No other random expulsion of air from the body has held as much superstition and customs surrounding it as the sneeze. Compared to other customs with faith based origins, it is not hard to understand why something as common and, at one time, misunderstood, as a sneeze would have spiritual and religious customs associated with it. What makes the sneeze extraordinary is not only the mechanisms in place within the body on an anatomical and physiological level, but the mythology and superstitions that humans have created, as well as the rituals, customs, and responses that have developed around the sneeze. This paper is intended to examine the various superstitions and customs associated with sneezing, and explain how their social impacts have helped shape western culture.

The physiology of a sneeze, or *sternutation*, and what it means to sneeze has been misunderstood throughout human history, and that still stands true today by the average person. Additionally, there are unexplained instances of sneezing that have yet to be entirely understood by the medical community. The association with sneezing and illness, while not unfounded, is regularly not the case. The *Concise Medical Dictionary* defines the sneeze as "an involuntary violent reflex expulsion of air through the nose and mouth provoked by irritation of the mucous membrane lining the nasal cavity. To break it down: the nerves in the nasal mucosa send a signal to the brain, notifying the brain of the invader particle. The brain then sends a signal to take a breath, causing the intercostal muscles between the ribs to tighten in preparation as the

¹E. A. Martin, *Concise Medical Dictionary* (Oxford: Oxford University Press, 2010))

pressure in the chest cavity increases. Baroreceptors then send the pressure signal back to the brain, and the brain sends a signal back to expel the air. An additional note of brilliance in the body's design, the brain also sends signals to the oral and nasal pharynx to channel the air through the nose rather than the mouth, (which would otherwise be the path of least resistance), thus clearing the debris from the nasal mucosa. All of this occurs in fractions of a second, and to understand every physiological step involved in a sneeze, one cannot help but appreciate how amazing the mammalian body is. While sneezing does occur when the respiratory tract is irritated from illness and mucus is produced, the most common cause for sneezing is non-allergen related dust particles.²

One of the prevailing mysteries of sneezing is the *photic sneeze reflex*. Also called ACHOO (autosomal dominant compelling helio-ophthalmic outburst) is an unexplained phenomenon that occurs when a person looks at a bright light, and it triggers the sneeze reflex. It is hypothesized that there is a crossing of pathways between the pupillary light reflex arc and the sneezing reflex arc.³ On a different note of scientific interest, the sneeze is so unique in its abruptness, that the sounds that a person makes when sneezing are nearly impossible to replicate due to their distinctiveness to each individual; each sneeze bears the sneezers own signature sound. It has been suggested that a person's sneeze could be used as an identifier replacing passwords and facial scans.⁴ The concerns about the spreading of germs by sneezing into devices

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² Songu M, and Cingi C. "Sneeze Reflex: Facts and Fiction." *Therapeutic Advances in Respiratory Disease* 3, no. 3 (2009)

³ Songu M, and Cingi C. "Sneeze Reflex: Facts and Fiction." *Therapeutic Advances in Respiratory Disease* 3, no. 3 (2009)

⁴. Newnham, D. 2012. "Bless You Sneezes Are Unique." *Nursing Standard -London-* 27 (7): 27–27.

has understandably left this pursuit at a standstill, but the recognition of this genuine exclusiveness to the sound of an individual's sneeze is no less fascinating.

The most common response to a sneeze in the western world is "Bless you." One would be hard-pressed to sneeze in most communities in the United States without hearing that reply. There is much misinformation floating around like dust particles as to where this reply originated or why it is said. Some think it involves old superstitions about the soul trying to leave the body, and that theory has been perpetuated and reaffirmed in publications on folklore. Others think that the response was created from the belief that the body is trying to rid itself of demons or evil spirits. Folklore aside, "Bless you." as a sneeze response, has an origin story that is rooted in a more macabre and dark period in human history, and it begins with the first appearance of The Bubonic Plague.

