

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Environmental Studies Undergraduate Student  
Theses

Environmental Studies Program

---

2020

## A Study Of The Relationships Between Environments And Human Death Practices

Carly Elizabeth Thody  
*University of Nebraska-Lincoln*

Follow this and additional works at: <https://digitalcommons.unl.edu/envstudtheses>



Part of the [Environmental Education Commons](#), [Natural Resources and Conservation Commons](#), and the [Sustainability Commons](#)

Disclaimer: The following thesis was produced in the Environmental Studies Program as a student senior capstone project.

---

Thody, Carly Elizabeth, "A Study Of The Relationships Between Environments And Human Death Practices" (2020). *Environmental Studies Undergraduate Student Theses*. 274.  
<https://digitalcommons.unl.edu/envstudtheses/274>

This Article is brought to you for free and open access by the Environmental Studies Program at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Environmental Studies Undergraduate Student Theses by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

A STUDY OF THE RELATIONSHIPS BETWEEN ENVIRONMENTS AND HUMAN  
DEATH PRACTICES

by

Carly Elizabeth Thody

AN UNDERGRADUATE THESIS

Presented to the Faculty of  
The Environmental Studies Program at the University of Nebraska-Lincoln  
In Partial Fulfillment of Requirements  
For the Degree of Bachelor of Science

Major: Environmental Studies  
With the Emphasis of: Natural Resources

Under the Supervision of Dr. Elliot D. Wickham

Lincoln, Nebraska

May, 2020

# A STUDY OF THE RELATIONSHIPS BETWEEN ENVIRONMENTS AND HUMAN DEATH PRACTICES

Carly Elizabeth Thody, B.S.

University of Nebraska, 2020

Advisor: Dr. Elliot D. Wickham

## **Abstract**

This paper analyzes connections between environmental factors and human death practices from several locations throughout the world. Using a thorough literature review, a thematic analysis is applied to combine a variety of sources to draw conclusions regarding how death practices are influenced and evolve over time. Environments, broken down into physical geography, religious, social, and political influences, are examined for the United States, Mexico, Japan, The Torajans of Sulawesi, Indonesia, and Tibet. Factors such as religion and culture have been an important component in the development of many societies' practices revolving around death. The interconnectedness of cultures makes it difficult to isolate contributing factors, so the literature is broken into themes. Using a thematic analysis, conclusions can be made to demonstrate the connections between these themes.

## **Preface**

I would like to give special thanks to Dr. Dave Gosselin for giving me this opportunity to express my interests in the form of my capstone and for his dedication to the Environmental Studies department in the College of Agricultural Science and Natural Resources. Another major thank you goes to Dr. Elliot D. Wickham, who has been a wonderful advisor for this project. I would also like to thank Dr. Laura Young for acting as my thesis reader. Lastly, the UNL Libraries have given me access to resources that I would not have been able to complete this paper without.

## **1. Introduction**

As with all life on Earth, humans are destined to die. Although death may seem to be a simple concept, the significance of it in varying societies and cultures is complex. To understand why death would be a complex concept, it is important to refer to those living in those societies. Across the world, experiences are constantly defined by environmental factors unique to any given area, leading to incredible diversity. If these differences in societies and culture affect how humans live, they can also have an effect on their death practices. Therefore, understanding the relationship between human death practices and the environments in which they take place has a central role in recognizing the importance of diversity in society.

Death practices can consist of several components including societal beliefs about death and post-mortem body care, among other behaviors and ideas (Little, 2016). Some examples of these beliefs and practices that will be covered in this work include death pollution, the idea that a person is either still alive after death or spiritually present, and performing specific rituals

involving corpses. In this research, the focus will remain on post-mortem body care, but the other aspects must still be put into consideration.

Burial and cremation are two of the most common methods of body care for the dead (Selected Independent Funeral Homes, 2020). Most cultures use a variation of burial or cremation, but it is not only limited to those two options. Some cultures use other, more specific methods to care for the bodies of their dead, such as preservation, as seen in the community of the Torajan people of Sulawesi, Indonesia (Brenner, 2014; Carlson, 2016). Although there is work being done to expand the information on death practices of cultures, there is limited research showing how they correlate with their environmental factors. It is only in specific cases, such as Tibetan sky burial, where there has been a direct association between the physical environment, the political climate, and a death practice (Bauer, 2014). A major centralized resource for information on death and the environment comes from American funeral director Caitlin Doughty. In her works, Doughty has combined methods of research and first-hand experience to present a new perspective on human death practices around the world. While much information from her work gives details of the influences on death practices, the focal point is the connections of the cultural, economic, or religious aspects. To establish context for the reader, the focus will be held on the United States and use comparison of other cultures to establish new connections. Thus, the research of this paper aims to answer the following:

1. How do environments influence human death practices?
2. How do the death practices of the United States compare to those of other countries?
3. What is the correlation between policy and culture when it comes to human death practices?
4. How has religion taken part in the evolution of death practices?

