

CHELTENHAM

Science
Festival @ Home

in association with



Hello and thank you for joining me at the Cheltenham Science Festival. I am very happy to be here, I'm pleased that there is such a thing, that among the many festivals that Cheltenham has there is one for science. We need more science festivals. It's unfortunate that we must meet in this way at home, but it is in fact science that tells us that's the right thing to do so who are we to do otherwise.

I am Stuart Vyse and I'm going to talk to you today about superstition and I suppose I should establish my authority first, as to why I can speak with any knowledge about this subject and so I just want to show you that I have written two books on the subject. The one on the left is 'Believing in Magic: The Psychology of Superstition'. It's the first book I ever wrote and I updated it in 2014 and when I wrote it I had no idea that it would change my life and that I would be working on superstition for the rest of my days. It is about the psychology of superstition and I am a psychologist and behavioural scientists and so my initial interest was in why people would still be superstitious in a scientific age like our current time. I also, more recently and the reason I'm here, have written a book in the Oxford Very Short Introduction Series called 'Superstition: A Very Short Introduction'. It is a very different book in the sense that the psychology of superstition is only a small fragment of it and it's about superstition from the beginning of time to today. It covers the history which is quite interesting, I will share some of that with you today and also some of the origins, people love to hear the origins of various superstitions and so that's in there too. Finally I say some things about superstition in the future and what superstition might bode for the future. So today I will talk about some of those topics, I will try to hit the history of superstition, the origins of superstition, some of the common superstitions we all know about and also the psychology of superstition. Finally I'll bring it back to the current day, current superstitions and even the current virus pandemic that we are concerned with today, the reason that we are in fact at home.

So if there's one thing that has been common about the word superstition from the beginning of time, is if it is a negative word. It is not a nice thing to say about someone, you don't typically meet someone and say hello my name is Stuart and I'm superstitious. It's not a compliment and that has been true almost from the beginning of time. Interestingly not at the very beginning, for a short period of time it was actually a positive label. So the beginning of our English word superstition comes from the Latin *superstitio*, which means to stand over and the implication is that you're standing over something in awe. That you are giving a great respect and that will become clear to you why that might be the case in a minute. Even before the Latin word there was a Greek word called **Deci Dimonia**. In the 4th century BCE that was actually a positive word. It meant that you were conscientious with your religion and practice of religion. You were *pias* in an appropriate manner. So for a brief period it was actually a positive term but it quickly, within 100 years or so became a negative term and initially that first negative turn meant that you were excessively *pias*. You engaged in many different prayers before starting your day. You appeared to be fearful of the gods rather than simply reverential towards them and fear of the Gods on the Greek era was not an appropriate thing. First of all the Gods were meant to be benevolent and always good and we shouldn't be fearful of them and secondly in Greek society, moderation was the key. You

always wanted to be moderate and not excessive in any direction and so being excessive was bad. This was the first hint of negativity and it went on from there and never really turned back. What has changed over the years is the target of that term, initially it was pointed at people in the same religion but as time went by it was pointed at people of different religions. As time past, Jews and, when they emerged, Christians were labelled superstitious in relation to the religion that was accepted by the elite. So both Greeks and Romans has their basic religions with all the various Gods and that was the religion you were supposed to practice. Anyone who practiced a different religion was called superstitious. It's also the case that from the beginning of time there have been magicians sorcerers and fortune tellers who have offered their services to the public. These were just itinerant people and entrepreneurs who told the future which was of course unpredictable in those days. They would also on occasion cast a spell for you, maybe curse someone that had been bad to you and also do various medical treatments sometimes that were of a magical nature. These people were also looked down upon by the elites, Plato for example talks about beggar priests and talks about them very dismissively and so these people and their ideas were also called superstitious.

Time passes and the Roman Empire continues into the later era and what happens is that eventually the Roman Empire becomes the holy Roman Empire and Christianity becomes the European standard. In this case, the word superstition is turned back around and directed at anyone that continues to believe in the Romans Gods. They were called Pagans, they were the elite before but after the adoption of Christianity as the state religion they were no longer in favour. Time passes again in Europe and eventually comes the reformation and the protestants call the Catholics superstition because the Catholics have all that ritual and the concentration of attention on priests. We should probably not that in the middle ages there was quite a bit of magic in the church and the protestants were critical of it. That came from the fact that there was the use of holy water that was meant to have magical powers and could be put on crops and in addition there was special ideas about the host. The baptism ritual which also used holy water was actually an exorcism ritual. So there was quite a bit of magic in the church that protestants were critical of. It wasn't so much that the entrepreneur was seen as untrue or bad it was that the magic that they did was not like mine and the difference was that the magicians and sorcerers and later on witches were thought to employ demons in their magic whereas the church did not. We have good magic and the witches have bad magic and of course as we know the witches were killed and there were many trials with primarily women as victims and so of course they were called superstitious.