In 541 CE, shipments of grain arriving in Constantinople from Egypt brought with them rats infected with a bacteria called, *Yersinia pestis*. The Justinian plague (named after the sitting emperor) was transmitted through flea and rat bites, but even more so through air-born transmission, spread throughout Europe one cough and sneeze at a time. Traces of the plague have also been discovered as far west as the British Isles, and throughout Asia. The plague did not just affect humans; chicken and livestock were susceptible to the fatal illness, which resulted in additional hardships and famine. Historians contribute the massive casualties from the plague to the eventual fall of the Byzantine (Eastern Roman) Empire and brought in the time known as The Dark Ages. Recurrences of the plague continued and by 590 CE. It had killed an estimated

⁵ Altrocchi, Julia Cooley. "Uncle Sam's Folklore." *The English Journal* 34, no. 10 (1945): 529-36.

100 million people⁶. Through recent DNA testing, a long-time suspicion was confirmed that this was the same bacteria that would crop up again after an eight-hundred-year reprieve, and Europe would lose a third of the continent's population during the famous Black Death.

During the panic of the outbreak of the Justinian Plague, people did not understand how the plague was spreading. Avoidance was how most dealt with trying to ensure their survival. People abandoned sick family members, parents abandoned sick children, doctors refused care, and even priests refused to see the sick to give Last Rites. Catholics believe that the ceremonial sacrament of Last Rites must be given at the time of anticipated death to unburden their souls and prepare them for entry into Heaven. Byzantine, predominantly Catholic, was not only suffering from this unexplained illness, but they were left to their own superstitions, which in turn caused a theological panic. The leader of the Catholic Church, Pope Gregory I, in a way of alleviating clerical pressures to see the infected, as well as appeasing his millions of congregates who believed that a priest's blessing was required, encouraged people to start saying, "God bless you" when someone sneezed, as a way of asking God to bless the person and spare them from the illness. This act is one of the first documented instances of the Catholic church relinquishing a power that was only practiced by men ordained by the church (priests), and the practice spread amongst the people of Europe as quickly as the plague itself. To this day in the western world, by religious and non-religious alike, it is still customary to respond to a sneeze by saying, "God bless you." or "Bless you.". In some communities, it is considered rude not to respond with it.8

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⁶ Maugh II, Thomas H. "An Empire's Epidemic." UCLA Department of Epidemiology. Los Angeles Times, 6 May, 2002. https://www.ph.ucla.edu/epi/bioter/anempiresepidemic.html.

⁷. Knowlson, T. Sharper, and John Brand. 1968. *The Origins of Popular Superstitions and Customs*. London: T. Werner Laurie.

⁸ Andary, Lena, Steven Klimidis, and Yvonne Stolk. 2003. *Assessing Mental Health Across Cultures*.

This bit of history has been cited incorrectly, confusing the Justinian Plague with the Black Plague and the origins of "Bless you.". This misunderstanding is possibly caused by Pope Clement VI doing something similar to his congregation during the Black Plague of 1347. He issued a blanket forgiveness of sins to anyone who died of the plague probably for similar reasons as Pope Gregory I. It is also possible due to the historical similarity of both plagues and the recent discoveries that they were both bubonic, that non-historians may have confused the two. Regardless of the confusion, we know now that "Bless you" has stayed a consistent custom and has maintained its place in social ritual for almost fifteen hundred years. It has served as both spiritual peace of mind, and social custom of polite behavior.

Today in the United States, saying "bless you" serves an additional and more practical function: teaching social cues to children with downs syndrome and autism. Teaching children what are considered appropriate manners within the culture are a part of healthy socialization that many people (aside from parents with younger children) do not give much thought to until noting the absence of it. It becomes a part of learning verbal communication, and saying things like "please" and "thank you" are ingrained in children from little on. Training socialization and social cues to developing children with downs syndrome and certain types of autism can present with their own challenges.

Sneezing, an unpredictable occurrence that happens regularly in public settings where the discomfort that children (and adults) with these conditions can feel is heightened; adding an outburst like a sneeze to the situation can be jarring. Behavioral specialists that work with parents and teachers have found that teaching children "bless you" at a young age is not only

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⁹ Songu M, and Cingi C. "Sneeze Reflex: Facts and Fiction." *Therapeutic Advances in Respiratory Disease*

training them a rewarding social cue, it also plants the seeds of responding to sudden sounds in a way that does not cause the child to panic. The unpredictability of a sneeze makes it the perfect candidate for this type training, and the simplicity of the phonetics of "bless you" make it an easy response for these children to remember. ¹⁰

A commonly used alternative to "Bless you" is the Germanic response of "Gesundheit!" which translates to English as "health!". This interjection started appearing around the late nineteenth century, faded post World War One, and reemerged during the German occupations during World War Two. "Gesundheit!" is also used as a drinking toast when celebrating. Gaining popularity in the United States following World War Two, it is the second most common interjection to a sneeze in the United States. 11 Leaving a sneeze without comment seems to be less culturally acceptable in most American communities.