To begin delving into these questions, a definition of “environment” and its components must be established. For the purpose of this study, environment will include the physical geography, political, religious, and social aspects of an area (see Table 1). While each of these environmental factors have their own influences, they tend to overlap. There seems to be a fascinating connection between environments and the human death practices that take place within them.

*Table 1. Environment type and corresponding characteristics.*

<b><i>Environment Type</i></b>	<b><i>Characteristics</i></b>
<i>Physical Geography</i>	Topography, climate, soil content, biological influences
<i>Political</i>	Political climate, laws, regulations, ideologies, etc.
<i>Religious</i>	Religions observed, history, death practices associated
<i>Social</i>	Death practice trends, societal view on death

## **2. Literature Review**

### **2.1 Quick History of Human Burial Practices on a Global Scale**

The history of death practices is well studied and documented, as humans have been practicing rituals around death since the beginning of their existence (Pettit, 2002). Because of this extensive timeline and the amount of diverse societies throughout it, this research will focus on the general history of death practices, specifically modern examples, with many unique characteristics. To begin, the origin of all death practices must be analyzed.

The earliest possible example of death practices in hominids can be traced back to 300,000 years ago (Pettitt, 2002). While these practices were not intricate compared to modern standards, they did serve a purpose. It is likely that a group would want to remove a dead body, before it would begin to decay, to a location deemed significant. Although this is purely up to speculation, these same patterns can be observed in modern chimpanzees, as stated by Pettitt (2002). There seems to be an instinctual need in many kinds of intelligent life to take care of

their own dead. Perhaps this is a reflection of how social beings function. Despite this fascinating theorization about this evidence from 300,000 years ago, it is hard to scientifically prove. There is, however, stronger evidence as time goes on.

Teeth remains of 5-15 bodies have been found of Neanderthals that date back to around 225,000 years ago, located in a cave in Wales (Pettitt, 2002). The research on these findings theorizes this group would dispose of their dead in one spot, which Pettitt refers to as 'caching'. This is not the only location in which Neanderthals have left the remains of their dead in particular ways. There had been speculation of some Neanderthals cannibalizing their own kind, but after a comparison of animal remains from that time 100,000 years ago, there was a difference in the damage observed on the bones. The animal bones had evidence of butchering, while the human bones had scrape marks that likely came from the use of a tool to remove the skin (Pettitt, 2002). This could mean these more recent Neanderthals were stripping their dead of their skin as an early intricate funeral practice. There have been many sites around Europe, such as France and Belgium, that show evidence of this same practice occurring (Pettitt, 2002). Pettitt reminds the reader that only speculation can be used from this information due to the age of the remains and intellectual abilities of our human predecessors at the time. It would not be until around 33,000 B.C. when researchers would find the first cases of burials being introduced into death practices, but these were still rare. The act of burying the dead has only been consistently in practice for the past 23,000-27,000 years (Pettitt, 2002). Since this revolutionary step in the history of death practices, there has been a large variation in methods of body disposition, which is the removal and disposal of a body. One of these new methods that emerged was cremation.

Cremation, or the act of burning the body of the deceased, first appeared around 3000 B.C., originating in Europe and the Near East (Cremation Association of North America, 2019b).

From there, cremation began to spread and become integral in the funeral rituals of many societies, such as the Grecians around 1000 B.C. and Romans around 600 B.C. (Cremation Association of North America, 2019b). The process of cremation became popular in these societies due to the frequency of war, resulting in high numbers of casualties. Cremation gave these groups a convenient method of body disposition in a time where the amount of bodies could have been overwhelming to try to bury. Body disposition by cremation would remain the popular method in these areas until the Christianization of the empire by Constantine around 400 A.D., when it began to fall out of practice unless there was a mass causality event such as war or a plague (Cremation Association of North America, 2019b). It would not be until the past two hundred years that cremation would begin to gain global popularity. Lodovico Brunetti, a professor from Italy, presented a model cremation chamber at the 1873 Vienna Exposition, which sparked the modern cremation movement that is still prevalent today. The interest from Brunetti's cremation chamber sparked the rise in popularity of cremation not only in Europe, but also in the United States (Cremation Association of North America, 2019b). Since then, cremation has only gained traction in the U.S., but it is not the only method of body disposition that has had an interesting history there.

