THE

BENT SPOON

GHOST HUNTING

THE BENT SPOON

In the landscape of paranormal media, there are traditionally two unique, yet separate, brands. One geared toward the believers, and the other more skeptical in nature. The problem is that the true believers rarely, if ever, embrace a skeptical attitude or ask tough questions of their community; instead preferring to surround themselves with like- minded individuals that reinforce their own belief systems. And the skeptics, likewise, promote science and critical thinking largely to those already open to it, or who are active participants in the skeptical community. This results in an echo chamber effect, wherein the same ideas are bounced back and forth, guru-student relationships are inadvertently created, and neither side ends up learning much about the other.

Enter: The Bent Spoon.

The Bent Spoon is a skeptical magazine for the true believer. Within its pages you will find Q&A between those with opposing viewpoints, interviews with leading investigators and thinkers, as well as articles which will not only provide in-depth analysis, but also be critical of both believers and skeptics alike. Along with reviews, comic strips, and other lighter fare, The Bent Spoon hopes to foster an attitude of outreach, forming a middle ground where believers and skeptics can come together and have a conversation about the issues and questions we've all given thought to.

The Bent Spoon. Where extraordinary claims meet ordinary explanations.

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5 GHOST HUNTER FALLACIES

For the most part, ghost hunters have their hearts in the right place. Many truly care about local history, and want to help the people who are experiencing what they perceive to be paranormal phenomena. But there are several fallacies that most amateur investigation teams regularly employ that damages not only their own credibility, but also blurs the line between truth and fiction, harming their clients in the process.

One major fallacy that ghost hunters use is working backwards from a conclusion. While claiming to follow the scientific method, what these individuals and groups are actually doing is starting with a conclusion; in this case that ghosts are real, that they inhabit a particular location, etc. and then working backward to find evidence. This is improper and harmful because the amateur ghost hunter will try to find the data to match their conclusion instead of allowing the data to lead them to an answer. Misinterpretations, false positives, and illogical conclusions will often follow this style of investigative protocol. For instance, when a team attempts to debunk the sound of footsteps in an empty part of a house and fail, they assume it must be the sound of an invisible dead person wandering around, and further stroke their client's fears by telling them so.

Another fallacy that ghost hunters tend to use, one quite similar to the last, is the logical fallacy of Arguing from Ignorance. This fallacy asserts that a position is true simply because it has not been proven false. For instance, a paranormal team may come home with a sound on their recorder, but that doesn't mean it is a ghost. It just means it is an anomalous sound they don't know the source of. The typical amateur ghost hunter will say that no one whispered during the time of the recording, nor were any noises at all made, therefore the sound they are hearing must be the voice of a dead person. But that is logically invalid. Just because you can't explain something doesn't mean that the explanation is therefore the least likely reason of all.

The third common fallacy ghost hunters employ is "going lights out." Turning out the lights is just about the worst thing you can possibly do when trying to spot a ghost. It immediately puts you at a disadvantage. I actually once asked Kris Williams, former cast member of SyFy's Ghost Hunters, and now employed on Ghost Hunters International, why the team turned out the lights during investigations. She told me it was because they are looking for things that are "darker than dark." But she also told someone else that sometimes ghosts have a fluorescent glow. So which is it? Whatever the truth is about ghosts, you would have a much better chance at collecting evidence looking for them with the lights on. If it is a dark figure you're trying to find, you'll see it under well it conditions,

not the other way around. And if it glows, you may see it in the dark, but you'll see more details in the light.

The next fallacy regularly seen among ghost hunters is the improper use of equipment. EMF meters are not ghost detectors. You can't wave a meter around, pick up a few readings, and conclude the readings were caused by a ghost. We don't know that ghosts exist, so we have no idea what type of properties they have. Writing down a series of fluctuating numbers only shows that the reading went up or down, it doesn't have any relationship with dead people.

Many amateur groups also use EMF meter to diagnose people with fictional illnesses. EMF hypersensitivity is not a real medical condition. But that has not stopped groups from telling their clients that a high reading leads to headaches, feelings of paranoia, or even hallucinations. If someone you know is experiencing these symptoms, they need to see a doctor…not a ghost geek in a TAPS Family t-shirt.

Digital recording devices and cameras don't do much good at finding ghosts either. Most ghost hunters don't seem to know that the majority of the sounds they are picking up on their recorder is interference allowed by an FCC regulation. And how many blurry images, long exposures and orbs does it take for people to realize they don't know how to operate a camera? Even if you did get a clear picture of a real ghost, it wouldn't be proof of anything. The best evidence from neuroscience says that consciousness is a product of the brain, not something that exists outside the brain, takes on human form and can talk. So your picture may be cool, but it is no more proof of a ghost than a picture of a unicorn or a dragon is proof that they exist. And in this age of Photoshop, it is becoming harder and harder for many to tell the real pictures from the fakes.

The final common fallacy we'll discuss today is using subjective experiences as evidence. Feeling strange in a location is not proof of the spirit world, it just means your body is reacting to something. Maybe it was your lunch from earlier, maybe not. But psychology tells us that many paranormal experiences are caused by one's expectations. Believing that ghosts inhabit a location is enough to make you misinterpret normal environmental conditions for abnormal ones. You may feel as if you are being watched, hear things, or even see what looks like a dark figure peeking around a corner. Would you be doing that if you didn't hear a variety of ghost stories before you came in? Probably not.

Being skeptical of the existence of ghosts is a good thing. It allows you to think in a more critical way about the individual ghost claims you hear, and helps to keep you from falling prey to some of the fallacies talked about in this article. As always, if you have any questions or comments, contact the Editors of The Bent Spoon. Your concerns will be addressed personally in an upcoming issue.

A FOOL'S GAMBIT

Like the rest of the paranormal "theories" pertaining to ghosts that I have heard, the explanation invoking the first law of thermodynamics has been regurgitated so often in the paranormal echo-chamber that I cannot trace it's origins. I have to wonder how that misappropriated notion has survived so long. Did our nation's public school fail us or is it simply a bluff given with the idea that if it sounds scientific, it's good enough?

The first law of thermodynamics, or conservation of energy, is often given as a possible explanation of what comprises a ghost and how it came to be. Whether this misunderstanding is what led many investigators to believe ghosts are made of "energy," or that it was given as a supportive hypothesis of the former is unknown to me and, most likely, to the claimant as well. Though the underlying concept is a pretty common one. It's the general misinterpretation of energy itself.

What is energy really? Energy is a scalar, that is, a quantity of a system's ability to produce changes or do work. In this sense, some one saying, "Ghosts are just energy," would be equivalent to saying, "Ghosts are just length," or any other measurable quantity. To those making the claim, are human bodies like a jar of fireflies, buzzing with a swarm of glowing, free-floating energy that escapes the moment we die?

If that were the case, then I think they'd most likely be speaking of energy in the metaphysical sense. Life force, ki, prana, kundalini, or spirit is the ever-present force connecting all things, giving life, creating auras, and the base of most alternative medicine. It's also a handy reference to explain anything paranormal. While many cultures believe in some form of a life force or another, this "energy" of the body is not detectable in any way beyond the claims of self proclaimed sensitives. And why should it be? It is not energy in the physical sense, so the laws of physics need not govern it, right? If that is indeed the case, then conservation of energy would not apply and that "theory" is busted.

But like the gadgets they carry with them, so do the paranormal investigators carry a lexicon of science terms that if said in the right order, might scare the doubting Thomases off their backs. Provided that they know less about quantum physics or electromagnetic fields than the investigator themselves. A fool's gambit.

At this point, some might still ask, "What happens to our body's energy when we die, then?" This is pretty simple to explain. Being that the body is dead, it no longer needs to take in any energy in the form of food. The remaining energy in the body is radiated off as heat and the rest of the chemical energy stored in our tissues is consumed by the body's environment. I think that pretty well dismisses the idea of spirits lingering due to the first law of thermodynamics, but be warned. After raising these points in a discussion with a believer, be prepared for the guaranteed, "Science doesn't understand everything," response.

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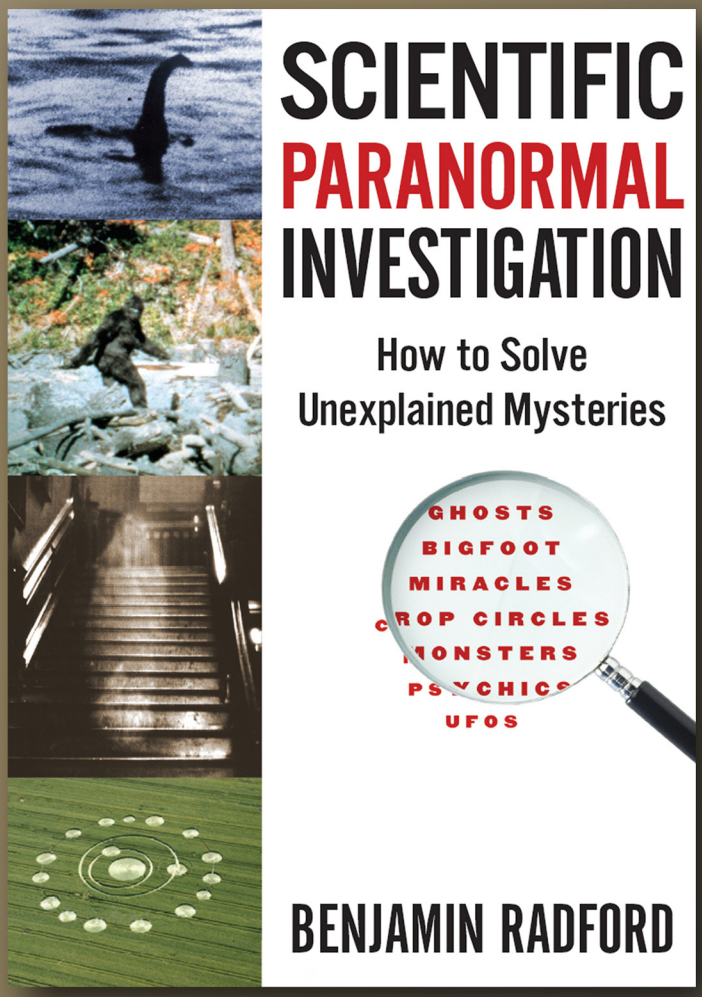