Atheists often rebuke an invoking of a deity on their behalf for what they consider a normal physiological response and consider it a religious social intrusion. A quick internet search of this topic will take a researcher to a multitude of discussion boards, articles, and blogs that address how to get people to stop, or how to politely let people know that it is not appreciated. In some discussion boards, the commenters seem less offended and state that they reply with a "thank you." and let it go. 12 Others go a bit further and share quips and retorts and encourage each other to have fun with it by shouting things back like, "Demons be gone!" 13. Others state

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¹⁰ Feeley, K, and Jones, E. (2007) Teaching spontaneous responses to a young child with Down syndrome. *Down Syndrome Research and Practice*, 12(2), 148-152.

¹¹ Patrick, Bethanne Kelly, and John M Thompson. 2009. *An Uncommon History of Common Things*. Washington, D.C.: National Geographic.

^{12 &}quot;Atheism - Atheist React to 'God Bless You.'" reddit. Accessed 1 November, 2019.

¹³ "Sneeze, Bless You Awkwardness Help Please." Atheist Republic. Accessed 4 November, 2019.

that they correct people and say if a response is needed, that they prefer the interjection of "Gesundheit!" ¹⁴.

While "Bless you." and "Gesundheit!" are the most common responses to the sneeze that we see in the western world, Christians commenting on the sneeze did not begin with Pope Gregory I. The understanding of the sneeze had evolved in Europe between the earlier years of Catholicism and the Justinian Plague. St. Ambrose, who at the time was the Catholic Archbishop of Milan (340-397 CE), warned in his sermons about the damnation of those who participated in the evil arts that included interpreting sneezes. Documents show that a few hundred years later, the church council at Lestines in Belgium condemned the practice again. One could surmise from these references that the superstitions regarding the sneeze were prevalent enough amongst Catholics to cause the church to respond against the beliefs, and it is quite possible that they carried over from practices from the early Roman empire.

The practice of analyzing the sneeze can be traced back even further. The ancient Greeks thought of the sneeze as ominous and prophetic. Philosopher Aristotle spoke of it, and several writings by Homer, including the Odyssey, have made references to sneezing: Telemachus sneezed while talking to Penelope, and it was interpreted as an omen, and he slew all of her suitors. Additionally, when assembling their armies before a battle, if a man sneezed, depending on the location and rank of the man, and the time of day that the man sneezed, it could completely change their course of action or even stop their campaign altogether. Their

¹⁴ "Thread: Responses to God Bless You." Atheist Foundation of Australia Forums RSS.

¹⁵ van der Horst, Pieter W. n.d. "Studies in Ancient Judaism and Early Christianity." Essay. In *23 The Omen of Sneezing in Pagan Antiquity*, 240–47

¹⁶ Pease, Arthur Stanley. "The Omen of Sneezing." *Classical Philology* 6, no. 4 (1911): 429-43.

¹⁷. van der Horst, Pieter W. n.d. "Studies in Ancient Judaism and Early Christianity." Essay. In

²³ The Omen of Sneezing in Pagan Antiquity, 240-47

superstition surrounding the sneeze very well could have changed the course of their history as an empire. Researchers of Greek antiquity also assume that saying, "Zeus, help!" following a sneeze was commonplace, from a piece of anonymously written humor where the author described a man's nose as so long that he could not hear himself sneeze to ask for Zeus's help.¹⁸

Much like the Ancient Greeks, the Romans also adopted the belief that sneezing was prophetic and required analyzation based on who sneezed, the positioning of the sneezer, and the timing of when they sneezed. In addition to wars and battles, this also affected their political decisions. ¹⁹ Again, that sneezing could determine decisions that could have had a historical affect on what, at that time, was the largest empire in the world, should impress upon anyone the magnitude of the superstition.

