also a former prison. Known as the "Hyde Park Barracks," this place was built to hold male convicts in the early 1800s. Visitors to the old barracks report encounters with a variety of ghosts who are often seen wearing prison garb. In St. Augustine, Florida, one can find a haunted masonry fort (The Castillo de San Marcos) full of legends and spirits, most famously the ghost of the wife (along with that of her lover) of a military officer who had been in charge of the fort. When the officer learned about his cheating wife, or so the story goes, he had the two culprits entombed alive by chaining them to a wall and having another masonry wall constructed in front of them. In spite of many chilling accounts from individuals who claim to have stumbled upon the skeletal remains of the unfortunate lovers, the story has been exposed as nothing more than a fable (Nickell, 2012). This does not, however, prevent visitors from getting a good case of the creeps when they visit the fort. The old jail in Nelson County, Kentucky, is now a bed and

breakfast that comes complete with hauntings by the ghosts of long-dead inmates. Probably the most famous of America's haunted prisons is Alcatraz Island in San Francisco Bay, populated by the ghosts of many of the notorious convicts who once called Alcatraz home.

In the state of Illinois, there is a famously creepy orphanage that was once known as "The Civil War Orphans Home." It opened in 1865 in the city of Normal and it stayed open for more than 100 years. Since it closed, it has fallen into disrepair and its old-school architecture and dilapidated condition make it anything but inviting. For a while, children who died there were buried in a cemetery on the grounds and rumors abound concerning the ghosts of the orphans who still haunt the place. Similar spooky abandoned orphanages shrouded in folklore also exist in other countries, including Germany, Greece, Turkey, and the Ukraine. Abandoned haunted hospitals, especially haunted mental hospitals, are also easy to find. Many of them are still littered with rusting outdated medical equipment and supplies, and almost every one of them is thought to be inhabited by the suffering ghosts of the tortured souls who once walked their corridors. One of the best known of these is the Pennhurst Asylum in Pennsylvania.

Stories of Haunted Houses Are Self-Perpetuating

It seems as if everyone likes a good haunted house story, and a belief in the veracity of these tales often persists long after the facts of the case reveal them to be little more than a legend. Part of the problem is that once an individual believes that haunted houses are real, even well intentioned individuals may hoodwink themselves into

experiences that genuinely creep them out. A fascinating case study of just such a situation has been described by paranormal investigator Benjamin Radford (2008).

Radford was contacted by a terrified woman near Buffalo, New York, in November of 2003. She was completely convinced that her house was haunted by ghosts or at least by some sort of evil spirit. She and her husband were contemplating moving because they could no longer stand the tension of living in a haunted house. They had been in the house about three years, and over time they saw an increase in what they believed to be paranormal activity. She and her husband slept in separate bedrooms because of his sleep apnea, and his room seemed to be particularly haunted. He experienced tapping on his feet as he was drifting off to sleep and on more than one occasion awakened when his bed was violently kicked by an unseen force. The family pets also seemed to be afraid to enter this room. The house was full of strange cold spots and the floors creaked throughout the night from the sounds of footsteps. They photographed the image of a demonic face on one of their tabletops, and a tape recorder they planted in an otherwise empty upstairs recorded the muffled sounds of conversation as well as animal noises. When they were downstairs, they frequently heard the sound of faint music and other unexplainable noises coming from empty upstairs rooms. The couple even summoned a priest to bless their house, but the haunting continued to get worse.

Radford, who worked for the Committee for the Scientific Investigation of Claims of the Paranormal in Amherst, New York, agreed to look into the case. He found the husband and wife to be normal, sincere people who were thoroughly frightened and creeped out by what was going on in their home. After a few weeks of experimentation

and investigation, he discovered that the couple had inadvertently, but quite literally, haunted their own house. They fed each other's fears by engaging in self-confirming "top down processing" that is guided by one's expectations. Once they believed that their house was haunted, any ambiguity that they experienced was resolved in the direction that was dictated by their fears, which in this case meant that there were ghosts running wild in the house.

The house was old, drafty, and poorly insulated. There were in fact "cold spots" that had a perfectly natural explanation, as did the creaky staircase, the mysterious music and voices, and the animal sounds. The couple had been completely unaware that sounds from people conversing on the street, dogs barking in the distance, and neighbors raking leaves filtered into the upstairs of the house and could be captured by a tape recorder. These things only sounded sinister when one did not know their origin and when one fully expected to hear ghosts. The demonic face on the table turned out to be the reflection of a lamp. Just as people can see the face of Jesus in a puddle of oil or an image of the Virgin Mary in a grilled cheese sandwich if that is what they expect to see, the random patterns in the reflection of a lamp can indeed be perceived as a demonic face. (The perceptual experience that results from imposing order on random stimuli is known as a *simulacrum*). The tapping on the husband's feet and the shaking of his bed turned out to be nothing more than the side effects of a very large man with sleep apnea twitching and shaking on a flimsy bed while he was sleeping. In short, whether a place seems truly haunted can very much be in the mind of the beholder.

Places associated with death are automatically creepy to us.

