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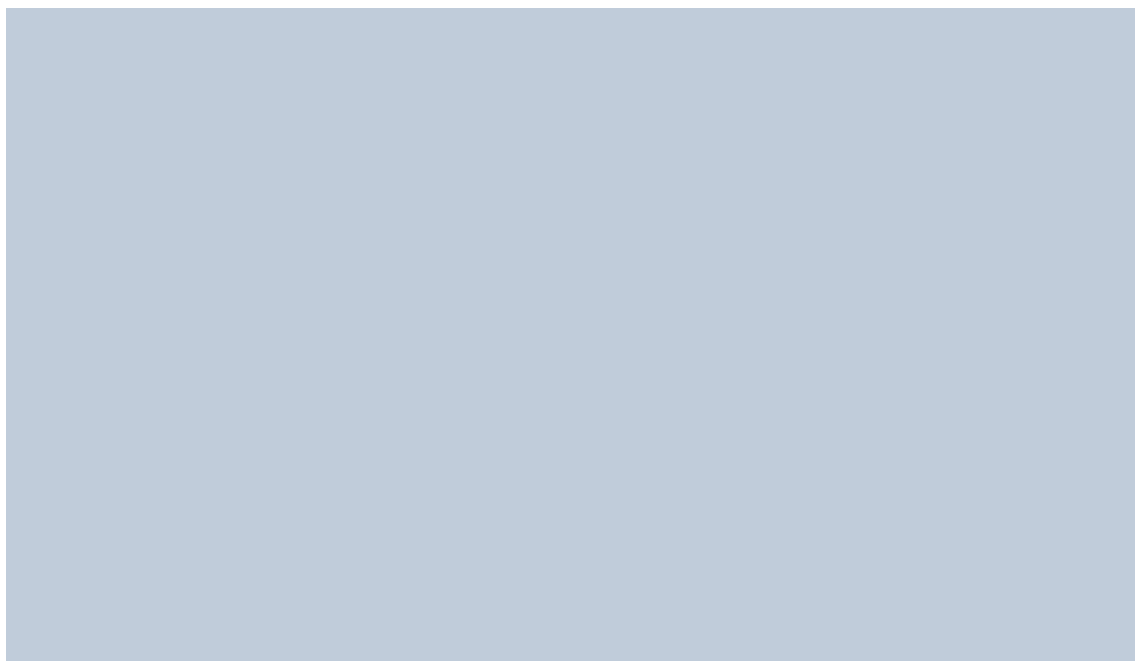
Why Do Some Brains Enjoy Fear?

The science behind the appeal of haunted houses, freak shows, and physical thrills

By Allegra Ringo

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P.T. Barnum's "Fiji Mermaid" was featured in 19th-century sideshows, billed as a mummified half-mammal-half-fish. It was actually the torso and head of a juvenile monkey sewn to the body of a fish. (*Wikimedia*)

This time of year, thrillseekers can enjoy horror movies, haunted houses, and prices so low, it's scary. But if fear is a natural survival response to a threat or danger, why would we seek out that feeling?

Dr. Margee Kerr is the staff sociologist at ScareHouse, a haunted house in Pittsburgh that takes all year to plan. She also teaches at Robert Morris University and Chatham University, and is the only person I've ever heard referred to as a "scare specialist." Dr. Kerr is an expert in the field of fear. I spoke with her about what fear is, and why some of us enjoy it so much.

Why do some people like the feeling of being scared, while others don't?

Not everyone enjoys being afraid, and I don't think it's a stretch to say that no one wants to experience a truly life-threatening situation. But there are those of us (well, a lot of us) who really enjoy the experience. First, the natural high from the fight-or-flight response can feel great. There is strong evidence that this isn't just about personal choice, but our brain chemistry. New research from David Zald shows that people differ in their chemical response to thrilling situations. One of the main hormones released during scary and thrilling activities is dopamine, and it turns out some individuals may get more of a kick from this dopamine response than others do. Basically, some people's brains lack what Zald describes as "brakes" on the dopamine release and re-uptake in the brain. This means some people are going to really enjoy thrilling, scary, and risky situations while others, not so much.

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we're in a safe environment.

Lots of people also enjoy scary situations because it leaves them with a sense of confidence after it's over. Think about the last time you made it through a scary

movie, or through a haunted house. You might have thought, *Yes! I did it! I made it all the way through!* So it can be a real self-esteem boost. But again, self-scaring isn't for everyone, and there are lots of psychological and personal reasons someone may not enjoy scary situations. I've talked to more than a handful of people who will never set foot in a haunted house because they went to a haunt at a young age and were traumatized. I always recommend parents thoroughly check out the content and rating of a haunted attraction before bringing a child. The chemicals that are released during fight-or-flight can work like glue to build strong memories ("flashbulb memories") of scary experiences, and if you're too young to know the monsters are fake, it can be quite traumatic and something you'll never forget, in a bad way.

What happens in our brains when we're scared? Is it different when we're scared "in a fun way" versus being actually afraid?

To really enjoy a scary situation, we have to know we're in a safe environment. It's all about triggering the amazing fight-or-flight response to experience the flood of adrenaline, endorphins, and dopamine, but in a completely safe space. Haunted houses are great at this—they deliver a startle scare by triggering one of our senses with different sounds, air blasts, and even smells. These senses are directly tied to our fear response and activate the physical reaction, but our brain has time to process the fact that these are not "real" threats. Our brain is lightning-fast at processing threat. I've seen the process thousands of times from behind the walls in ScareHouse—someone screams and jumps and then immediately starts laughing and smiling. It's amazing to observe. I'm really interested to see where our boundaries are in terms of when and how we really know or feel we're safe.