The history of embalming is one of great importance in the United States death industry. Modern embalming in the U.S. began during the Civil War. Before the war, the act of embalming the bodies of loved ones was nearly unheard of in the West. Beard and Burger explain how factors such as the Industrial Revolution and Civil War caused these changes in the U.S.'s funeral industry in their article "Change and Innovation in the Funeral Industry: A Typology of Motivations" (2017). The largest factor for this change in method was that soldiers in the war were dying hundreds of miles away from their homes. This combination of distance

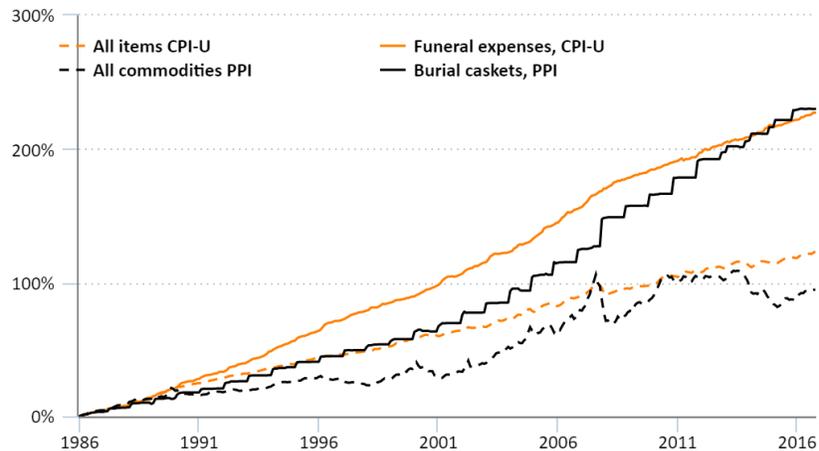
and overwhelming amount of bodies made it difficult to transport them before they began to decompose. To remedy this, Thomas Holmes, known as the “father of modern embalming”, began offering to embalm the bodies on the battlefield, allowing them to be transported home in a fresher, less decomposed state (Fitzharris, 2019). Holmes not only offered to perform these services on the dead soldiers, but he also trained others to embalm as well. It was this emergence of the embalming industry that brought forth the massive funeral industry that exists today. Allowing an industry to take over such an intimate process has had an intriguing effect on the modern perception and detachment of death in the United States. In recent years, there have been pushes for a Death Positive movement in the U.S., one of which being The Order of the Good Death, founded by Caitlin Doughty (The Order of the Good Death, 2020). This movement has been occurring passively for some time now, as one can see by comparing the statistics of peoples’ post-mortem decisions.

## **2.2 Burial Practices in the United States**

Only within the last 150 years in U.S. history has the idea of cremation no longer been seen as violent and sinful. Since the revitalization of cremation, the numbers of those choosing it have increased immensely, especially since 1900 (Cremation Association of North America, 2019b). In 1999, the percentage of cremations in the U.S. was about 25.39%, but in 2009, this number increased to 36.84% (Cremation Association of North America, 2019b). There are many factors that have contributed to the growing demand of this service, with a change in the Catholic Church being one. In the 1960s, the Catholic Church’s previously opposing stance on cremation become one of acceptance. While they did prefer burial, they began allowing people to choose cremation if they preferred due to “sanitary, economic, or social considerations” (Congregation for the Doctrine of the Faith, 2016). They stated, “The Church raises no doctrinal objections to

this practice, since cremation of the deceased’s body does not affect his or her soul, nor does it prevent God, in his omnipotence, from raising up the deceased body to new life” (Congregation for the Doctrine of the Faith, 2016). Along with wider religious acceptance, another more significant factor for the rising popularity of cremation is the price.

The average cost of a funeral has risen drastically over the past 30 years. Casket prices alone have risen 230% since 1986, and the average total expense of a funeral has increased 227.1% since 1986 (U.S. Bureau of Labor Statistics, 2017). This estimate does not account for other expenses that might be included in a funeral, such as a burial plot or other resting place. Figure 1 gives a visualization of the rise in cost of funeral expenses compared to inflation. The dashed lines represent inflation in the U.S., and the prices of both caskets and funerals have risen much higher in comparison.