"We approach ghost hunting from a scientific point of view."
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"This is the best book I have ever read on the subject of paranormal and ghost investigations... It's dead-on target about how to do real, scientific investigation. I can't recommend it highly enough."
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- *Brian Parsons, Ohio Paranormal Investigations Network*

"As someone who participates in investigations, I recommend [Chapter 4] to all paranormal investigators."
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- *The Dumbasses Guide to Knowledge*

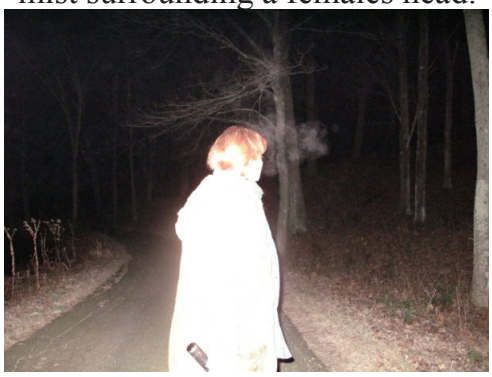
Benjamin Radford has investigated the paranormal for over ten years. He is author of six books and a writer for Discovery News, Live-Science.com, and has appeared on CNN, ABC News, BBC, MTV, DiscoveryChannel, History Channel, Learning Channel, NationalGeographic, and others.

For more information and a free 16-page downloadable PDF:
www.ScientificParanormalInvestigation.net

ECTOPLASMIC RESIDUE

It's the real thing

A while back, I was sent a picture of what some people are claiming to be "ectoplasmic" mist surrounding a females head.



If you notice in the photo, the individual is wearing a coat and the "ghost" like mist appears to be right by her head. It doesn't take much to realize that this apparition, in mid-manifestation, is actually the woman's breath. Being a skeptic and paranormal researcher, there are certain things in the field of paranormal research I can't stand; one of those things is the claim of ectoplasm. Ectoplasm (from the Greek ektos, which means "outside" and plasma, which means "something formed"), which was previously called teleplasm, is a term that was coined by French physiologist and noble prize winner, Charles Robert Richet.

Charles Richet (Bottom Right)

Richet, a man with a passion for science and medicine, also had a high interest in psychical research; he even served as president of the Society of Psychical Research located in London in 1905. Initially, Richet was closed-minded and shrugged off claims of psychic phenomena. But in his book, Thirty Years of Psychical Research, published in 1923, Richet wrote that he was shameful he was one of the many that was among the willfully blind.

Richet studied the claims of an Italian peasant named Eusapia Palladino, who was producing some very weird phenomena. This is when Richet coined the term ectoplasm, explaining that it was some type of jelly-like protoplasm that emanates from the medium.

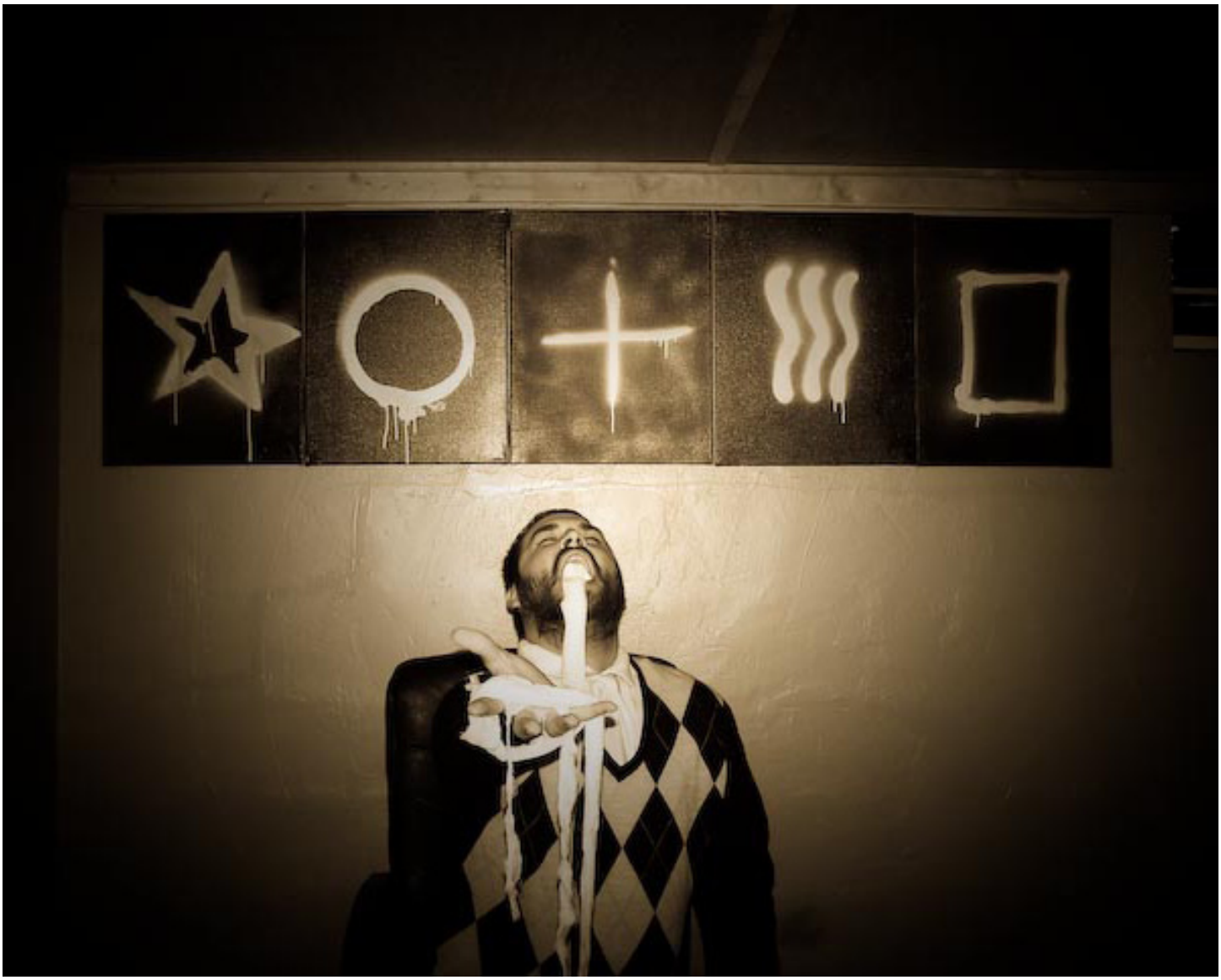
It is important to note that many researchers of the time felt Palladino was nothing more than a charlatan. But in the typical mindset of a scientist, Richet felt he couldn't be duped and defended Palladino. Richet wrote, "Even if there were no other medium than Eusapia in the world, her manifestations would suffice to establish scientifically the reality of telekinesis and ectoplasmic forms." Sadly

"Ectoplasm" in solid and gasseous states

Charles Richet

for Richet, this wouldn't be the case, ectoplasm was never proven authentic; in fact just the opposite.
Lots of ectoplasm cases had been proven to be nothing more than fraud. People using items such as cheese cloth, gauze, chewed paper, egg whites, muslin, and even pieces of meat from chicken or cows.
The way many mediums produced this feat was the real work of art; hiding these objects anywhere within reach, even in their own vaginas or rectums. Some mediums even swallowed these objects and regurgitated them during the séance when the lights were out.
But the thing I find so fascinating is the evolution of this phenomena, how it went from a solid form to a mist. How it went from protruding out of the orifices of mediums to a lingering fog floating around alleged haunted locations.

I don't mean to sound rude but it's absolutely embarrassing, almost eye rolling, to look at some photos that people think are authentic, ectoplasmic evidence. Of course nowadays, ectoplasm only exist in photographs. Personally, I liked it more when it was cheese cloth.



UP A BLIND ALLEY

THE DELUSION OF 'GOING DARK'

If I were to accept the existence of ghosts, I would still be forced to admit that they are an elusive subject based on what some would call their supportive evidence. I would think that the most valuable quality of a ghost hunter would be a highly observant nature then, in order to find such illusory prey. That being said, it could only be considered foolish to intentionally mute your prime sense of observation, yet this is standard practice among ghost hunters. I'm referring to turning off the lights during an investigation.