Death is inherently creepy to us because of its ambiguity, and ambiguity is the soil in which horror grows. Very few people know exactly when or how they will die, let alone what happens to them after their death, and religion has been the traditional vehicle for allaying our fears and resolving the uncertainty surrounding death (McAndrew, 2017). In fact, psychologist Jesse Bering (2008) has concluded that it is impossible for us to conceptualize our own lack of existence. Because one has to be conscious to imagine anything, we cannot possibly imagine what it would feel like to be dead because it should not "feel" like anything at all. Experiments show that even people who do not believe in an afterlife fall into the trap of thinking as if one's knowledge, desires, and emotions continue after death (Bering, 2002). In short, since there was no evolutionary payoff for being able to think of yourself being dead, we never developed the mental machinery required to make such a thing possible.

British historian Owen Davies has studied the history of haunted places in England, and he has made the observation that some ghosts haunt individuals while others haunt places. I am much indebted for his scholarship (Davies, 2007) on this topic as I examine the geography of creepiness and why spirits haunt specific locations. Most of us think of the ghosts of dead individuals as haunting the places where they died, or at least haunting the places where their bodies are now buried. While these places do indeed creep us out, Davies has noted the interesting frequency with which physical boundaries and intersections where different places are either separated or joined together become creepy, haunted locales.

Throughout the history of England, crossroads have frequently been thought of as haunted places where one does not wish to linger, especially after dark. It was believed that the ghosts of suicide victims were especially likely to haunt crossroads. Because they were denied burial in the consecrated ground of the churchyard, there was a practice of burying suicide victims alongside - or even in – highways, and driving a stake through their hearts. Roads that ran along the borders between separate parishes were especially likely to be haunted, and some famous English ghosts only accosted people after they crossed the border from one parish into another. Davies (2007, p. 51) eloquently expressed the relationship between remote highway crossroads and the ghosts of suicide victims as follows:

> It is no surprise that ghost legends developed around these spots. The isolation of the locations, the mental torment that led people to commit self-murder and so damn their souls, and the knowledge of how their corpses were ritually desecrated, must have easily played on the imaginations of those travelling the roads at night.

Other reasons why these transitional locations are perceived as haunted are not clear; Davies speculates that it may be related to the concept of "liminality." Liminality refers to the quality of being between different states of being or existence, as in hovering somewhere between life and death or somewhere between the natural and supernatural worlds. Places that mark a transition or separation of any sort possess the quality of liminality to some degree, so who knows what *other* transitions might occur in this location?

The old expression "whistling past the graveyard" reflects the longstanding unease that humans have around places associated with death. Therefore, it should not be surprising to discover that places that have been the scene of a death frequently become haunted places, and these locations are common settings for horror movies and books. The more gruesome and traumatic a death, the more likely it is that the place where it happened becomes tainted by the event. Locations that were the scene of executions, such as the places in town squares where gallows were built or where beheadings occurred, are often linked with ghost stories, as are battlefields and mines where men have traditionally died violent deaths.

In early 20th century England, it was widely believed that the spirits of miners who had been killed in previous mine disasters suddenly appeared to warn miners about an impending collapse of the walls around them (Ringwood, 1957). In some mines, the legend was passed down with the twist that it was the ghosts of the children of dead miners who delivered the bad news. In almost every mine, beliefs about the ghosts of miners killed in accidents haunting the very spot where they had died were common (Gwyndaf, 1994).

College and university campuses where dramatic deaths have occurred are often thought of as haunted, perhaps because deaths that occur in such a young population are by definition unexpected and traumatic. Many, if not most, colleges have at least one resident ghost. Kenyon College in Ohio has a reputation for having one of the most haunted campuses in America. In fact, the place is so full of spirits that the main gates to the campus have come to be known as the "Gates of Hell." An inordinate number of students have died in tragic and unusual ways in the history of the college, and their

ghosts haunt the place by rearranging furniture, turning lights on and off, flushing toilets in empty bathrooms, and creating wet footprints in a dance hall that used to be a swimming pool. Other ghosts unscrew light bulbs and jog around the track at night. The most tragic event was a dormitory fire in 1949 that claimed the lives of nine students, and the spirits of the fire victims have reportedly been seen in the halls of the now restored building, visible only from the knees up because the foundation of the rebuilt dorm is roughly ten inches higher than the old one.

Suicides can score extra horror points for the places in which they occur, but the mere occurrence of a suicide does not seem to be enough in and of itself to make a place seem dreadful - the site must possess additional qualities to bestow true creepiness upon the locale. For example, the number one suicide destination in the world is the Golden Gate Bridge in San Francisco, but in spite of the estimated 2,000 suicides that have occurred there since the bridge opened in 1937, most people do not think of the bridge as a creepy place. In the universe of suicide destinations, the clear frontrunner for the title of creepiest suicide venue is the infamous "Suicide Forest" in Japan.