*Figure 1: Cumulative percent change since December 1986 in consumer prices for funeral expenses and producer prices for burial caskets, not seasonally adjusted (U.S. Bureau of Labor Statistics, 2017)*

The cost of cremation can be much lower. A direct cremation, which cuts out the “fluff” of a traditional U.S. funeral, can cost \$1,100 on average (The Living Urn, 2020b). This depends

on the state in which it is performed, but it is still much less expensive in comparison to a traditional burial and service. Even if choosing a less expensive body disposition method, the “fluff” of funerals can still make them very expensive. This high cost does serve a benefit in the end, as the U.S. funeral industry is worth around \$20 billion annually, which makes it a significant contribution to the economy (Boring, 2014). Throughout the years, there have come to be many services and objects involved in the funeral industry that are not entirely necessary. For example, it is a common misconception that bodies have to be embalmed to have a viewing, as the body is “unsafe” to be around (Doughty, 2017b). This is not true, however, in most cases. The embalming of bodies can serve a purpose, such as when a funeral cannot take place within a few days. The embalming of bodies may not be a legal issue, but there are other post-mortem options that do involve the law. The legalities of funeral and death practices can vary by state, making it somewhat confusing on what a person can and cannot do. Because of each of these factors, the idea of planning a funeral in the U.S. can be overwhelming to many. Even with a push for death positivity and shift in preferred method, the industry surrounding death will likely remain generally constant unless there is a widespread economic or societal change. Despite this, the U.S. will increasingly face challenges and limitations as a result of these practices.

The United States is made up of nearly 3.5 million square miles, yet there is concern about a lack of space for many established cemeteries (State Symbols USA, 2020; Schenke, 2017). The population estimate for 2020 is around 333 million people, and of those people, 82.7% live in urban areas (The World Factbook, 2020b). Due to dense populations in urban areas, the land surrounding these established burial sites locks them in with no room to expand; there is also a rise in deaths due to people born in the “baby boomer” generation reaching older ages ranging from 55 to 73 (Schenke, 2017; Fry, 2020). The combination of a supply that is

becoming limited and an increase in demand increases costs. Given this information, it is apparent that the death practices of the United States are generally influenced by socio-economic factors. It can be assumed that with cremation becoming the less expensive mainstream option, it will continue to grow in popularity in the U.S. This is purely a general stance, however. There are some communities that are embracing a change in what they do after they die.

In a small town roughly an hour north of Great Sand Dunes National Park and Preserve, there is a special place in which some funerals take place. The town of Crestone, Colorado has a funeral pyre, meant for open-air cremations. A non-profit organization called Informed Final Choices created the Crestone End-of-Life Project in 2007, which is the suborganization that made the pyre possible. The use of this funeral pyre is restricted only to citizens and property owners of Crestone or the surrounding county of Saguache, Colorado. Figure 2 depicts the pyre as it is ready to be used. The body is placed on the metal bars covering the fuel beneath, with the large walls on either side helping to prevent the burning wood or other flaming pieces from rolling away.



*Figure 2. Crestone Funeral Pyre. Photo by David Wright. (n.d.)*

Not everyone was welcoming of this new addition to the community, however. Some neighboring community members had initially rejected the installation of the pyre, saying it would cause smoke to be blown towards their property (Doughty, 2017a). However, once it had been built and they were able to see how it was used, they began to accept its presence in their town. This community choosing to embrace this recognition of death is a major milestone for death in the United States, but it is still a way before there will be widespread change. Other

countries may not have this aversion to death that the U.S. does. Many countries have extensive histories of death acceptance, one of which being Mexico.

### **2.3 Examples of Current Death Practices Around the World**

Mexico has a rich history that embraces death. An example of this is the holiday of Día de los Muertos, or the Day of the Dead in English, which is a celebration of death. It is a two-day event in which people remember the loved ones they have lost and give them offerings to take back to the land of the dead. The first day, November 1<sup>st</sup>, is when children who have died are said to come back to visit, and November 2<sup>nd</sup> is when the adults come (University of New Mexico, 2020). The families will set up an altar called an “ofrenda” which is decorated with photographs of the ones they wish to visit, along with personal items and favorite foods of theirs (University of New Mexico, 2020). This celebration’s origins date back to the introduction of Catholicism from Spain to the Aztecs, where Catholic influences overpowered the existing Aztec beliefs and created All Saints’ Day and All Souls’ Day. Throughout the centuries, it has morphed into what is now known as the Day of the Dead and is celebrated by a large portion of Mexico (University of New Mexico, 2020). There was a time where Día de los Muertos had fallen out of practice, according to Doughty, around the 1950s (2017a). It was the increasingly popular event of Halloween in the U.S. that would influence the Mexican people to pick it back up. It has since been revived as a holiday of national pride and was directed to celebrate people of oppressed groups. “These groups adopted Día de los Muertos to mourn for those kept from the public eye, including sex workers, indigenous and gay rights groups, and Mexicans who had died trying to cross the border to the U.S.”. (Doughty, 2017a, p. 80-81). Día de los Muertos is a fine example of the spiritual connection the people of Mexico have to the dead. The holiday also connects to