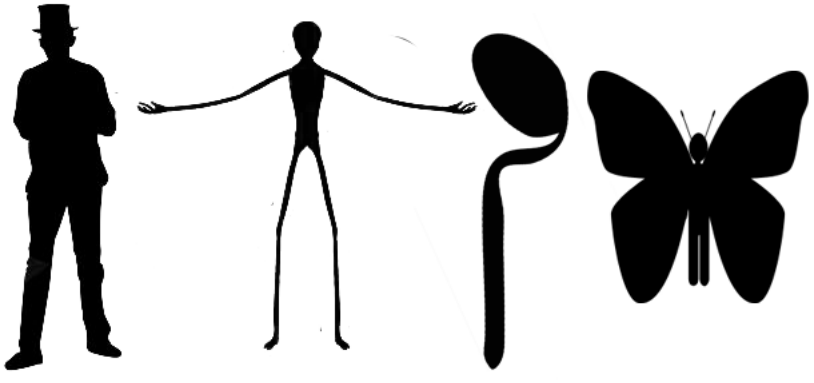
Clearly this method is used for creating atmosphere in regard to the popular ghost hunting TV shows, but I can find no solid, practical reason for this method. Vision is our brain's interpretation of visible light reflecting off of objects and entering our eyes. It is received by our retinas, or specifically, the light sensing cells called cones and rods. This results in a chemical reaction, sending electrical impulses through the optic nerve to the brain. Simply put, we need light to see. By placing themselves in a dark environment, paranormal investigators are hindering their observational acuity to next to nothing, leaving their minds highly open to suggestion.

To illustrate this point, I created an informal test involving a short animation consisting of eight frames, solid black, each with randomly generated noise, similar to static or snow seen on a television. I then prompted participants to find the hidden image in the animation, providing them with four options to chose from. (http://tinyurl.com/bentspoon-test)

This essentially primed the participants to seek the images I desired, much like listening to the claims of a haunting before an investigation. Of the twenty five participants, 13 saw an image.

While this was by no means a proper scientific experiment, I think it demonstrates several points relevant to ghost hunting. First, it shows the brain's tendency to form patterns from random noise, a phenomena known as pareidolia ,something with which I presume our readers are becoming familiar. It also exhibits people's susceptibility to persuasion. By priming the participants with four images, it strongly implied the existence of what was never there, yet some were able to see the them.

Another possible downfall of operating in the dark is a strange visual phenomenon called "prisoner's cinema," a symptom said to affect prisoners kept in



(A) (B) (C) (D)

Which of the following images is the hidden image?

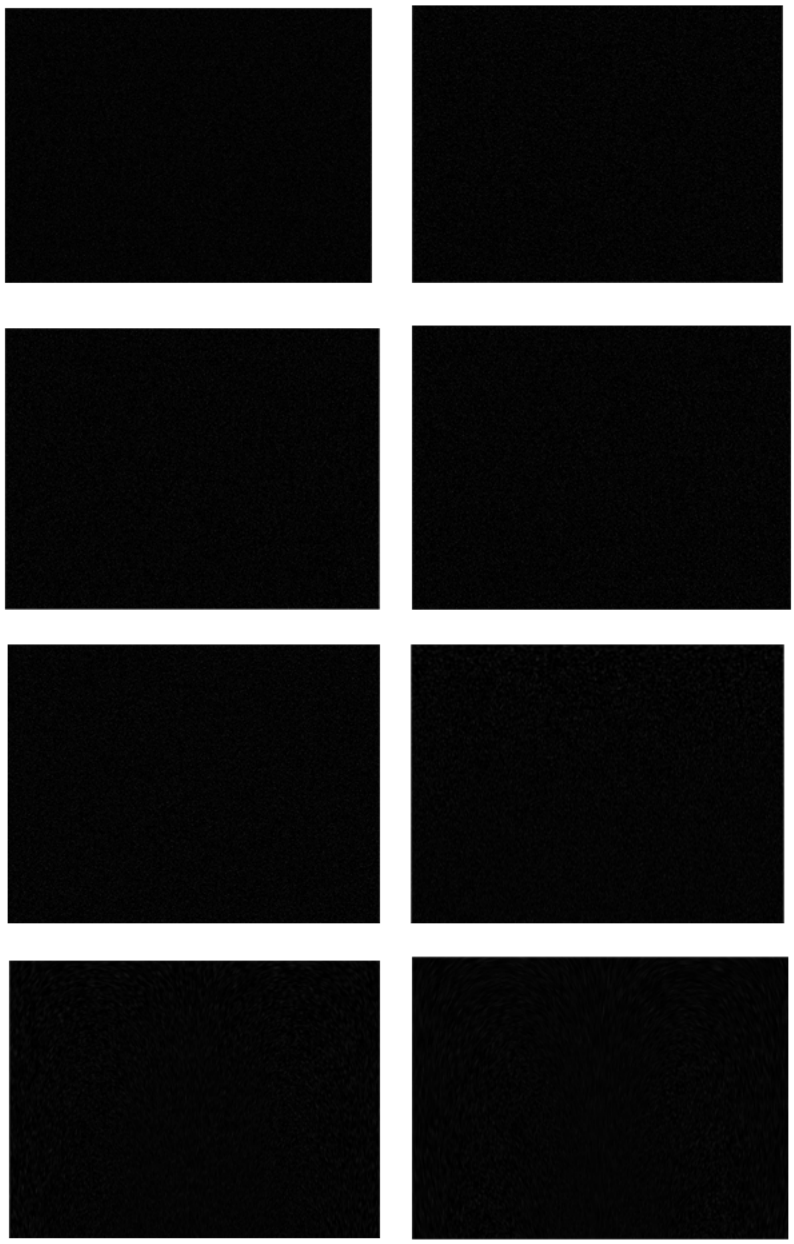
solitary confinement. Reportedly, after long exposure to complete darkness, they began to see "light shows" or "cinema lights forming human figures." This effect is called phosphenes, though it may be more familiarly known as seeing stars. You can induce this effect by pressing on your eyes. During long exposure to dark, your photoreceptors misfire, creating a "TV snow" like effect, which can certainly invoke your imagination. This particular phenomenon is what inspired my hidden image test.

Ghost hunters also often employ the use of active infrared light sensitive video cameras to record their night time investigations. While this does, in fact, aid their ability to to see, it's virtually no different than using regular flashlights or better yet, leaving the lights on.

As with most of the ghost hunting methodology, searching in the dark should be considered an obsolete practice, and like all ineffective practices, it should be thrown out. To summarize in simile;

You're just leaving your house. You pull the door closed behind you, just realizing you left your keys within. You attempt to turn the handle, but it is fixed. Your next step is to find another way in, not to continue struggling with the locked knob.

Why not abandon the fruitless endeavors of modern ghost hunting? Reject the methods that garner no evidence and move on. Employ the scientific method and make real progress in your field.



THE EIGHT FRAMES THAT COMPRISED THE ANIMATION, CONTAINING ONLY COMPUTER GENERATED NOISE.
IT CAN BE SEEN THAT NO FRAME CONTAINS ANY OF THE SUGGESTED IMAGES.

THE MYTH of EMF HYPERSENSITIVITY

I have long had questions as to the reasons for using Electromagnetic Frequency detection devices in paranormal investigation. On TV, the false correlation is made that EMF can either give a ghost energy to manifest or be a by-product of a ghost manifesting (of course there is a contradiction, it's the paranormal). It's recently become popular for skeptically minded investigators and researchers to deny that EMF detectors can determine the presence of paranormal activity. Now, this isn't just a fad, because after all there is no evidence to support EMF even correlates with paranormal phenomena.

Many of these investigators are using EMF detectors to determine if there are natural causes for high EMF in these locations. Why? Because it's a common theory in the paranormal field that high EMF can cause hypersensitivity. EMF Hypersensitivity has been defined in many ways, but the basic and perhaps most concise definition was published in the Sweden National Institute for Working Life: "electromagnetic hypersensitivity is a phenomenon where individuals experience adverse health effects while using or being in the vicinity of devices emanating electric, magnetic or electromagnetic fields (1997). A studying done by the California Department of Health Services uses the term "hypersensitivity to electric and magnetic fields", or HSEMF. I will use HSEMF during this review.

HSEMF reportedly causes everything from dizziness to rashes and even hallucinations. However, HSEMF is not a currently accepted diagnosis in the medical community. It is interesting to note that while Sweden considers it a functional impairment, it is not considered a disease or illness. There simply is not enough empirical evidence to show that HSEMF is anything more than psychosomatic, let alone a medical condition.

What little scientific literature there is on the topic of HSEMF has been done in the field of dermatology. These studies mostly focus on the subjectively reported symptoms, such as itchiness and dryness of the skin with very little focus on objective data, such as redness or measurable visual skin conditions. In studies, including double-blind experiments, no clear relationship between skin disorders and measurable EMF has been found. One worry in science is always experimental design. In the case of skin conditions, this shouldn't be an issue. Skin disorders are visual and measurable and therefore should be very easy to observe objectively. However, the few descriptive epidemiologic studies that have been published were all questionnaires and the subjects had not been trained to respond objectively. Sweden seems to have done the most research on HSEMF presenting in skin conditions, and even that research depended heavily on subjects reporting symptoms. One interesting study, published in 1997 by Andersson et al from Sweden, had 16 subjects who were referred to researchers by dermatologists. These 16 subjects reported subjective facial reactions when exposed to EMF for at least 6 months, and those reactions happened within 30 minutes of reacting to test equipment. Each of these 16 people had made adjustments at work to deal with their HSEMF. The experiment was a double-blind crossover experimental design. After a 15 minute rest period, the subject was seated for 30 minutes in front of a computer screen about 60 centimeters from their face. Each subject

was tested four times, with the PC off twice and on twice, in what is considered a multiple baseline ABAB format (rest, treatment, rest, treatment). The subjects where then giving a questionnaire after each set, as well as blood tests. The results of this study were extremely interesting. Subjects could not discriminate between when the PC was off or on, and reported significantly intense symptoms when they thought the PC was on, even if it wasn't. The blood tests showed no changes in hormone levels compared to EMF exposure. With an extremely small sample size, the generality of this study would propose that HSEMF is subjective and psychosomatic.

