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Writing 50

### Unlucky 13 and Human Nature

Fortunately, this paper does not consist of 13 pages. Otherwise, in the nineteenth century, over 15% of Americans would drop this essay without a second thought, 45% would consider throwing it away, and the remaining 40% would not be influenced by whether the paper had 13 pages or not and would have a fighting chance of actually making it to the end (Lachenmeyer 92). There are many reasons why some might fear the number 13, ranging from religious beliefs to personal experiences, and the various incarnations of this idea are referred to collectively as the myth of unlucky 13. Unlucky 13 is still a pervasive superstition in today's time, especially in western cultures (Lachenmeyer 64). Many say that 13 steps lead to bad luck, or that room number 13 is unlucky (Lachenmeyer 122). These are just a few of the many examples of superstitions based around the number 13. Unlucky 13 is one of the oldest superstitions in the world, and there have been a number of plausible theories for its origin (Lachenmeyer 1). Over the course of its history, which began in the seventeenth century, there have been significant transformations in perceptions and reactions towards superstitions regarding 13. How deeply do people actually believe in unlucky 13 and why? What are the psychological dynamics that people have developed towards this? By looking at western culture's historical and social take on the number 13 and by analyzing the number's evolution over time, we gain interesting insights into human nature and, hopefully, some partial answers to these questions.

## Origins of the unlucky 13

### *Theories on the origins of unlucky 13*

Over the past two centuries, there have been major shifts in how people view the origins of unlucky 13. Humanity's creation of multiple contrasting theories of unlucky 13 reveals that it is our nature to feel the need for control when dealing with uncertainty. In the nineteenth century, people thought that 13 at a table (as at the Last Supper, for example) was the first of many 13 superstitions; the general belief was that if 13 people sit together at a table, one will die within a year (Lachenmeyer 22). Today, there are a number of competing alternative theories that continue to undermine the claims of the Last Supper theory, and so far there is no consensus on which theory is the original (Lachenmeyer 22).

One of the most popular competing theories is partly mathematical in nature and has a much more ancient historical background. Throughout history, the number twelve has long been connected to the idea of "completeness." There were twelve gods on Mount Olympus, twelve signs of the zodiac, twelve months in a year, and twelve apostles. Therefore, people viewed 13 as  $12+1$ , or "completeness plus one" (Lachenmeyer 24). This idea of being one away from completeness gave people a sense of uncertainty and unpredictability; thus they associated the number 13 with these feelings (Lachenmeyer 24). Other alternative theories include: the death of Baldur, god of light, who was killed by Loki in Norse mythology; the 13 witches of the Sabbath, which were said to originate because of fear and hatred of witches in the past; lastly, the theory of the Knights Templar, where fifty knights were burned alive in the field outside Paris on October 13, 1307, because they were charged with performing witchcraft (Lachenmeyer 34).

### *Analysis on the theories of the origins*

These shifting views and theories demonstrate an important idea concerning human nature: the illusion of control that humans exhibit when encountered with unexplainable phenomena and uncertain

events. As the numbers of theories demonstrate, history has forgotten where the superstition of unlucky 13 originated, and people have tried to invent new explanations for this phenomenon. These unproven theories were created to satisfy humanity's desire for control, which are employed as a hedge against uncertainty (Vyse 11). Some of the more customary ways that humans deal with uncertainty are through meditation, poetry, art, and religion (Smaley). These forms of escape from reality provide control for humans by explaining the details related to world phenomena.

Another noticeable pattern pertaining to humanity's illusion of control is that it increases in times of stress, when the level of uncertainty and danger is greatest. As a result, people associate unlucky 13 with the connotation of danger and their fear of death. Dealing with death becomes more intriguing and stressful, and as Stuart Vyse, the author of *Believing in Magic: The Psychology of Superstition*, states, "the stress created by fear of death threatens a person's sense of control and that, conversely, any improved sense of control—even if it is an illusion—can help alleviate stress" (133). This illusion of control that increases as a result of stress and uncertainty can be seen from the number of theories proposed for the unlucky 13. The uncertainty behind the myth itself induces stress into people, who then create their own rationale behind the myth. According to my research, there are over 20 theories proposed, ranging from the Last Supper to the Neopagen Moon.