the major religion of the country, Roman Catholicism, since as previously stated, Día de los Muertos was a repurposing of All Saints' Day (University of New Mexico, 2020).

This is a very strong reflection of how this society views death. Death feels less scary when a person knows their family will continue to remember them and celebrate them after they are gone; it no longer seems like a permanent sentence. This is perhaps why those who celebrate death may not feel fear over its arrival. This evolution of tradition and belief is not exclusive to Mexico, however. Many countries in the East have a strong connection with their dead, especially compared to the United States. One of these places is Japan.

Like the U.S., Japan has faced a commercialization of death. The once intimate interactions between the deceased and their family have changed due to the growing death industry. Despite this, Japan's long history of spiritualism does continue to the modern day. For example, Doughty (2017a) discusses that after a body has been destroyed, bone fragments are left within the ash. "The family are handed pairs of chopsticks, one made of bamboo, one made of metal. The chief mourner begins with the feet, picking up the bones with the chopsticks and placing them in the urn. Other family members join in and continue up the skeleton." (Doughty, 2017a, p. 170). The process of cremation is very important in modern Japanese death culture. In 2012, 99.9% of the dead were cremated, which makes it the leading country in cremation rates (Hiatt, 2015). The significance of cremation in Japan can be attributed to its history of religion and population density over time.

Until the 19<sup>th</sup> century, much of the Japanese population followed Confucianism, which viewed cremation as immoral (Hiatt, 2015). When Buddhism began to spread through the country, so did the acceptance and increased use of cremation. It was the deaths of two significant political and religious figures, Buddhist preist Dosho and Emperor Jito, around 700

A.D. that sparked the transition to cremation (Hiatt, 2015). This is when cremation began to be heavily associated with Buddhism. Today, the most popular religion in Japan is still Buddhism, but 57% of citizens describe themselves as non-religious (The World Factbook, 2020a). With this in mind, it is important to recognize that religion and spiritualism are commonly intertwined in cultures. A popular spiritual belief in Japanese culture is death pollution. Death pollution is the idea that when a person dies, they leave behind a type of aura which can cause major problems for the living (Hyunchul, 2012). It is said to be dangerous and even contagious, lingering in the area in which a person dies, but there was a shift that caused people to believe cremation helps to destroy it (Hiatt, 2015).

The significance of cremation in Japan can be attributed not only to its history of religion and spiritualism, but also population density over time. Japan faces issues of running out of cemetery space in urban areas like the U.S., even with such a high cremation rate. Compared to the U.S., however, Japan's population density is much more intense. The country is less than 150,000 square miles, but the population is nearly 126 million as of 2020; of those 126 million people, 91.8% live in urban areas (The World Factbook, 2020a). When the Buddhist Koukokuji Temple ran out of space in their old cemetery, they decided to modernize their next location (Doughty 2017a). In an interview with priest Yajima of the temple, Doughty quoted him saying, "It is quite natural to use technology alongside Buddhism." (2017a, p. 158). Instead of acquiring land to start a new traditional cemetery, Yajima built Ruriden, a high-tech columbarium meant to house cremated remains (Doughty, 2017a).

Japan has had to adapt their death practices over time due to a significant population increase over the decades, but this does not happen in all places. The Torajan people of Sulawesi, an island of Indonesia, live with the dead bodies of their family members for long periods of