Eventually after the reformation there were a number of wars. The war of religion where people were killing each other for not having the right religion, the crusades which had a similar purpose. It was a tough time, there were plagues, a lot of famine in Europe and all of that actually stimulated a lot of belief in various magical things. Crops would fail and they would often be assumed to be the work of a curse or another magical force. Eventually we arrive at the 17th and 18th century enlightenment and what happened was the idea that philosophy could stand alone and that men could reason and work things out themselves, morality and logic could be applied and this was the beginnings of the scientific revolution- the idea that evidence and logic could be the path to truth. Science started to blossom. At that point superstition made it's final turn, it was a label that meant not bad religion or the wrong kind of magic, but it meant that you were believing in something that was unscientific. Science how it is today for most of us has become the standard by which we judge whether something is true or not, is it scientific or not? So at that point the word superstition made it's final turn, it's still a negative label for

the most part despite the fact that many people are superstitious. Some polls suggest that approximately half of people in the United States where I am, describe themselves as at least somewhat superstitious and polls in the UK say a substantial minority admit to it.

Maybe I should turn now to some of the superstitions that persist. People are always interested in knowing what the source of the common superstitions are. Oh before I go to far with that though I did mention that there are superstitions in the church and there are still remnants of that not so much in the church but in the commercial market place and so I thought I would point out two examples of religious superstitions that exist today. So here (seen on screen share) are a couple of products, I'm not recommending these, this is not an endorsement this is just an observation but here are a couple of products that you can find on amazon or other online retailers. On the left you have a bottle of holy water which you can use for whatever purposes you suggest, this is holy water from the river Jordan. I'm not sure what the claims are about it but I'm sure some people use it for various magical purposes. I don't think there's any science to back up whatever people would do with is. St Joseph statue (right), I don't know whether this is a practice in the UK but it definitely is here. St Joseph is apparently a very good realter, if you have trouble selling your house you can buy this little kit... by the way the holy water goes for about 9 dollars in the US so whatever that would be in sterling, and the St Joseph's kit goes for about 12 dollars. So if you're having trouble selling your house it's widely believes that or certainly believed by many... this isn't the only kit I found online by the way... the idea is that you take the Joseph figurine and bury him in the front yard. Some people say you bury him upside down is best, and you will be just amazed at home quickly your house will sell after you've done that. So here are a couple of examples and I'm sure there are many other but these were ones that were easy to find on the internet.

Some of the common superstitions that we come into contact with everyday, people are always interested in where they came from, what are the origins of these superstitions. I can only do a few of the more popular ones here today, many more are covered in the book and there are also huge encyclopedias of superstitions. I will say we are now entering into folklore and it's not clear in many cases and there are disputes that rage about the source of a number of superstitions so you have to take all of this with a grain of salt. For example the number thirteen is probably the most famous of all superstitions, it's popular in Europe as well as in the US, it is a very contentious topic. There are three primary theories of where it came from. I support one and whenever I talk about that one I get angry emails from people who support the other two. So bearing that in mind I will go ahead and suggest that the most evidence for the origin of the unlucky 13 comes from the story of the last supper and it began as the idea that 13 people at a table was unlucky. Before I go on, there are two other theories, one involves the nights templar who were a crusading order in Europe during the crusades, a group of them were arrested on a Friday the 13th and they eventually ended up being burnt at the stake and so that is thought to be the origin. From what I have read there is little evidence to suggest that's the true origin. Another theory comes from Norse mythology, a group of 13 Gods in Val Halla, mischief insues and one of the Gods dies. So a similar story to the last supper story, again it's not impossible that the superstition would have multiple origins but the most evidence I have found has been for the last supper. As the superstition developed, first it was 13 at a table or a group of 13 and then 13 eventually became freed from the table and became a free floating scary number. That then gave the possibility of it being linked up with Friday when emperor Friday fell on the 13th day of the month and Fridays had already been a scary day because it was in Europe when hangings were done, sometimes known

as hangmans day, it became doubly scary because of that. This is all speculation and there is some data to suggest that this is what went on but that's the best I can do on probably one of the most famous superstitions of all time.

Black cats are also thought to be unlucky, if they cross your path some people have a counter measure that you can do, you can turn around and go back or something. Black cats as you might imagine are considered to be related to witches. There was a belief that a witch could turn herself, primarily, into a cat and so the black cat that passed you might in fact be a witch.

Walking under ladders is also considered to be unlucky as you probably know. This one I find to be a little bit harder to pin down. But one of the interpretations that I've heard is that the ladder forms a triangle which is reminiscent of the trinity, another religious origin, and that by going through it you sort of disturb or upset the trinity. Personally I've always thought walking under a ladder is a bad idea just from a straight practical point of view especially if there's someone up there, but even if there isn't if it's not very stable it could come down. Sometimes superstitions have a logical beginning and morph into something that it isn't. An example of that is in the theatre. Theatre is a profession that is thought of as being superstitious, actors and so forth have a very nervous, nerve wracking profession. There is a superstition against whistling backstage in the theatre and the origin of that is that before there were walkie talkies and those ways of communicating, the crew backstage who were raising and lowering backdrops of scenery tended to be sailors and so would communicate with each other by whistling. So if an actor were to be randomly whistling backstage a piece of scenery could fall on their head or a bad thing would happen so that was the beginning of the superstition. Of course we now have walkie talkies but the superstition still persists among actors. You can ask your acting friends whether they believe in that sort of thing.