In contrast, superstitions correlated with positive events, which do not induce stress, generally have far fewer explanations of their beginnings. Nearly all such superstitions, such as white cats bring good luck and an itching palm brings money, have only one or two well-known proposed theories of origin. This dramatic imbalance in the number of proposed origin theories between positive and negative superstitions shows that people try far harder to explain negative superstitions. It is human nature to seek control, whether illusional or rational, when faced with inexplicable phenomena and uncertainty, especially in the face of danger (Vyse 132).

## Historical Record

### *Beginnings of Friday the 13th*

According to the Oxford University Press's Dictionary of English Folklore, the first known reference to the unlucky 13 superstition appeared in an English periodical in June 1695, referring to the bad luck associated with having 13 people sitting at one table (Lachenmeyer 42). This continued throughout the eighteenth century (Lachenmeyer 47). By the early nineteenth century, this original reference grew into many other combinations (Lachenmeyer 41). By the mid-nineteenth century, many variations of the unlucky 13 myth had spread around the United States and Europe, such as the 13<sup>th</sup> day of the month being unlucky (Lachenmeyer 45). During this time, the unluckiness of 13 people at a table was still preeminent (Lachenmeyer 49). However, in a relatively short timespan, beginning around the end of 19<sup>th</sup> century, another 13 superstition was vaulted into prominence—the myth about Friday the 13<sup>th</sup>. This myth reached new heights and became one of the worst omens, going so far as to surpass the popularity of the 13-at-a-table myth (Lachenmeyer 52).

By examining the key events that led to the sudden rise of Friday the 13<sup>th</sup> around the turn of the 20<sup>th</sup> century, we can see how humans are extremely prone to priming, and how often people seek to find illusory correlations when no rational explanation feels sufficient. In the late nineteenth century, several other superstitions gained popularity; one of which was that Friday was an unlucky day of the week (Weisstein). This is likely due to the belief that the Biblical stories involving Christ's crucifixion and Eve's offering of the apple to Adam in the Garden of Eden both occurred on a Friday (Bethel). This superstition, combined with society's negative connotations about 13, led to every Friday and every 13<sup>th</sup> both being unlucky, respectively (Weisstein). One small group of people combined these two superstitions to create the idea that Friday the 13<sup>th</sup> was especially unlucky; however, this was not widely

accepted at that time (Lachenmeyer 55). Fletcher Bascom Dresslar published a study in 1907 detailing the separation of these two superstitions by questioning over 2,000 college students about when evil things were most likely to happen (Lachenmeyer 55). Forty-five percent believed that the 13<sup>th</sup> was partially or fully unlucky, but less than 1% of those who believed the 13<sup>th</sup> superstition also believed that Friday the 13<sup>th</sup> was especially unlucky (Lachenmeyer 56).

The separation of these two myths began to change in 1907 when Thomas Lawson published the book *Friday, the Thirteenth*, which redefined the coincidence of unlucky Friday and unlucky 13<sup>th</sup> as one superstition (Lachenmeyer 90). In the opening sentence of his book, Lawson seemingly made a major grammatical error—he wrote “Friday the 13<sup>th</sup>,” omitting the comma that should appear after the day, as in “Friday, the 13<sup>th</sup>.” He continued this throughout his book and ended it with a dramatic conclusion, “... when the all-kind God had cut her bonds: FRIDAY THE THIRTEENTH...” (Lawson 226). However, this book was not widely distributed, and so it could not have single-handedly influenced the spread of this myth. Nonetheless, it seems that someone who read this book had an audience wide enough to shift public opinion. Very soon after this book was published, the *New York Times* published an article in 1908 that omitted the comma between Friday and 13, “WASHINGTON, March 13.—Friday the 13<sup>th</sup> holds no terror for Senator Owen” (Snopes). Due to the similar timeframe and lack of a correction, this omission was clearly not a typographical error but a grammatical acknowledgement that Friday the 13<sup>th</sup> was now transitioning from a relatively unknown idea to something far more important. Many people view this specific event as the catalyst for spreading this myth throughout the country (Lachenmeyer 87). This continued throughout the century, and by the late twentieth century, Friday the 13<sup>th</sup> had become the extremely popular and well-known superstition that it is today (Lachenmeyer 87).