time- anywhere from weeks to years. During this time before the funeral ceremony, the dead are still considered alive, just very sick. It is not until a ceremony is held where a buffalo is sacrificed for the dead that the person is considered truly deceased. According to their beliefs, the buffalo is how the person will travel to the afterlife. Until the funeral ceremony has occurred, the family will continue to take care of the deceased as though they were still living. In a National Geographic video titled: "Here, Living With Dead Bodies for Weeks- Or Years- Is Tradition", local Sulawesi resident Jacob Kakke explains that the length of time before the funeral is typically dependent on the social class of the family. Families with more wealth will keep the bodies of their dead for multiple years before they have the funeral, while poor families will choose to only wait a few weeks to perform the ceremony (Carlson, 2016). This is likely due to the time and resources that are put into taking care of the body. Since the person is still considered alive, the family will continue to feed, change, and interact with them daily. A few years after the funeral has been held, the family will remove the body from its casket and change the clothes and clean it to keep the person clean and in style (Carlson, 2016). This practice may seem morbid to a person who is not accustomed to that culture, but with Sulawesi being an island, it likely sees less interaction with outside cultures, which may be what allowed the people to avoid losing these practices. When cultures mix, traits and practice can become lost to time. While this is one of the more extreme cases of post-death traditions in the East, there are still other places that have traditions that may at first seem unsanitary or disrespectful to those living elsewhere. One such special case can be found in Tibet.

In the mountains of Tibet, one of the most common methods of corpse disposition is known as sky burial. Sky burial consists of dismembering a corpse, bringing the parts to burial sites where they can be placed, and they are then to be consumed by fauna- specifically the

vultures in the area (Bauer, 2014). Sky burial is an option alongside ground burial, cremation, and water burial for those in Tibet, but depending on the region, some of those may not be viable options. Tibet is surrounded by mountain ranges on almost every side, with a plateau near the center; this can make the resources of the country somewhat limited in regions (Jigme, 2019).

While its origins are debated, sky burial has existed for hundreds of years and is still commenced today (Bauer, 2014). There are many possible influences on why this is such a common practice in the area. Due to the intensely cold climate in the mountainous regions, the ground is frozen solid for much of the year and rocky, making traditional burial impossible (Doughty, 2017a). The area also lacks suitable fuel for cremation (Bauer, 2014; Doughty, 2017a). Bauer also suggests that religious influence from Zoroastrianism also may have been what brought sky burial to Tibet (2014). While this has become a famously known death practice, it is under threat. In recent years, Tibet has been facing issues with this process because the vulture population has decreased 95% (Gross, 2006). The increased use of poisons on rodents and NSAIDs on livestock, known to have caused this, has raised concern for many who rely on this method (Bauer, 2014; Gross, 2006). Because of this, Tibetans have been opting for cremations instead; the government has responded by building 11 new crematories between 2010 and 2014 (Bauer, 2014). Adaptation is necessary when resources are no longer viable.

Scarcity of resources is a common cause for change in practices, and most societies have faced this issue sometime in their history. Both the U.S. and Japan are becoming aware of their limited cemetery space, but they are not alone on this. Many other developed countries around the world are seeing land scarcity for cemeteries. One common solution that some European countries have been utilizing for some time now is to rent burial plots to people for a certain number of years (Arcuri & Naddaff-Hafrey, 2018). This idea may seem strange, and perhaps

almost rude to those who are unfamiliar with the process. There are large benefits to this method, however. Depending on the country, the person will either receive a free grave for a period of time or the family will pay for the initial rental period of years. When that time period is up, they may choose to either pay for a second period or have the remaining bones exhumed (Arcuri & Naddaff-Hafrey, 2018). While this idea may seem new to some, it has been used for quite a while in some areas; however, there are new methods of body disposition that have been gaining traction, especially in the U.S.

The popularity of different end of life options continues to shift in modern times. In recent years, new death practices have begun emerging in media. Companies such as The Living Urn and Bios offer a service where the ashes of a person can be added to a biodegradable urn where a tree seed or sapling can be planted along with it, allowing the ashes of said person to decompose and provide nutrients for the growing tree (Bios Urn, 2019; The Living Urn, 2020a). Another company, Capsula Mundi, provides a similar service, but also provides an option of burying the entire body of a person in an egg-shaped pod, which allows for a mostly natural burial (2020). This is depicted in Figure 3. These new methods reflect a shift in interest of the consumers. The sentiment of giving one's body back to nature is appealing to many, especially those of younger generations. Not only have there been changes in social norms in the West, but there have also been changes in policy- particularly in North America.