In a published literature review of HSEMF, Levallois admits there is very little to review and is able to conclude, based on what studies exist, that there is no evidence of a link between skin disorders and exposure to EMF. If anything, these studies have found a potential correlation between workplace environment and subjectively reported skin disorders. He also summarizes that the methodology of these studies is riddled with practical and philosophical problems and have mostly neglected HSEMF in terms of digestive or neurological presentation. He concluded that there are no substantial grounds to believe in the validity of HSEMF, but admits that more research and experimentation is needed.

I decided to spend an hour searching for articles on HSEMF or any effects of EMF on the human body in peer-reviewed journals. My search included any possibly discipline, ranging from occupational and environmental hazards to psychology, behavior, and neurological journals. I did find some articles discussing experiments in using EMF delivered to the brain to treat depression (with subjective positive results reported), to using high-frequency EMF fields to map out the human brain. It's interesting to note that I didn't find the word "hallucination" anywhere in my searches. It simply hasn't been tested. Even then, testing HSEMF with hallucinatory presentation would be wrought with methodological and data collection problems and would require multiple tests in laboratory settings.

A simple Google search will yield a plethora of ghost hunters, investigators and researchers who claim that some ghost sightings can be explained as hallucinations caused by HSEMF. Even the ever-popular television paranormalists will claim episode after episode that this is a possibility. It's interesting, what an hour or two of typing key terms into research engines and reading a few articles will teach you. As of now, HSEMF is considered a myth in science. Then again, in pseudoscience, anything is considered possible. And we all know that possible is just another word for "fact" in the paranormal.

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ANOMALY HUNTING IN GHOST INVESTIGATION

guest contributor
benjamin radford

Most amateur ghost hunter groups today (influenced by TV shows like Ghost Hunters and Ghost Adventures) rely largely on anomaly hunting during their investigations: essentially wandering around a supposedly haunted location searching for anything that might considered strange or anomalous.

Anomaly hunting is a very poor investigation technique; it is not particularly useful in solving mysteries, and is in fact usually counter-productive. That's because scientific paranormal investigation begins with a specific claim (e.g., "A ghost in my house throws plates at me," or "My Elvis statue is weeping bloody tears"), which is then closely analyzed. Anomaly hunting reverses this process, essentially putting the investigator in the position of needlessly generating spurious new claims. I discuss this at length in chapter 4 of my book Scientific Paranormal Investigation: How to Solve Unexplained Mysteries.

It's the classic paranormal fallacy of arguing from ignorance (or personal incredulity): "I don't understand X, therefore it's an anomaly." We see this in everything from UFO reports to ghost and Bigfoot sightings, where people experience something they believe is weird and assume it's paranormal (or at least an "anomaly"). In science, if what you're observing contradicts known facts or the accepted body of knowledge, the first assumption should be that the experiment (or the assumptions behind it) might be flawed in some way—not that you have discovered some new phenomenon.

What about anomaly hunting in science? Scientists, as a rule, do not spend their time searching for anomalies. Geologists don't spend their careers sampling soils around the world looking for anything unusual, and epidemiologists don't randomly screen the public hoping to find some unknown disease. Instead, anomalies appear in the course of their ordinary work and are usually easily distinguished as anomalies. For example, conjoined twins are an anomaly, but it would be pointless for a researcher to spend his time visiting hospitals around the world looking for such an anomaly; instead, the anomaly will appear, and then be investigated.

Scientists, unlike ghost hunters, have an idea of how to identify a true anomaly. Scientists educate themselves with reliable knowledge about the characteristics of what they're studying; ghost hunters cannot. Alleged ghostly phenomena is very poorly defined and includes an impossibly wide variety of "signs" including cold, heat, noise, silence, fear, and so on (Radford 2010).

To see the problem that anomaly hunting poses, consider the following example. A college student reads that water freezes at 32 degrees Fahrenheit. Being a naturally skeptical and inquisitive fellow, he decides to try it for himself. He fills a cup with water and puts it, along with a thermometer, in a freezer and sets the freezer's temperature. The next day he opens the freezer door and finds that the water is very cold but not frozen. This information—this anomaly—contradicts widely-accepted knowledge about the freezing temperature of water. The thermometer reads below 32 degrees, yet the water is not

frozen. Science was wrong!

But before he sends an e-mail to the Nobel Committee notifying them of his breakthrough, he should read the fine print for a better understanding of what he was looking for. Pure water freezes at 32 degrees Fahrenheit at sea level. If the water was not pure, or if the thermometer was not exact enough for scientific purposes, or if he's not at sea level, or if there was a bit of oil or another contaminant in the cup—or any number of other factors he didn't think of—then he will not necessarily get an accurate reading. What he perceives as an anomaly is in fact nothing of the sort. The error is not with accepted science, but with his procedures and/or understanding of the phenomenon.

Ghost hunters often go through an identical procedure, not understanding what they are looking for, and mistaking normal variations in a room's temperature, or ambient sounds, or electromagnetic fields, or any other measure, as mysterious anomalies.

Philosopher John Shook, writing about scientific observation, notes that "Rational empiricism would say that a valid observation is an experience aided by inference and knowledge. A scientist must have an experience of an object that includes its 'identifying qualities.' The scientist already knows what qualities a certain thing must have, which identify it... Scientists reduce the possibility of mistaken identifications by having rigorous tests for several qualities that uniquely identify particular things" (Shook 2011).

But, one might object, what about something completely unknown to science, as ghosts are said to be? How could a scientist or investigator even begin to determine what qualities it would have? The answer is that many of those (alleged) qualities are known; ghosts are said to have been photographed, therefore they exist in the visible spectrum; they are said to make sounds, therefore they are material. The fact that ghosts are said to be heard, felt, seen, smelled, or otherwise sensed means that, if they exist, they can, by definition, be detected through scientific means.

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This article is adapted from a Skeptical Inquiree column in Skeptical Inquirer magazine.

PLEASE LEARN YOUR TERMS

Every day I talk with people I call true believers, people who believe in paranormal phenomena 100%. People who can't believe they are not being taken seriously, people who can't believe that I don't believe.

You see, I used to be a true believer, but when I found the method of questioning everything, the paranormal belief slowly but surely faded and I became a skeptic. I call myself the Paranormal Skeptic, because I still have a passion for investigating paranormal claims, but I just look for rational and logical explanations and never invoke the supernatural as an explanation.

Yet, I do see people in the paranormal community who really want to be taken seriously, but haven't given up the belief totally. In my opinion, here is the first thing people need to do, people need to start using terms properly. Like the word energy. The word energy is littered all over the paranormal community. It isn't just ghost hunters that use this word improperly, reiki enthusiasts, psychics, and spiritual healers fall victim to this as well. I will give a quick example of the way the word energy is used in the paranormal community.

This happened to my best friend, Jason Korbus, in the chat room accompanying a radio show while I was being interviewed on what it means to be open minded. The conversation they were having involved the concept of Jesus. Jason said that the belief in Jesus wasn't bothersome; it was the fact that he was supernatural that didn't sit right with him. The person in the chat opposed this and said that Jesus healed people like doctors do, so Jason must also think doctors are magic or he must not believe in doctors. Jason simply explained that doctors heal people with medicine and asked how Jesus healed people. The response was that Jesus healed with energy, which science has proven. Jason asked what kind of energy they were talking about. This person replied with spiritual, healing, and earth energy. Jason had to explain that science has never proven the energy this person was talking about.

I see this all the time, people misusing the word energy. The way it is used in the ghost hunting world sort of makes ghosts sound like a luminescent form of some kind, or as Brian Dunning of Skeptoid says, "Energy is considered to be literally like a glowing, hovering, shimmering cloud, from which adepts can draw power, and feel rejuvenated." And that is exactly how the word is used. If people reading this don't believe me, just ask any person who is a true believer in paranormal phenomena what a ghost is or how it manifests, I guarantee you will hear the word energy misused.

So what is energy? Energy is a thermodynamic quantity equivalent to the capacity of a physical system to do work. To make this sound a bit easier, I am going to quote Brian Dunning again. In his first episode of Skeptoid titled, "New Age Energy," he defines energy as "measurable work capability." This is a brilliant definition and a lot easier to remember. But what does all of this mean? Well let's think about it this way; when we eat our body takes the energy from the food and converts it into energy to do work. This energy allows us to do work; such as walk, run, and lift things. As I write this article I am doing work, just as you are while reading this.

Another concept paranormal enthusiasts get mixed up with or misuse is the first law of ther-

modynamics which says energy cannot be created or destroyed. For some reason, to the paranormal enthusiast, this means that when you die your soul exists, because energy cannot be created or destroyed. However, that isn't at all what the first law of thermodynamics means. It's actually very simple; the first law of thermodynamics means when adding heat to a system, only two things can be done. Either it causes the system to do work, or it changes the internal energy of the system.

Now when thinking of thermodynamics and the human body, it is even easier to understand. Thermodynamics deals with heat. Heat is a form of energy called thermal energy. Now the human body can't use heat to perform work, it only works from chemical energy. So when a person exercises, the heat produced is transferred to the skin and it is lost to the air and other surroundings.

As you can see, it explains nothing that slightly resembles a soul or an explanation for ghosts. I mean, ghost hunters use energy when walking around a house in the dark but that's about the extent of the energy used in ghost hunting.

The next word that is thrown around improperly is the word theory. The paranormal field has taken this word and mutilated it to mean, "an idea I had while in the bathroom." Anything that can't be tested or produces no results is considered theory in the realm of the paranormal. Actually, anything anyone comes up with to hunt or explain ghosts is considered theory. There are things called stone tape theory, water tape theory, the theory of E.V.P., E.M.F. theory, and so on. However the word theory is a little more than just an idea.