*Analysis of Friday the 13<sup>th</sup>*

This intentional omission of the comma between Friday and the 13<sup>th</sup>, which popularized the new combined myth of Friday the 13<sup>th</sup>, proves that humans can be vulnerable to priming. Before the omission of the comma, humans notated a Friday occurring on the 13<sup>th</sup> as Friday, the 13<sup>th</sup>, indicating a disconnect between the two ideas. However, after the *New York Times* intentionally omitted this comma and thereby removed the separation between the two myths, people started to view Friday the 13<sup>th</sup> as one single, distinct superstition (Lachenmeyer 87). This is essentially what priming is: an increased sensitivity to certain stimuli due to prior experience (Jacoby 9, 21-38). The omission of the comma thus acts as a stimulus, which influences our perception into believing that it is one superstition.

Other aspects of human nature also become clear when we pay close attention to the events that led to the idea of Friday the 13th. First, we as humans often seek to find illusory correlations, a bias that leads us to believe things are related when they are not (Vyse 116). The illusory correlation exhibited by humans in this situation can be broken down into two categories: attentional bias and motivational effects of prior belief.

Attentional bias convinces us to pay more attention when two or more things occur together and less attention to the other relevant information (Vyse 116). As a result, we tend to find correlations even when there are none. The Dutch Center for Insurance Statistics produced a study that concluded there was an average of 7,500 traffic accidents on Fridays that landed on the 13<sup>th</sup> (Noyes). Attentional bias would then cause people to believe that this large number of accidents indicates that Friday the 13<sup>th</sup> is an unlucky day. However, upon closer examination, this is not supported, because the same study showed that the average number of traffic accidents on Fridays of any kind was 7,800, a significantly larger number than Friday the 13<sup>th</sup> (Noyes). Many readers ignored the second part of this study and used it to

reinforce their ideas of the unluckiness of Friday the 13<sup>th</sup>, even though the data does not support this conclusion in any way.

Another major bias is the idea of the motivational effects of prior beliefs, or also known as belief bias, which reinforces the idea that Friday the 13<sup>th</sup> is unlucky (Vyse 116). Our assessments of situations are often biased because of prior beliefs—we will interpret data to match our preconceived ideas, regardless of whether or not this is the best match for the data. Many people believe Friday the 13<sup>th</sup> is unlucky, so when unlucky things happen on Friday the 13<sup>th</sup>, they blame the day rather than any specific detailed reason. This manifests into strengthening the belief that Friday the 13<sup>th</sup> is unlucky. For example, one of my interviewees said, “I don’t know. If I had to pick, I guess I would fear Friday the 13<sup>th</sup> more because my grandpa slipped that day.” He blamed Friday the 13<sup>th</sup> for this accident, even though there is no realistic reason that the date was responsible—he simply believes it to be responsible, regardless of any evidence or lack thereof.

Coupled together, these two biases form the idea of illusory correlation. This plays a vital role in the maintenance of superstitions and other paranormal activities. People pay more attention to accidents and detrimental coincidences on Fridays that occur on the 13<sup>th</sup> due to attentional bias. Additionally, people are more likely to blame these events solely on Friday the 13<sup>th</sup> instead of on a more reasonable cause due to their belief bias. The attentional bias and belief bias thus culminate to form the powerful illusory correlation that keeps many people believing that Friday the 13<sup>th</sup> is associated with bad luck.