*Figure 3. Capsula Mundi Burial Pods. (Capsula Mundi, 2020)*

A style of body disposition called alkaline hydrolysis, or “aquamation,” has come into the public’s eye (Olson, 2014). While as a method of human body disposition it is fairly new, this process in general has been used for centuries. Alkaline hydrolysis was patented by Amos Herbert Hanson in 1888 as a method of breaking down animal carcasses to use them as fertilizer. It was not until 2011 that the first U.S. funeral homes used this method of body disposal (Cremation Association of North America, 2019a). The process of alkaline hydrolysis is fairly simple and gentle. First, the body is placed into a mixture that is about 95 percent water and 5 percent strong alkali- such as potassium hydroxide or sodium phosphate. The solution itself is usually warm and/or pressurized to speed along the process. What remains are sugars, peptides, and amino acids, all of which are harmless and can be washed down into municipal sewer systems- as long as they are cooled to a normal temperature and at a normal pH (Olson, 2014). Alkaline hydrolysis is not legal in most U.S. states, however. As of 2019, there are only twenty states that allow for alkaline hydrolysis as a method of body disposition (Cremation Association of North America, 2019a). The map in Figure 4 depicts the states of the U.S. and Canadian provinces in which alkaline hydrolysis is either legal, not legal, or currently in consideration.

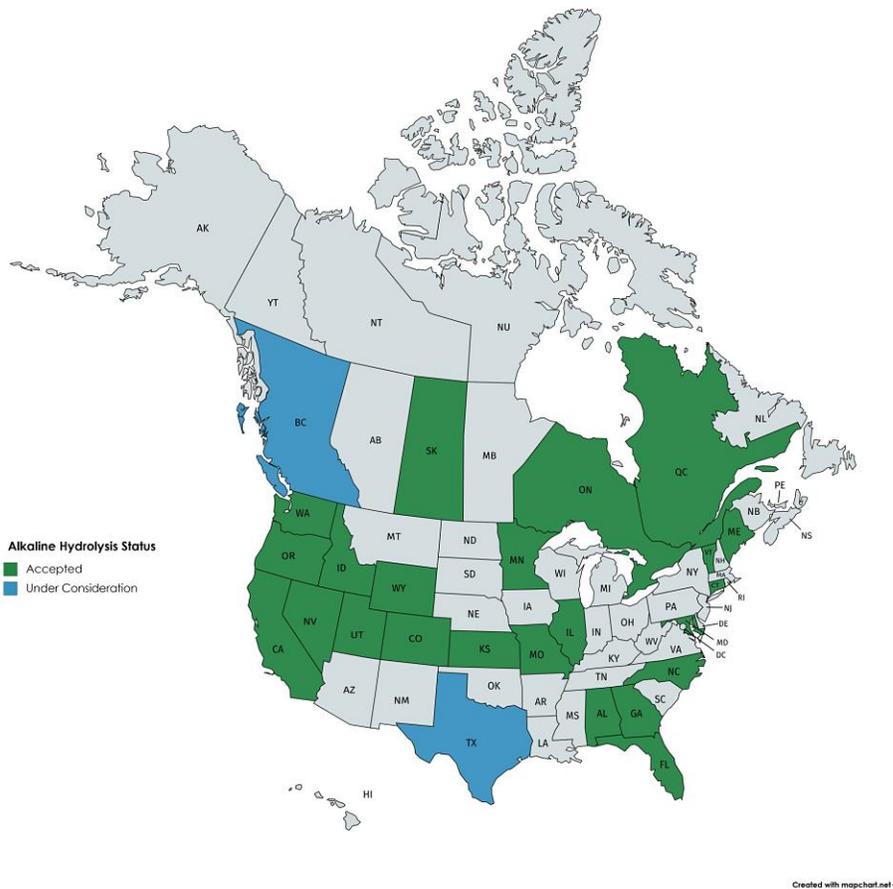


Figure 4. Map detailing legal status of alkaline hydrolysis in The U.S. and Canada. (Cremation Association of North America, 2019)

There are three purposes for this research: (1) to compile several sources into a singular reference; (2) broaden the reader’s understanding of the cultural significance of varying death practices throughout the world; (3) allow the reader to explore the taboo subject that is death. The first purpose would allow for easier consumption of information while also empowering the audience with the sources used for further reading afterward. With that intention, a thematic analysis will be the most appropriate method of pursuit to use. The second purpose gives insight into perspectives that might not otherwise be known. As global connectivity increases, this is important when attempting to holistically understand a foreign culture. The final purpose can be an uncomfortable topic that leaves one feeling powerless and small. By providing this knowledge

to individuals, it shows that there is a level of control one can take on their own death. This could then empower them to apply this new knowledge in their own life. Within these purposes lies the significance of this work. As stated, the information covered in this paper has not been previously compiled. Now, readers of this work can begin to think more critically about the death practices than they are accustomed to and explore practices they might not have previously known.