I have a interest in a couple of superstitions that are slightly more elaborate (shares screen) one of them is something called the evil eye which you may have heard of. The evil eye is an extremely popular superstition around the world but it takes very different shapes depending on where you come from. I come from the middle of the United States originally, a protestant by default place and I had never heard of the evil eye. I had never heard of it at all, I was only taught about it by a student when I was in my 50s and so I am kind of amazed that I had never heard of it until then. So you may have seen these kinds of pieces of jewelry, the basis of the evil eye superstition is of envy. The idea that you have something of great value and you're worried that someone might steal it from you or harm you in some way out of their envious feeling. Babies for example are often the things people worry about and so people will put a blemish, a little mark, this is true in South Asia, or another object near the baby that is supposed to distract the evil eye away. The idea that someone could do harm simply by looking is the basic idea. These charms that you see here, the blue one is Turkish and on the right you have the Hamsa which is popular in the middle east and can be worn and used in jewelry and is sometimes in the reverse position with the fingers pointing down. You notice an eye in them and the idea is that the eye might bounce the evil eye rays back to the person who send them and protect the person who wears them. The little gold horn is an Italian version of a charm that is meant to protect against the evil eye. Various cultures have different ways in which they deal with the evil eye, the Italian version is quite different and unique and so I find it fascinating. It's a somewhat more elaborate superstition than the simple ones that we encounter everyday.

So I should probably get to some of the reasons why people are superstitious today because here we are in this age of science, if it weren't for science we would not be here today being able to communicate across many miles. So why would people believe in these magical things that are not supported by science even today. Well the reason is that some of the psychological circumstances that have existed in the past still persist today. The primary function of a superstition is to give someone a feeling of control, a sense they are somehow in control of the uncontrollable. The world is of course very uncertain and we live right now in a particularly uncertain time with this disease that we are all learning as we go along how to protect ourselves from this disease, so this circumstance is a very fraught one for people to grasp at things even if they're magical to give them a sense of control and make them feel like they're doing something to improve their circumstances. It also has a way of making people feel less anxious by the very fact that they are simply doing something. Traditional superstitions that people grow up believing, socialization has a lot to do with it, we obviously learn from people and so it becomes a part of our habit and personal culture and the evil eye superstition and the different ways it's used in different places makes that clear. So why would you have superstitions? It's primarily supported by the sense of this illusion of control, a sense of having control over the uncontrollable and because it reduces anxiety. So one question that often comes up is do they work? Do superstitions work? There have been a number of studies that have tried to show whether they work or not in a sense that if you use a superstition might you perform better at sports, in a job interview or on the stage and so forth. There was a study in Germany a while back where they gave everyone a golf ball and for half of the people they said this golf ball had been lucky today and the other half they said here's your golf ball. Low and behold the lucky ball group were actually able to put the ball better in the Lab on a carpet into a cup, significantly better. So this lead to show that perhaps belief in luck leads to better performance. But as in science someone tried to replicate the study in the US with a larger sample size, better controls and sadly no difference between the two groups. So it stands to reason that as a result of having used a superstition you might produce better performance in a skilled activity, it's not going to help you at the roulette table because that's a pure game of chance but in an activity involving skill, it stands to reason that it might help. Unfortunately and this is science again, the evidence doesn't vogue for that yet.

Are superstitions harmful? This might be a good place to stop my talk and obviously in some cases I might suggest that they could be helpful. In most cases it's fairly benign and doesn't make a difference, sometimes people are embarrassed about it and so they don't do it in public very much. But there are circumstances in which I think they could be dangerous, one would be in the context of gambling. If you believe in luck and stay at the table to long, especially in cases where luck is obviously, I mean there is no actual luck, but obviously in activity that's completely random luck the roulette table or a slot machine, believing in luck can only harm you. It can only prolong your time which prolongs your losses. I also am concerned about people who believe in superstitious medical treatments, and here I have to make a slight criticism of your Prince Charles because homeopathy is not a scientific treatment, there is no scientific evidence to back it up, it's basically a placebo. The medicines have been diluted, which is a good thing in some cases like deadly nightshade which is used and is actually a poison. I will assert that there will be no homeopathic cure for the corona virus and people who use alternative medicine rather than scientifically based ones have a risk of great harm and there have been examples of this in the past. That's not a problem for many people but for those who might go in that direction, the true believers in magic and superstition then I think it is harmful.

So on that cheery note I will end for today and I hope that with the benefit of science, next year the festival can take place in person instead of on zoom. Thank you very much for listening and for being here.