### **Number thirteen in the 20<sup>th</sup> and 21<sup>st</sup> century**

#### *The role of social media and public symbols*

Friday the 13<sup>th</sup> was not the only unlucky 13<sup>th</sup> that became popular in the early and middle twentieth century. Architectural phenomena also portrayed the powerful impact that unlucky 13 has on our society. Most of the skyscrapers built during this time discarded floor 13, most hotels skipped

numbering rooms as room 13, and even some commercial airlines such as Continental omitted row 13 from their planes (Lachenmeyer 108). Numerous movies regarding unlucky 13 were also made, such as *Thirteen at Table* (1907), *Taxi 13* (1928), *Friday the 13<sup>th</sup>* (1934), *The 13<sup>th</sup> Man* (1937), and *Thirteen Ghosts* (2001) (Lachenmeyer 102).

In the late twentieth and early twenty-first century, social media such as films, news reports, and other communications regarding the number 13 have become more frequent (Lachenmeyer 109). Similarly, there has also been an increase in the omission of the 13<sup>th</sup> floor on skyscrapers (Lachenmeyer 109). This act of omission, coupled with the higher number of reports on the number 13, shows that many in the media have an aversion to 13, and this aversion is spreading to the public. This bombardment of news related to the unluckiness of 13 creates a constant reminder of the myth itself, as well as a constant affirmation that the myth is believable. Because they influence today's popular culture, the media's bias has led to the increase in unbalanced reporting of the unluckiness of superstition 13. One specific example based on the effect that unbalanced reporting has had on society comes from my interviewee, who said that he "came to really know the bad omen of 13 because of the movies of the twenty-first century and if [he] had to pick a day to avoid driving out, it would be Friday the 13<sup>th</sup>."

#### *Analysis on the role of social media and public symbols*

Many people fear 13 because of films, omission of 13<sup>th</sup> floors, and news reports. This shows that humans are vulnerable to unbalanced reporting and are extremely susceptible to selective memory. For the past century, there have been an uneven number of reports regarding the accidents that occur on Friday the 13<sup>th</sup> versus accidents that occur on other days. Although numbers of reports are hard to compile, Friday the 13<sup>th</sup> comes out as one of the popular searches for car accidents. A study done by the Insurance Institute for Highway Safety in the United States calculated the average number of people



who died in automobile crashes from 1986 to 2002. They found that the highest day of deaths is July 4<sup>th</sup>, with a total of 2,743 deaths; Friday the 13<sup>th</sup> was not even listed in the top 10 (Mayerowitz). However, we do not usually hear of people taking precautions when driving on July 4<sup>th</sup>—instead, we often do so on Friday the 13<sup>th</sup>. This demonstrates what Elizabeth Loftus calls the misinformation effect. The misinformation effect occurs when information we receive is unbalanced or misled, causing memories of some things to become more available in our mind; this can critically affect our original thinking and judgment (Loftus 70-75). Our fear to drive on Friday the 13<sup>th</sup> because of our belief in the misinformed reporting is consistent with this effect. The misinformation effect on humans is one of the most influential and widely known effects in psychology today (Loftus 70-75). The misinformation effect is only one of the few reasons why humans choose to believe in the unluckiness of 13, and a few of the other reasons will be discussed later in the essay.

### **Fear of Unlucky 13**

#### *Today's Triskaidekaphobia*

Perhaps one of the most important ideas regarding human nature is how our extreme sensitivity to chance and coincidence leads to behavioral conditioning. This idea is illustrated clearly in today's triskaidekaphobia, or extreme fear of the number thirteen (Weisstein). After reading through Lachenmeyer's *13: The Story of the World's Most Popular Superstition*, I discovered that very few triskaidekaphobes today connect unlucky 13 to the Last Supper, even though this is thought to be the major historical basis for the superstition (Lachenmeyer 132). They do not seem to have any theory of its origin. In fact, they don't need one: their belief comes from their own experiences, and they assume that this is the way it has always been (Lachenmeyer 132).