In science, the word theory means a scientific hypothesis that survives experimental testing and becomes scientific theory. In the world of science, a theory is valid as long as there is no evidence to dispute it. So a theory can be disproved if only one alternate legitimate explanation can be given.

So now let's look at what a hypothesis is. A hypothesis is simply an educated guess or testable prediction about what you expect to happen in your study. Let us look at an example of how a scientific hypothesis may work for the paranormal field. Example: take a working radio and modify it so it continuously scans up and down the different channels. This will create a way for us to have intelligent conversations with unknown entities. Right away, I can provide an alternate explanation of what is going on. People trying this method are experiencing audio pareidolia with fragmented words by DJ's, songs, sports games, news broadcasts, and commercials. This is a legitimate explanation of what is going on, so this cannot be considered a theory.

Another thing people in the paranormal community can't seem to grasp is the word scientific. Over the years, I have come across many ghost hunting teams who consider themselves scientific. When I ask them, "what makes you scientific?" the answer usually revolves around the fact that they do not use psychics or the fact that they are using top of the line equipment. Let me give you an example of what I mean; on paranormalnews.com, an article about a group called Para-Boston says this, "Para-Boston takes a 100% scientific approach to paranormal investigation, using state of the art technology including infrared DVR cameras, tri-field meters, electro magnetic field meters, IR thermometers, digital audio recorders, Mini DV cameras, etc."

This doesn't make you a scientific based group, not at all. The cool thing about the word scientific is you don't have to be a scientist to follow the scientific method. I have a little saying about people in the paranormal field, "If you are in this for thrills, good, go to a cemetery. If you are in this for self validation, fine, just admit it. If you are in this for science, only accept science as your answer." And, as of right now, anytime you invoke the supernatural as an explanation, it is outside the realm of science.

The scientific method is actually really cool and very easy to understand:

1. Ask a question.
2. Do your background research.
3. Construct a hypothesis.
4. Test your hypothesis with experiments.
5. Analyze your data and design a conclusion.
6. Communicate your results.

If your hypothesis is true, perhaps it can move on to becoming a theory, however if it's wrong, go back to step 3 and start from there. However, this has to be done correctly and peer reviewed. It doesn't mean you take your results to a paranormal message board where you are only looking for people to confirm your belief systems.

The word skeptic is another disfigured word in the paranormal community. I can remember once, I was participating in a debate on the paranormal and I said, "I don't believe ghosts exist; however, if positive evidence is shown I will reevaluate my belief, depending on the evidence." I was instantly told by many people in the chat room that I wasn't a skeptic. You see, to the paranormal community a skeptic is a cynic. A cynic is a person who doesn't believe despite positive evidence. That isn't what a skeptic is at all. A skeptic is a person who questions the validity or authenticity of something purporting to be factual. We usually test the reliability of these claims by using the scientific method. It is seriously that simple. However, this explanation usually leads to another thing I want to briefly touch on, and that is being open minded.

Skeptics are constantly accused of being closed minded and my thought is, true skeptics are actually the most open minded people in the world. For example, I don't believe in ghosts, but if I am ever shown positive extraordinary evidence, I will reevaluate my belief. That is what truly being open minded means. Not just accepting the possibility everything in this world exists without any kind of positive evidence.

I came up with my own informal logical fallacy when talking to people of this kind and it's very simple to understand, I call it the appeal to open mindedness. The appeal to open mindedness states that just because one subscribes to that belief, doesn't mean that belief actually exists. I usually use this when talking to people who try to tell me that they know for a fact ghosts exist. I have to correct them by saying, "no, you 100% believe ghosts exist." There is a very big difference. I like to quote Carl Sagan by saying, "don't be so open minded that your brain falls out." I usually follow it up by telling them the Pet Dragon in my Garage story.

What if I told you I had a pet dragon that really breathed fire? I keep him chained up in my garage for anyone who wants to see him. One day, someone comes over because they want to see my pet dragon and when I open the door, the only thing lying on the ground is a chain. Do you think this person would believe me when I told them that the dragon was real but just invisible? Or they would magically believe when I say, "you're just not being opened minded?" Not at all, they would most likely storm off and say, "I can't believe he thought I was that gullible." And that is the word I want everyone to look at, gullible. Be open minded, not so open minded your brain falls out, and not so open minded you are actually being gullible.

THE BENT SPOON

Here at The Bent Spoon we always appreciate feedback, whether it be criticisms, compliments or suggestions. The Bent Spoon also accepts article submissions but they do not necessarily have to be from a skeptical viewpoint. If you are a true believer and love to write, The Bent Spoon's new section titled "The Open Forum" may just be the place for you. With the intentions of keeping the dialogue open between true believers and skeptics, we feel "The Open Forum" might be the perfect opportunity to do so. It will show the believers viewpoint with at least one skeptical rebuttal.

Please send all inquiries and submissions to TheBentSpoon@live.com

Thank you.

THE BENT SPOON

SOUPERNATURAL

BY JASON KORBUS

4 FAMOUS HAUNTINGS DEBUNKED

There are many locations, both private and public, across the country and around the world that ghost hunters say are haunted by spirits of the dead. These landmarks of the paranormal world have been seen on television and movies, some offering tours and overnight investigations for the enthusiasts and, in some way or another, have made certain people a lot of money. Famous though they may be, major aspects of their cases have been explained away with very natural, non-paranormal reasoning by investigators using science and logic.

Here, for readers of The Bent Spoon, I present 4 such cases, a brief overview of the paranormal claims, and then a quick illustration of what you should know about the events and people involved. I hope you'll find it enlightening.

STANLEY HOTEL

You've heard of the Stanley, right? Located in Estes Park, Colorado, it is the inspiration behind Stephen King's "The Shining" and one of the most famous "haunted" locations in the country. It has been featured prominently on SyFy's Ghost Hunters television show, wherein they based their conclusion that it was haunted on the idea that the building itself sits upon heavy deposits of quartz and magnetite. This, they say, acts as a conductor of "energy," which occasionally releases itself into the atmosphere, allowing the ghosts of the past to appear and interact with the living. In paranormal circles, this is known as "the stone tape theory."

What you may not know, however, is that these claims are completely bogus. Not only is their definition of "energy" completely unscientific, but no trained geologist seems aware of any ghostly energy that can use quartz or magnetite as a conduit.

The Rocky Mountain Paranormal Society looked into it, finally contacting the United States Department of Agriculture. A team of scientists took soil samples, and concluded that the primary metamorphic rock was schist and that there were no "large deposits of magnetite or quartz under the property" at all.

To read the full report of RMPS' investigation as written by Dr. Karen Stollznow, and to see how the foundation of the ghost stories at The Shanley Hotel crumbled, visit: http://www.csicop.org/specialarticles/show/stanley_hotel_an_investigation/

WHITE WITCH OF ROSE HALL

In Montego Bay, Jamaica is Rose Hall, allegedly one of the world's most haunted locations. The resident ghost, Annie Palmer, was said to involved in sorcery and voodoo and could apparently put the fear of death in anyone who looked upon her. Her cruelty knew no bounds apparently, as she left behind a variety of people in fear, and a trail of dead husbands, to boot.

In an investigation televised on Ghost Hunters International, the team visited the location and came away convinced they had found evidence of this ghost's existence. The problem? Annie Palmer is completely made up.

Annie Palmer is a fictional character, written about in a 1929 novel by Herbert G. de Lisser. How on Earth did this team, who claim they research locations and conduct scientific investigations, make such an error? Because, obviously, they don't do much research or know much about how science works.

You can read about Ben Radford's investigation into this matter in his

book, “Scientific Paranormal Investigation,” and by visiting online at: http://www.centerforinquiry.net/blogs/entry/ghost_hunters_international_team_finds_evidence_of_fictional_characters_gho/

BORLEY RECTORY

Dubbed “The Most Haunted House in England,” Borley Rectory was home to a variety of paranormal claims. There was said to be a ghostly nun who walked the grounds, spectral writing appearing on the walls, and occupants being violently attacked. Parapsychologist Harry Price built a career on investigating the house, conducting seances and doing excavations which produced human remains, publishing several books and achieving great fame from his work there.

Though Price was respected by many, those closest to him considered him a showman and a hoaxer. He was not a scientist, but a trained magician, and kept among his close friends Charles Dawson, a man infamous in archaeology for his role in the Piltdown Man hoax. Price himself even exhibited fake artifacts from Roman and Sussex history for profit.

The stories of the hauntings at Borley have been largely invented or embellished. The ghostly nun seems to have come from a tale by Rider Haggard that the original resident would tell his children. Human remains found on the site were attributed to 1654 plague victims that had been buried on the grounds which later became the rectory. Onetime residents, The Reverend and Mrs. Smith, say they left because the house was in poor repair and had bad plumbing, not because of ghosts. In fact, no claims of paranormal activity had ever been reported at all until a 1929 newspaper article that attracted Harry Price.

If it seems dubious to you, you are not alone. Read a full report of this case by Brian Dunning by checking out: http://skeptoid.com/episodes/4053

AMITYVILLE HORROR

In November of 1974, six members of the DeFeo family were murdered in their sleep by their son Ronald Jr. Soon after his sentencing, George and Kathy Lutz moved into the home on Ocean Avenue in Amityville, but stayed only for 28 days, driven out by what they said were evil entities. Doors were ripped from their hinges, green slime oozed from the ceiling, houseflies appeared from nowhere, and red eyed monsters left cloven-hoofed tracks in the snow outside.