A sneeze prophesizing a person's fate can be found in other mythologies and folklore and vary in positive or negative omens. Early American folklorist, Mary E. Chamberlain recorded the following prophetic poem in 1892 that was said by African Americans in northern New York:

"There was a prophecy in regard to sneezing before breakfast:--

Sneeze on a Monday, sneeze for danger,

Sneeze on a Tuesday, kiss a stranger,

Sneeze on a Wednesday, sneeze for a letter.

Sneeze on a Thursday, for something better,

Sneeze on a Friday, sneeze for sorrow,

Sneeze on a Saturday, see your sweetheart to-morrow,

Sneeze on a Sunday, the Devil will have you all the week."20

Contemporary sneezing customs around the globe all seem to share similar well wishes for health. The Hawaiian's have responded with "kihe a mauili ola" that translates into "sneeze

¹⁸. van der Horst, Pieter W. n.d. "Studies in Ancient Judaism and Early Christianity." Essay. In 23 The Omen of Sneezing in Pagan Antiquity, 240–47

¹⁹ Pease, Arthur Stanley. "The Omen of Sneezing." *Classical Philology* 6, no. 4 (1911): 429-43.

²⁰ Chamberlain, Mary E. "Folk-Lore from Northern New York." *The Journal of American Folklore* 5, no. 19 (1892)

and live."²¹ In Serbia, the interjection changes between responding to an adult and responding to a child; if a child sneezes the response is "go away, kitten," due to the similarity between the noise a person makes when sneezing and the phrase. The Islamic belief that the Prophet Mohammad saw sneezing as a positive sign and that it clears the mind, respond to sneezing with, "Praise Allah."²²

Alternately, in most parts of Central and Eastern Asia, it is considered rude to acknowledge that a person has sneezed, or expelled air of any kind for that matter, and excusing oneself is also not practiced and is considered inappropriate. Only in the instance of multiple sneezes is it acceptable to ask a person if they are all right. An exception to this is found in Vietnam, where when a child sneezes the response is *com muối* that translates to "rice with salt," which is the Vietnamese equivalent of chicken noodle soup to treat a cold.²³ While it is not customary to respond to another person's sneeze in most of Asia, interestingly there is a shared superstition in Japan and parts of China that when a person sneezes, another person is talking about them: sneeze once, they are saying good things, but sneeze twice they are saying something bad about them.²⁴

A common question that came in the research for this paper was why the sneeze had received so much attention compared to other bodily functions. This question arises particularly among the atheist community.²⁵ The same questions were posed over one hundred and fifty years

²¹ Walker, Penny. "The Curious Ways Different Nationalities Respond to a Sneeze." The Telegraph. Telegraph Media Group, 2018.

²² Walker, Penny. "The Curious Ways Different Nationalities Respond to a Sneeze." The Telegraph. Telegraph Media Group, 2018

²³. Nguyễn, Thu Hà. "Basic Elements: Rice and Fish Sauce." Vietnam Travel Blog, 2015

²⁴ Songu M, and Cingi C. "Sneeze Reflex: Facts and Fiction." *Therapeutic Advances in Respiratory Disease*

²⁵ "Thread: Responses to God Bless You." Atheist Foundation of Australia Forums RSS.

ago in the English lady's magazine *Godey's Lady's Book & Magazine*, and the explanations are as equally compelling as the superstitions that they were trying to explain; tracing the origins to ancient Athens and associating it with old wives tales and superstitions of witchcraft.²⁶ One could surmise that the random, loud, and uncontrollable aspects of sneezing are what make them unique compared to expelling air in other ways where they, for the most part, could be repressed or kept more discreet.

Regardless of our better understanding of the physiological aspects of the sneeze, people still hold onto their rituals surrounding it. Without a doubt, the sneeze and the superstitions and customs associated with it have influenced and still help form cultures and societies. Whether it was from contributing to the shape of the geopolitical map of antiquity, or giving individual people a peace of mind and spirit, participating in social interactions, or helping a child with downs syndrome feel more comfortable in social situations, the customs associated with the sneeze still impacts the western culture today.

²⁶ "Some Curious Superstitions, Sneezing." 1876. *Godey's Lady's Book & Magazine* 92 (549): 289.

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