#### *Analysis of conditioned superstition*

Lachenmeyer gives an example of a typical triskaidekaphobe, a 40-year-old man from Wisconsin who has paranoia regarding Friday the 13<sup>th</sup>. It began when his grandmother died on Friday the 13<sup>th</sup>. Over the years, his belief intensified because his dog died on a Friday the 13<sup>th</sup> and a friend fell off a roof and broke his back on another Friday the 13<sup>th</sup> (Lachenmeyer 132). This typical example of the development of triskaidekaphobia emphasizes how our judgment and thinking can be conditioned by coincidences. This is also another classic case of attentional bias since the man views events that occur on Friday the 13<sup>th</sup> as being due to the day without realizing that bad events occur with approximately the same probability on all of the other days. The development of triskaidekaphobia or other phobias that many of us possess often follows a similar pattern, and Lachenmeyer explains that this pattern usually begins with “awareness of the phenomenon of unlucky 13 [that] leads to increased sensitivity to the number, which, helped along by a negative 13 experience or two, results in full-blown triskaidekaphobia” (132). This demonstrates our innate susceptibility to environmental coincidences over time, which increases our likelihood of adopting a superstition.

Like any other learned behavior, superstitions are acquired throughout the course of our lives in response to environmental stimuli. Many of these learned superstitions are ones that should bring us luck. For instance, if a man accidentally wears green socks to a basketball game and happens to be the top scorer in that match, he may give credit to the socks rather than his athletic prowess. As a result, he is likely to repeat this superstitious process a few times until he realizes that the green socks do not bring him luck, that it was simply a coincidence. These types of superstition are extremely popular, especially regarding sports (Levy, Polman, and Marchant). The high number of conditioned superstitions suggests that learning through experience is a basic behavioral pattern of human nature—when important events happen together, they can alter our behavior (Vyse 76). Another pattern can be distinguished from conditioned superstitions. Unlike good-fortune superstitions, superstitions that deal with the unlucky 13

bring with them high stakes. It has been theorized by Vyse that when the stakes are high, we are susceptible to deeper conditioning (76). For triskaidekaphobes, unlucky experiences have caused them to believe in the unlucky 13 for a long time, if not forever; in contrast, those who believe in good-fortune superstitions quickly forgot them once they stop working. It is unclear whether we are more susceptible to the initial conditioning by negative or by positive experiences, but our conditioned behavior through negative experiences seems to last longer than behavior conditioned through positive experiences. The fact that 13 is a conditioned superstition because of coincidences also suggests that we are prone to making illogical errors and exhibiting mathematical misunderstandings.

We are extremely sensitive to coincidences, and when events come together despite seemingly impossible odds, we still try our hardest to search for the deeper significance and understanding (Vyse 102). As Vyse points out, our everyday analysis of coincidence tends to be overly narrow, and we tend to focus on specific events rather than the larger category of potential coincidences from which it is drawn (103). For instance, when the friend of the 40-year-old man from Wisconsin fell off the roof and broke his back on the 13<sup>th</sup> of the month, he would have asked himself, “What were the chances of this happening?” This might have then led him to a belief in unlucky 13. If “this” is the chance that his one and only friend fell off the roof on a particular day, the probability is extremely small, and his thoughts are justified. However, he should have asked himself, “what was the probability that—during the course of one year, ‘at anytime, in any part of the city, anyone from his large circle of friends and acquaintances’ had an accident?” (Vyse 106). An accident by any one of his friends would have produced an equivalent coincidence, and any time or place in the city would have been equally surprising (Vyse 106). Hence, if we look at the latter view of thinking, the chances seem far more reasonable than the former narrowly focused view. This innate logical error and mathematical misunderstanding is also apparent on a daily basis. For instance, one of the popular misunderstandings is

when we encounter an old friend in the middle of a cosmopolitan city and ask ourselves, “What are the chances of this happening?” We have difficulties dealing with probabilities, and this can lead us to underestimate or overestimate the likelihood of everyday events, such as this one. Our mathematical misunderstandings play an important role in maintaining superstitions by looking only at probabilities of events that occurred and failing to consider the probabilities of events that did not occur.