The story they told spawned a best selling book, and several blockbuster movies. Psychics and demonologists, among them Ed and Lorraine Warren, came to the home, conducted seances and concluded that the forces in the home were demonic. Within a very short amount of time, it became the most famous haunted location in the world.

Unfortunately, it was based on a series of lies. There was no snow at the time when the cloven-hoofed prints were allegedly seen, doors and locks supposedly torn off were still in place after the Lutzes had moved out, and the paint showed no effects from any kind of slime.

So why did they make all this up? Ronald DeFeo’s attorney, William Weber, came forward and said he was contacted by the Lutz family after they had left the house, explaining that their experiences could be useful in obtaining a new trial for his client and preparing a book about the case. Weber said that, “we created this horror story over many bottles of wine that George Lutz was drinking.” He later brought a lawsuit against the Lutzes, accusing the of reneging on the book deal. During the trials, the Lutzes were forced to admit that the bestselling book “The Amityville Horror” by Jay Anson had been largely fiction.

Read more in Joe Nickell’s investigative files here: http://www.csicop.org/si/show/amityville_the_horror_of_it_all/

CONCLUSION

These are just 4 famous cases whose stories don’t match up with the facts, though there are many more. Next time you hear about a famous case that supposedly proves ghosts are real, check out the scientific and skeptical investigations that have been done on it. Odds are you’ll find out that the people with backgrounds in investigation and science solved it long ago. If you’re like me, you will feel more knowledgeable about the psychology behind perceived paranormal phenomena having read their work, and you can apply what you learned to future cases you read about or investigate yourself.

STONE TAPES

In the lexicon of your average ghost hunter, you'll typically find between three to five classifications of hauntings. These range from the more sensational demonic and poltergeist types to the less violent, yet still interactive intelligent hauntings and shadow people and finally, the "residual haunting" or restligeist (essentially "residual ghost"). This type is described as a non interactive scene from the past, played on loop, like a skipping record and can be represented by both visual and auditory phenomena.

The mechanism suggested to support this phenomena is localized minerals such as limestone and quartz acting as a recording medium capturing the emotional energy resulting from a traumatic event, typically involving death. While it overlooks that nearly all deaths of human beings involve trauma or grief, this conjecture presumes the existence of the non-conventional emotional energy despite no evidence supporting it and no known method of measuring or detecting it. While this fact invalidates the postulate outright, I want to delve a little further into the subject in order to discover the possible rationale behind it.

One key factor in the stone tape hypothesis rests upon the presence of quartz and limestone, the recording medium for the "energy" to be captured and replayed. Quartz is the most common mineral found in soil and limestone is prevalent many types of architecture and is also quite common. What properties do they have in common? The presence of silica is the only relation I'm aware of beyond the fact that quartz can be found in natural cavities of limestone. Between the two, quartz seems like a likely choice, due to the new age fascination with crystals. Though crystals are thought to have paranormal qualities, one true property may be the source of the mystical misconception. Crystals are known to be piezoelectric, meaning that when the crystal is compressed, it's crystal lattice deforms and disturbs the charge balance. When the lattice is changed slightly, the charge imbalance creates a potential difference, essentially producing electricity. While this property is fascinating, it lends no credence nor supports in any way the idea that it can record moments in time or project them.

It is also not explained what could possibly trigger the replaying of these recordings. Since we clearly aren't under a constant barrage of ghostly projections everywhere we go, it stands to reason that a unique event must trigger the "projection". Some chalk this up to the witness' sensitivity to spiritual phenomena, but that is purely speculative.

In typical fashion of paranormal theories, this concept has been copy/ pasted so many times over that it's become unclear where it originated, but it was likely born from the 1961 book Ghost and Ghoul by Thomas Lethbridge or Peter Sasdy's teleplay the Stone Tape, the latter being responsible for the name, at least.
Since ideas such as these have been passed back and forth so frequently and been adopted and promoted by television personalities, it's very unlikely that they will be abandoned, eternally being played in loop within the closed system of the paranormal community, a stone tape itself.
A parting word of advice to paranormal investigators; If you want to be taken seriously by science, take science seriously.

HELLO FELLOW BENT SPOONERS! WE FEEL THAT PROMOTING HEALTHY SKEPTICISM, RATIONAL THOUGHT AND CRITICAL THINKING IS HIGHLY IMPORTANT; IT IS THE MAIN REASON WHY WE WRITE THE BENT SPOON. WE ARE NOW ASKING FOR YOUR HELP IN THE BATTLE AGAINST PSEUDOSCIENCE AND IRRATIONALITY. IT IS REALLY VERY SIMPLE; ALL YOU HAVE TO DO IS PASS ON THE FOLLOWING LINKS TO FAMILY, FRIENDS OR ANYONE YOU THINK WOULD BENEFIT FROM READING OUR FREE ONLINE MAGAZINE.

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SCIENTIFIC OR SCIENTIFICAL?

GHOST HUNTING GROUPS AND THEIR USE OF SCIENCE

GUEST CONTRIBUTOR
SHARON HILL

As humans became intelligent, we reasoned many basic things about how nature works. There are many great questions are left for humans to answer but they aren't the easy ones. Is there life in space? Why did the dinosaurs die out? How do we explain gravity? Does part of us live on when we die?

In the same sense, long ago we exhausted all the relatively easy ways of learning about the world. Science, as a method, is reliable (in comparison to revelation or intuition). But, one can't discover much new knowledge with a candle and a string anymore. When science began to tackle harder and harder questions, the ability to establish new knowledge rocketed out of the realm of amateurs. A scientist required training to do learn how to ask and answer these questions precisely. Training required institutions. Institutions required professionals. Everything required money. Science became organized and formal. Boundaries were established.

Boundaries made the scientific community exclusive.

Science is HARD and it is a community effort – not for the weak minded or easy offended. There are institutions, experts colleagues with which to collaborate and peers that critique your work. Yet, for all that, it gives us approximation to the truth; close as we can get today, then tomorrow, a little closer, building upon what we already have. In summary, answers to nature's remaining great questions won't come from DIY amateurs and announced in a press release on the Internet or a TV special.

Everyone likes science on their side, to support their position. Surveys bear out that the public generally accepts that the methods of science are rigorous and considers the results authoritative. The average non-scientist likely can not explain why science is rigorous and authoritative because exposure to science education or professional scientists in everyday life is low. How do we get our ideas about what science is? Television and fiction give us a simplified and optimistic representation of science. Scientists are all very serious, unemotional, they talk technical, they use equipment. What we call "science" ends up being not about a method or reliable knowledge but about the symbolism we associate with it.

I noticed this concept of public ideas about science and the scientific manifest in paranormal investigations. Here, I describe what it means to do science, how to miss the mark and, essentially, how the public views it all.

About half of all amateur research and investigation groups (ARIGs – those self-forming groups that do ghost hunting, Bigfoot searches, cataloging of UFO sightings, and other paranormal phenomena) on the Internet say they use scientific methods and equipment and/or their field is based in science [1]. In the eyes of the public, to say that one is "scientific" is to set a very high bar (whether perceived or real). I worked pretty hard to become a scientist and learn the philosophical underpinnings. Here were people doing "sciencey" stuff in their spare time. Did I miss the shortcut? Can anyone do it? I wondered just how close to the high bar these ARIG participants get. So, in a year-long project, I looked at their websites and read their publications. Here, I focus on ghost/haunting researchers but similar conclusions apply across the paranormal spectrum.

Training – Are you experienced?

I excluded what appeared to be academic institutions from my study because my focus was on

the thousands of ARIGs popping up in every neighborhood across the country, not the very few official-looking metaphysical organizations. Since ARIG participants presumably are not trained scientists, their guide to what it means to be scientific is the same as that to which the public has access. [3]. First, I had to find out if, indeed, they were NOT scientists.

Most investigation teams have a page where you can find out more about their members. This seemed to be a good way to find out if any had scientific training. The number of groups that are led by or are advised by an actual scientist (I even count a degreed parapsychologist as a scientist) can be counted on one hand. Out of many hundreds, almost no group had active members who reported having formal scientific training.

Even more astonishing than ARIGs lack of scientific training was the lack of interest in recruiting people with scientific training. While claiming to be scientific or using scientific methods, I did not find a single group that required prospective members have any scientific training. They often required their own training program to be completed by new members and sometimes "certifications" were endorsed. That's the blind leading the blind, I'd say. I suspect they might have been thrilled if a physicist wanted to join their crew but a trained scientist might not last too long if they had to go along with commonly used methods which I'll describe.

It sounds harsh, but to be scientific, in a strict sense, there is no substitute for academic training. You can't learn proper research methods, how to conduct a controlled experiment, how to focus your question, how to consider confounding factors and variables, how to show validity for your instruments, etc., without actively learning and practicing it. An alternative is to enlist someone with scientific training to tell you when you made an error and how to correct for that. Both options are big efforts not too many paranormal investigators seem willing to take for their part-time interests in paranormal investigating. Instead, the easier way is to make up their own rules about how to be scientific. Often, they have made up their own "science" whole cloth. It looks good and it fools some of the people some of the time.

Methodology – Taking care of business

Many groups claim they use a scientific methodology, often referring to the "scientific method". If they defined it in any way (most did not), it was the simple 3rd grade explanation: have an observation, propose a hypothesis to explain it, design an experiment to test that hypothesis, formulate a theory based on your evidence. This works great as a general framework to figure out day to day questions - like why the internet connection quit or what method best stops pests from invading your garden. But, problems abound with this simplified version of science when you attempt to apply it to a complex situation. The everyday world, especially a perceived haunted environment, is a multifactor, highly-complicated situation.