The Aokigahara Jukai forest is a beautiful, dense, fourteen square mile patch of vegetation near Mount Fuji, Japan's sacred mountain. It provided the inspiration for the 2016 horror film *The Forest* (Zada, 2016). The place has long been associated with mystical and supernatural phenomena, and in the 1800s it was a popular destination for abandoning elderly people so they could die alone and with dignity in the woods. In fact, it is described in a book with the somber title *The Complete Manual of Suicide* (Tsurumi, 1993) as "the perfect place to die," and copies of this book have been found on the bodies of many suicide victims in the forest.

In spite of its long association with death, it is primarily since it was used by a Japanese novelist in the 1960s as the setting for a story about two lovers who end up killing themselves that it has come to be known as a suicide haven. Suicides are so common there (105 victims in 2003 alone!) that the area is regularly patrolled by police and teams of volunteers who seek to save people from themselves or to at least recover the bodies of those whom they could not save. Signs with messages such as "Please consult the police before you decide to die" and "Your life is a precious gift from your parents" are posted throughout the forest in an attempt to deter individuals who may be wavering in their resolve. Some individuals prowl the forest looking for the bodies of the dead so that they might rob them of any valuables that may still be in their possession.

Unlike the Golden Gate Bridge, the forest has all of the trappings essential for being creepy. It full of densely packed trees, rotting logs, moss and underbrush, and the lack of legibility in the forest is exacerbated by the fact that compasses do not work there because of the high concentration of magnetic iron in the rocky volcanic soil. Folklore has it that the spirits of people who have killed themselves in the forest call others to the place and then prey upon those who are sad by luring them off of the trails, deep into the woods.

Cemeteries and burial grounds in general quickly come to mind when one is asked to think of creepy places. However, as creepy as graveyards are to us, it is surprising that they fall only moderately high on the list of places that are haunted. There are, of course, many stories of cemetery ghosts such as the woman who haunts an old cemetery in Alexandria, Virginia. In 1816, a young woman visited the town with her husband. Her face was completely covered with a veil, and no one had a chance to meet

her or see her face before she was overcome by a mysterious illness that killed her. The medical staff that treated her agreed to keep her identity confidential, and the husband buried her in the local cemetery all by himself. Consequently, no one ever found out who she was. Her veiled figure has reportedly been seen wandering through the cemetery ever since.

The one thing that seems to really rile up the ghosts in a graveyard is the desecration or disturbing of graves where the dead have finally gotten comfortable. In Owen Davies' (2007) history of English ghosts, a disruption of burial plots by construction projects or body snatching invariable leads to an increase in strange paranormal activity around the graveyard. This, of course, was the premise of the very scary *Poltergeist* (Hooper, 1982) horror movie series. In the original film, an unsuspecting suburban family purchases a home from a greedy land developer who has built new homes on top of a sacred Indian burial ground. The spirits of the dead communicate with the youngest child in the family via the television set and eventually kidnap her by dragging her through a portal in her bedroom closet into the spirit world. Again, it was the disruption of the resting dead rather than their mere proximity that led to all of the trouble.

Stephen King's 1983 horror novel *Pet Sematary* reminds us that the restless dead need not even be human in order to creep us out, and there is no shortage of morbid pet cemeteries in the world to keep us on our guard. Burying pets with all of the dignities afforded the human dead has a history stretching back to at least ancient Egypt and Israel. The largest and oldest pet cemetery in America is located in Hartsdale, New York. It is more than 120 years old and there are around 70,000 pets of all kinds buried there. In

most cases, it is the bizarre statuary and tombstones accompanied by downright weird epitaphs that confer an air of creepiness upon pet cemeteries.

Bodies of water are frequently associated with horror.

Rivers, lakes, and ponds often provide the setting for horror stories about ghosts. This makes sense in that deep water has always posed a hazard to humans and drowning is a common cause of human death, both accidental and intentional. It is therefore not very surprising to find that bodies of water are frequently linked with paranormal experiences. An old woman named Mother Wakely drowned herself in a pond near Suffolk in England, and for generations the locals believed that her ghost would appear to people who approached the pond and attempt to drag them into the water (Davies, 2007). In West Milford, New Jersey, there is a stretch of haunted highway named Clinton Road that has been the setting for many a ghostly encounter, including phantom trucks that chase cars. This stretch of road passes over a small bridge, and the ghost of a small boy who lives under the bridge apparently tries to lure motorists into the stream below to drown them. Ghosts haunting ships at sea, wells, and bridges are also the stuff of legends. The fact that ghosts were once believed to have been cast into bodies of water or laid under bridges by priests performing exorcisms only adds to the ghostly mystique surrounding water.

Conclusion

In summary, recent scientific work confirms that the plots and props of contemporary horror fiction and film are securely anchored in the parts of our

unconscious that we have inherited from our prehistoric ancestors. McAndrew and Koehnke (2016) proposed that our reactions to "creepy people" are based upon ambiguity and our lack of confidence about being able to read their intentions. It appears that this theoretical framework might work equally well in helping us understand our reactions to creepy places. Introducing an air of uncertainty into an antiquarian environment where terrible things have happened before (and may happen again) places us on our highest alert. When combined with hazards that have threatened humans from the dawn of time, such as darkness, isolation, and deep water, the effect can indeed be chilling.

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