An example of this mathematical misunderstanding that perpetuates a superstition regarding 13 is based on the idea of the number of times Friday the 13<sup>th</sup> occurs. Surprisingly, there is an objective reason Friday the 13<sup>th</sup> will have more bad events than any other 13<sup>th</sup>, irrespective of biases. Although the fact that Friday is the day between Thursday and Saturday shouldn't seem to have anything to do with the 13<sup>th</sup> day of the month, this is not quite accurate. A detailed analysis of the modern Gregorian calendar shows that the 13<sup>th</sup> of any month is most likely to land on a Friday, with a probability of approximately 14.33%, whereas the average is about 14.29% (Weisstein). This is due to leap days, which shift the day that specific dates fall upon in an irregular fashion (Weisstein). As a result, people are statistically more likely to find bad events on a Friday the 13<sup>th</sup>, rather than any other day's 13<sup>th</sup>, simply because there are more Fridays on the 13<sup>th</sup> than any other days on the 13<sup>th</sup>. This mathematical misunderstanding reinforces the superstitious beliefs that bad events are more likely to occur on any specific single Friday the 13<sup>th</sup> instead of any other single specific day.

### **Conclusion**

There are some generalizations that can be drawn from my interviews and surveys regarding the 13 superstition. According to my survey, a correlation seems to exist between people who believe in superstitions related to 13 and an external locus of control. The *Encyclopedia of Psychology* defines locus of control as “the extent to which people believe they have power over events in their lives” (Fournier). A person exhibiting a high internal locus of control believes that events in his or her life are

solely caused by his or her own actions, while a person displaying a high external locus of control believes that environmental factors are the controlling element of his or her life (Fournier). For example, a person with a high external locus of control might blame God if he or she gets into an accident. Therefore, my research seems to suggest that people in the nineteenth century may have exhibited a higher external locus of control than people in the twenty-first century, since there were more believers of the unlucky 13 superstitions in the nineteenth century than there are now. It seems safe to assume that our increased internal locus of control correlates with the rapid rise of technology, education, science, and mathematics in the twenty-first century. This may also partially explain why fewer people believe in other superstitions and unsubstantiated beliefs, like paranormal forces and religion (Lechenmeyer 192). This conclusion, although seemingly logical, requires further research before it can be proven.

My research also led me to the conclusion that we exhibit embedded mathematical thinking in our daily lives, especially when we deal with superstitions. The superstition regarding 13 has helped me realize that we have a tendency to compare the relative magnitude of events. We compare these relative magnitudes using the most basic mathematical concepts, the relations greater than ( $>$ ), less than ( $<$ ), and equal to ( $=$ ) (Vyse 95). When life is uncertain, our embedded mathematical nature becomes extremely apparent as we apply an informal calculus of probability to compare options (Vyse 95). This is clearly exemplified through widespread fear of unlucky 13, as people often choose the 14<sup>th</sup> floor over 13<sup>th</sup>, prefer 12 people at a table over 13, or call an hour afternoon “one o’clock” rather than “thirteen-hundred.” These innate comparison tools are used every day for many other topics unrelated to unlucky 13 or any other superstitions. People choose McDonald’s over Burger King, Subway over Quizzno’s Subs, and Domino’s Pizza over Pizza Hut. Each of these choices marks a quantitative decision based on nearly automatic mathematical calculation of the relative magnitude of utility.

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