In examining investigation methods of ARIGs, I found them all to be rather similar - eyewitness interviews, site visits, equipment use, collection of data via video, computers, sound recorders, temperature gages, EMF readers and other instruments to measure environmental variables. Then, the data was analyzed and conclusions were made. There isn't anything wrong with those activities of data collection. However, if you don't understand concepts like reliability, experimental controls, bias and validity, the results are flawed, perhaps useless and, at worst, misleading.

Here are some realities that ARIGs consistently underestimate or completely overlook.

1. Eyewitness testimony is notorious unreliable. People make errors. Memory is fallible. Eyewitness stories give you something to think about but they are not evidence. Also, to start with the stories that people tell you is to bias your expectations for what may happen and where.

2: Over-reliance on gadgets that do not measure what you say they are measuring will lead you astray. Attention to calibration, background data collection, baseline measurements, controls,

and the understanding of the myriad causes for anomalous data are critical to the validity of your data. This is a well-worn subject, I know. But simply put – overly showy equipment is played up to hide the fact that you can't work out a problem by thinking about it. Sometimes only a notebook and a keen eye are necessary. Theories about how "psychic energy" works and can be measured are unjustified in terms what we know about how everything else in the universe works.

3. Your bias kills evidence collection. Not too many groups start with the question, "Did anything happen here?" before proceeding. I'm not convinced that they seriously consider the question, "What could possibly have happened here?" before jumping to a paranormal conclusion. Sometimes, the answer is obvious and they readily grasp it. Yet, also obvious is that group members are convinced the paranormal exists and set out to obtain good "evidence" for this from the investigation. This goes back to equipment use, which looks objective. Since a scientific methodology is designed to remove as much subjectivity as possible, using the gadgets appears objective. But the presumption of what the data represents and its interpretation sinks the boat. This bias in favor of paranormal causes by default is the primary reason that paranormal investigation groups utterly fail at being scientific. When the desired answer is assumed and the rest of the reasoning is just decorative, it's sham inquiry, not scientific inquiry.

4. Investigation writeups do not include the basic components of a scientific report: identification of a problem (although this can be found framed as "a paranormal event has occurred"), references to existing knowledge, and careful explanation of procedures to answer specific questions. If a record of the case is presented at all, it often consists of personal observations of feelings, perhaps some data reading with vague location descriptions, photos, videos or EVPs and perhaps interpretations of other observations. I was hard pressed to find graphs or tables of data sets. Taken separately, each individual piece of evidence may have a mundane explanation. Instead, they are all lumped together to feed into a conclusion to support paranormal activity. Sadly, ARIG sites and their case reports are notoriously full of horrendous grammar, typos, unreadable formatting and unprofessional language. How am I supposed to take this seriously? I suppose any report is better than none at all. Confidential clients allow reporting to be conveniently left out. If the goal is not to investigate, research or solve the case, I wouldn't expect careful documentation. But if you say you are a scientifically-minded group, you must document your results carefully and completely. Otherwise, you are just fumbling around in the dark.

5. The ARIG scene is a disjointed array of independent groups. Even when they apparently align under the banner of a large group, like TAPS or GAC, there seem to be no protocols, sharing of data or organized critique. There is no formal process for screening results, no quality control. Many of these haunted locations have been investigated by several groups. Is the data pooled? Does it match up? Conflict? Why isn't someone comparing what was found and seeing if there are patterns in the data? Where is a journal to publish and discuss results? Careful analysis is likely to show us something interesting, maybe not ghosts. Where is the skepticism that allows questions to be posed and more rigorous attention to be paid? It's not there. Science is a community effort where knowledge is shared and errors can be spotted by others. The researchers are called out. This process results in improvement and, ultimately, in more reliable knowledge. You can't get closer to the truth if you live in a closed system, under your own rules, surrounded only by bobble-heads that never question the status quo.

You want the truth?

After scouring hundreds of ghost investigation websites, I found little that was truly scientific. It was actually worse than I had hypothesized. Not only were ARIGs not even close to scientific methodology, philosophy or established norms, but they grossly misunderstood and misrepresented what it means to

be scientific. By examining the publicly available information, I found a plethora of examples demonstrating scientific confusion, haphazard and subjective data collection, shoddy reporting, lack of critical analysis and unsubstantiated conclusions.

ARIGs exhibit "scienceyness" by presenting an image of how they think science should look – serious, detailed, systematic, technological, and sophisticated. They do this not only by throwing the words "science" and "scientific" around a lot, but also by use of jargon and equipment - symbols of science, not scientific per se.

I am not, saying that ARIGs are necessarily doing this on purpose. ARIGs generally appear to be trying their best to do science. It reflects their desire to be taken seriously and make a difference. Unfortunately, you can't learn a skill like that by winging it. You need training and guidance from professionals.

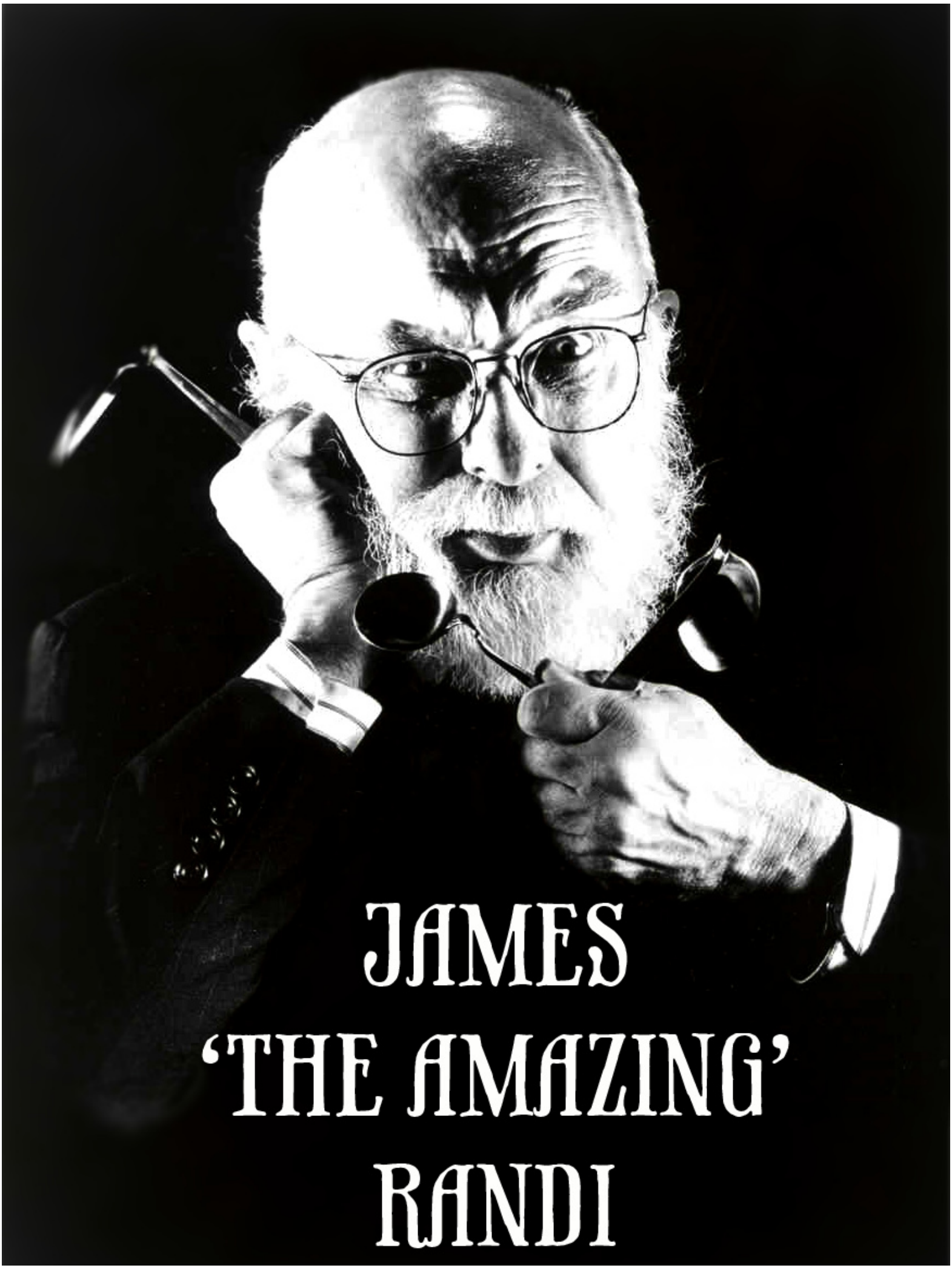
Since the media is the primary source of a "scientific" image, however distorted, the public sees more fake science portrayals than real in everyday life. When a person or group adopts what they assume is a genuine scientific method, but fail to understand the foundations for why it works so well, they are not being scientific, but scientifical. Scientifical is a slang term that described what most ARIGs do really well: they mimic. ARIGs use the culturally established authority of "science" as a stamp of legitimacy. They view sciency-ness as a way to exhibit their seriousness and commitment to truth; it is used to project competence, professionalism, accuracy and honesty.

ARIGs often succeed in producing a scientifical image. The public buys it. I've had many skeptics pooh-pooh this idea. They can't really grasp how viewers get anything more than entertainment out of TV ghost hunting shows. I advise them to go to a presentation by some local ghost hunters or even look at the comments on postboards for their fan sites. The public believes ARIGs are serious, credible researchers. Amateur groups have done a fine job of marketing themselves as authorities and experts on ghost and paranormal subjects. One reason why they have succeeded is because the orthodox scientists eschew any involvement with such topics. The public has a great need to look to experts to answer questions. So, they gravitate to these socially-derived "experts" because they tell a good story. It sounds believable, scientific, and legitimate.