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What qualities do “scary things” share across cultures, or does it vary widely?

One of the most interesting things about studying fear is looking at the social constructions of fear, and learned fears versus those fears that appear to be more innate, or even genetic. When we look across time and across the world, we find that people truly can become afraid of anything. Through fear conditioning (connecting a neutral stimulus with a negative consequence), we can link pretty much anything to a fear response. Baby Albert, of course, is the exemplar case of this. The poor child was made deathly afraid of white rabbits in the 1920s, before researchers were required to be ethical. So we know that we can learn to fear, and this means our socialization and the society in which we are raised is going to have a lot to do with what we find scary.

Things that violate the laws of nature are terrifying.

Each culture has its own superhero monsters—the Chupacabra (South America), the Loch Ness Monster, the Yōkai (supernatural monsters from Japanese folklore), Alps (German nightmare creatures)—but they all have a number of characteristics in common. Monsters are defying the general laws of nature in some way. They have

either returned from the afterlife (ghosts, demons, spirits) or they are some kind of non-human or semi-human creature. This speaks to the fact that things that violate the laws of nature are terrifying. And really anything that doesn't make sense or causes us some sort of dissonance, whether it is cognitive or aesthetic, is going to be scary (ax-wielding animals, masked faces, contorted bodies).

Another shared characteristic of monsters across the globe is their blurred relationship with death and the body. Humans are obsessed with death; we simply have a hard time wrapping our mind around what happens when we die. This contemplation has led to some of the most famous monsters, with each culture creating their own version of the living dead, whether it's zombies, vampires, reanimated and reconstructed corpses, or ghosts. We want to imagine a life that goes on after we die. Or better yet, figure out a way to live forever. Again, though, that would violate the laws of nature and is therefore terrifying. So while the compositions and names of the monsters are different, the motivations and inspirations behind their constructions appear across the globe.

What are some early examples of people scaring themselves on purpose?

Humans have been scaring themselves and each other since the birth of the species, through all kinds of methods like storytelling, jumping off cliffs, and popping out to startle each other from the recesses of some dark cave. And we've done this for lots of different reasons—to build group unity, to prepare kids for life in the scary world, and of course, to control behavior. But it's only really in the last few centuries that scaring ourselves for fun (and profit) has become a highly sought-after experience.

My favorite example of one of the early discoveries of the joys of self-scaring is actually found in the history of roller coasters. The Russian Ice Slides began, not surprisingly given the name, as extended sleigh rides down a snowy mountain in the mid-17th century. Much like they do today, riders would sit in sleds and speed down the mountain, which sometimes included additional man-made bumps to make it a little more exciting. The Russian Ice Slides became more sophisticated throughout the 18th century, with wooden beams and artificial mountains of ice. Eventually instead

of ice and sleds, tracks and carriages were constructed to carry screaming riders across the “Russian Mountains.” Even more exhilarating terror came when innovative creators decided to paint scary scenes on the walls that shocked and thrilled riders as they passed by. These came to be known as “Dark Rides.” People were terrified, but they loved it.

We haven’t just enjoyed physical thrills—ghost stories were told around the campfire long before we had summer camps. The Graveyard Poets of the 18th century, who wrote of spiders, bats, and skulls, paved the road for the gothic novelists of the 19th century, like Poe and Shelly. These scary stories provided, and continue to deliver, intrigue, exhilaration, and a jolt of excitement to our lives.

The 19th century also brought the precursors to the haunted attraction industry. Sideshows or “Freak Shows,” and the museums and houses of “oddities,” have existed since the mid-1800s. Perhaps the most notable is Barnum’s American Museum, operated by P. T. Barnum, best known for being half of the Ringling Brothers and Barnum and Bailey Circus. His museum contained things like monkey torsos with fish tails attached, and other characters meant to frighten and startle. Much like modern haunts, customers would line up to challenge themselves and their resilience and dare each other to enter the freak shows and face the scary scenes and abnormalities. The haunted-attraction industry has come a long way from fish tails and plastic bats—modern haunts incorporate Hollywood-quality sets, and a crazy amount of modern technology all designed to scare us silly.

There’s a common belief that if you meet somebody for the first time in a fearful situation, you’ll feel more attached or more attracted to that person than you would if you’d met them in a low-stress situation. Is there any truth to that?

One of the reasons people love Halloween is because it produces strong emotional responses, and those responses work to build stronger relationships and memories. When we’re happy, or afraid, we’re releasing powerful hormones, like oxytocin, that are working to make these moments stick in our brain. So we’re going to remember the people we’re with. If it was a good experience, then we’ll remember them fondly

and feel close to them, more so than if we were to meet them during some neutral unexciting event. Shelley Taylor discussed this in her article “Tend and Befriend: Biobehavioral Bases of Affiliation Under Stress.” She shows that we do build a special closeness with those we are with when we’re in an excited state, and more important, that it can be a really good thing. We’re social and emotional beings. We need each other in times of stress, so the fact that our bodies have evolved to make sure we feel close to those we are with when afraid makes sense. So yes, take your date to a haunted house or for a ride on a roller coaster; it’ll be a night you’ll never forget.