Everyone wants science on their side. In the cases where the scientific consensus is NOT available for your use, advocates for a position can cobble together a reasonable facsimile of science. That's often good enough for the public to buy into their argument. With a population that is sadly illiterate in how science works, being scientifical and convincing is easy. When the public so easily accepts the scientifical as a substitute for the genuinely scientific, that signals some trouble.

So, are there solutions? Yes, I believe so. But they do involve ditching the egos and collaborating with others. I saw a fair bit of jockeying for authority and prestige when examining hundreds of ARIGs websites and references. There are a fair number of local skeptics groups that would gladly participate in a joint investigation. There are even some scientists (like me) that would love to examine the protocols and make recommendations for improvement.

After examining the current state of ARIGs, I was left wondering what it is participants really want. Is it personal fulfillment? Social standing or attention? Support for a belief system? Or, is it to get the actual answer to what is going on when someone says they have experienced the paranormal? If it is the last option, then science is the best method. You may not like the process or the answer but it gives you the truest results. You just have to know what you are doing. No faking it.


JAMES
'THE AMAZING'
RANDI

Being that you are a world-famous conjurer, what made you want to start investigating paranormal claims?

Well, all of this has been referred to many times on our web page, we've got a few hundred thousand words up on there and a word search would come up with it very well. But I will go ahead and answer, then. Yes, as a magician, I realized that I was in a unique position to be able to recognize how the so-called "psychics" were doing their tricks. When I became 60 years of age, I decided to retire from being an escape artist and travel around the world as a magician. I decided that my time would be better spent investigating these matters and trying to inform people as to how they were being fooled. Not by the magicians, because they are legitimate entertainers, but by the so-called "psychics," who were using exactly the same technologies.

I know you have said in the past that when it comes to testing things, like paranormal claims, that scientists are actually the easiest people to fool. I was just wondering, how does someone like a magician or a conjurer help in identifying things when these processes occur?

Because they know how the tricks are done. That's rather direct and forward, but these people are doing tricks. The scientists don't know how tricks are done, magicians do know how tricks are done.

These people that are doing it, in your opinion, do you feel that most of them actually believe that they can perform these abilities or is it that they are deliberately trying to fool people?

Well, it depends on how successful they are. If they're very successful, and they're making a lot of money at it, obviously they are using gimmicks because people just guessing and depending on the good will of the people that they're trying to deceive would not be doing that well. If they're professionals, they're tricksters, in my opinion. That's what I have found and, invariably, I've never found one case of anyone who really believes they have the power who has done very well at it.

How do you feel that the woo changes but never seems to die out, no matter how much it is being disproved, it just seems to get bigger and bigger and even now in 2011 with things like ghost hunting, they've never advanced but seem to be so strong in the public eye right now?

Well, for one thing, you said they don't seem to change, well they don't change, no they don't change at all, they're the same old gimmicks from the 1600's. They haven't changed the methods of fooling people, they've just gotten a little more refined and they've got some technology into it, as well. But, I have found that all over the world, these things are better known now because of things like the internet. That doesn't mean that it proves that they exist it just means that the internet provides a lot more information in a big hurry and it's often not very careful about what it provides.

In a recent article that I just read, you and Seth Shostak actually gave some pretty brilliant explanations to some things that Lorraine Warren was saying was paranormal. You concluded that things like hearing faint voices, or seeing what someone claims to be an apparition or something out of the corner of the eye, temperature fluctuations, etc., that if it happened to someone who could be described as a believer that all rational thinking goes out the window and everything becomes this "ghost." Why do you think something like this happens to a person that believes in the phenomena?

Well, it won't happen to someone who doesn't believe in the phenomena because they don't make it up. They don't connect it with something woo-woo. People who want this sort of thing, and in many cases they don't just want it, they NEED it, because they've got nothing else going for them, people who

believe in ghosts and such, just love to tell the stories to anyone who will listen as to how great the ghost was and how spooky it was and what it said to them. Their stories change very rapidly over the years because the stories get better and better. So this is a need that people have, as I say, people who don't have very much else going for them. This is their only claim to fame, it's their only conversation piece. It's bar conversation, largely, and they amplify it as much as they can.

A lot of people consider skeptics naysayers and believe that skeptics are not looking at the evidence. But if the evidence were to actually point to the positive in hauntings, would it be fair to say that you would re-evaluate your views on ghosts?

Well, of course, of course. I am a rational, logical person. If someone proves to me that two plus two equals five, I'll want to see the evidence and if they were convincing and they could prove that two plus two equals five, I would have no choice but to believe it. I couldn't possibly offend rationality that way. If someone proves the case and has a strong enough indication of it, then I would certainly accept it, yes, and we've got a million dollar prize out there. We can't avoid accepting it if people come up with evidence like that. We're absolutely committed to awarding that prize if anyone can actually prove their case.

When it comes to skepticism, there seems to be a lot of what I call "preaching to the choir," that skeptics like to only talk with other skeptics, and sometimes I feel that this may actually hinder a positive message that could go out to believers in the paranormal. How do you think skeptics should engage a believer or do you feel one shouldn't even waste their time?

Well, the believer has to be willing to have something presented to them and in most cases, as I say, the believer NEEDS what they believe to be true and they've got nothing else going for them. That need is so important to them that they will ignore all evidence against it. The skeptics, if they present a rational case, all they can do is lay it on the table in front of them. If you have the evidence, take it out of the bag, put it on the table, and let's take a look at it. But, these people don't want to look. They need the fantasy, they need the delusion, much more than they need reality.

Going into the Million Dollar Challenge, I know recently that Banachek has actually become in charge of the Million Dollar Challenge. Can you briefly explain the challenge and are there any changes being made since Banachek became involved?

The challenge hasn't changed much. We've made some adjustments in it to make it more attractive and more acceptable to the woo-woos out there but they don't seem to accept any of those changes that we've made. They have to because they're our rules and it's our million dollars, it's not something just floating in a cloud someplace. Although, the way they're talking about the cloud now, I'm wondering whether there is a million dollars up there someplace. But, I don't want to get into that. No, Banachek has done a wonderful job and he's taken a huge load off my back, I can tell you that. He's finding out that it's not a simple thing to handle these strange people who have all sorts of claims. They can't state clearly what they think they can do, with what accuracy, and under what conditions. Those are the only three things they have to mention when they make the application for the prize. Banachek is finding out, as I found out a long time ago, they just can't seem to get a few sentences together to make a rational statement. So, he has to fight with them as I had to fight with them, over all these years. In one case, we had a double PHD in California who was actually teaching a course in remote viewing, in which you are supposed to be able to cast your mind out to the planet Jupiter, never to Fort Lauderdale, Florida, where I had the prize money waiting for them. No, they never did that, they always wanted to go to Jupiter for some

reason or another. We found out that these people would just not listen to reason, they don't follow the rules, they don't want to go along with it, and what they do, what they seem to want to do, is get us so angry and frustrated with them that we'll just tell them that they're no longer eligible. Of course, they consider that to be a victory. They always say, "Of course they're afraid, now they know that I have the power and they want to avoid me so they refuse my offer." Which has never happened, in fact.

The Million Dollar Challenge, it sort of hangs in the faces of people that claim they possess any type of paranormal ability, but there are many excuses as to why people decide to not take up the challenge. One is that the JREF will create a test so impossible that it can't even be won and they don't want to waste their time with it. However, that isn't really true; isn't it true that the people who claim to have these abilities help design the tests and they are in agreement?

They have to design the test because they know what they say they can do. I can't step up to a person on the street and say, "Are you a musician?" and then the lady says to me, "Yes, I'm a musician," and I say, "OK, here's a banjo, play it." "Oh no, I'm a harpsichordist." "Well, I'm sorry, you said you were a musician and a musician can play a musical instrument." You can't do it that way, you have to have THEM design the test. The tests are always designed, the protocols are always designed in such a way that it is agreeable to all persons concerned. Without that agreement being entered into, we don't go ahead with it at all because we haven't come to an agreement. We strive, under all circumstances, to come to an agreement without having to lose the opportunity of doing the test. But these people will do anything to make it impossible.

My last question is, does your book, A Magician in the Laboratory, have a release date yet?

No, we don't. No, I've got 29 chapters I'm working on, I'm a good four-fifths into it right now and I've got to assemble the illustrations and a few things like that. Its quite a job, it's quite a job, it's going to be a large book, I can assure you.

OK, well, Mr. Randi, thank you so much for your time.

It's been a great pleasure and thank you for calling.

Interview conducted by Bobby Nelson and transcribed by Stephanie Bohn

PAREIDOLIA OF THE MONTH

Jesus returns in the form of a tree!!! Ok not really, but pareidolia of the month goes to Raleigh, NC for this amazing miracle of Kudzu tree Jesus. Personally I think it looks more like a dementor for the Harry Potter series, but hey, to each their own.

Due to the amount of articles submitted for this issue, The Bent Spoon decided to split the Ghost Hunting issue into 2 parts.

Part II will be released later this month and will include:
"Details are in the photographs" by Kenny Biddle

"Programmed by Programming" by Patrick HT Doyle

"Shadow People" by Bobby Nelson

"Ghost Hunting: A Hobby, a Science, or a Symptom of a Serious Societal Disease?" by Rachel Wolf

And an interview with parapsychologist and Ghost Hunter Loyd Auerbach

Thank you for reading The Bent Spoon