### **3. Methods**

The exploration of the environmental influences on human practices requires much research, and as there is no physical experimentation for this particular project, a thematic analysis requires a heavier and more thorough literature review. This starts with identifying where the main areas of focus must be. The main areas are broken down into the general history of death practices, examples of practices by varying countries, and a closer look at unique death practices. To find reputable sources, the initial information came from peer-reviewed journals found online in databases through the University of Nebraska-Lincoln's library website. This source provided the base information needed to begin the literature review process.

There are details that cannot be found in these databases, specifically on more recent innovations in the funeral industry. Companies referenced, such as Capsula Mundi, The Living Urn, and Bios each have contributed to this Death Revolution by providing unique methods of body disposal that reflect the ideas and perspectives of those who want to give back to the planet after their death. With the base information collected, backing data must be gathered to piece the materials together.

The supplemental data for this research comes from online sources outside databases often accessed through a web search, but from websites verified as reputable. To organize the

information gathered from these sources, it was given a logical order by location. A major source of firsthand experience on the subject of the death industry and death practices throughout the world is American funeral director Caitlin Doughty. Her organization, Order of the Good Death, aims to educate people on the various subjects that involve death. Doughty has published three books, each reflecting personal experiences from her time in the funeral industry. Her 2017 book, “From Here to Eternity: Traveling the World to Find the Good Death” gives an account on some of the unique post-death celebrations and traditions of various other countries. Another source of information that is vital to this subject is documentaries. This subject has a lack of peer-reviewed journals for many of its sub-categories, so sources such as National Geographic and National Public Radio provide many documentary-style videos showing first-hand experiences at some of these locations. The videos typically provide one-on-one interviews with multiple people from a location. Government websites, such as CIA.gov, were also used to obtain data on religion demographics of countries. Through this use of a variety of search engines, databases, and websites, enough information could be found to make insightful connections between the resources.

#### **4. Results & Discussion**

After completing a thorough literature review, a large amount of information has been collected to make conclusions about the relationship of environments and death practices. Table 2 shows the summary of data collected. From this data, comparisons can be made.

*Table 2. Summary of research finding in order of most to least influential for each location.*

<b>Country/Region</b>	<b>Summary of Findings; Largest Influences</b>
United States	Economic, social, political, & religious
Mexico	Cultural, political, & religious
Sulawesi	Cultural, religious, physical geography, & economic
Tibet	Physical geography, religious, & cultural
Japan	Religious, cultural, & physical geography

The leading influencing environmental factor seems to be religion, as each location researched had at some sort of religious influence on the focused death practice(s). Some locations were influenced more than others, such as Buddhism in Japan or Catholicism in the U.S. and Mexico. The reason behind why religion plays such a strong role in the environmental influence of death practices is because religion often determines what a person believes will happen to them after they die. Cultural influences were found strongly in Mexico, the Torajans of Sulawesi, and Tibet, but not as heavily in the U.S. Of the environmental factors, culture is impacted by the others heavily, which in turn causes culture to affect the others as well. Physical geography, on the other hand, can cause great impact yet remain unaffected by other environmental factors. Examples of these include societies on islands like the Torajan people and Japan or surrounded by mountain ranges like Tibet. Currently, there is not a strong influence of physical geography on death practices from the literature. Instead, there is a major connection between the environmental factors involving human beliefs and practices that shape how people interact with their dead. In the context of the questions proposed previously, much information has contributed to their answers.

The way in which environments influence human death practices are complex. As shown in Table 2, there are multiple major factors that interact with one another to cause the death practices in locations. The United States gives a clear example of how economics strongly influence how a culture deals with their dead, which compared to the other locations analyzed, is somewhat unique. The other locations explored in this work seem to have deep cultural and religious ties. There were some direct correlations that were found in other locations as well as the U.S., such as limited urban cemetery space or changes in religion. Policy, outside of the

United States, appeared to have less of a role than expected. The relationship policy has with death practices did not have much supporting information, which means that relationship may not be necessarily strong. Religion, on the other hand, seems to be the most widespread influencing environmental factor. Despite this, religion cannot be the sole impacting factor, as the idea of environments cannot be separated into sections without overlap.

## **5. Summary & Conclusions**

When comparing the environmental factors of societies, it is evident there is a major correlation between those aspects and death practices. Policies, religion, physical geography, social norms, economics, and culture all play a significant role in the development and evolution of death practices in any society. A stronger influence from physical geography was expected from the results, but there were very few connections to be made from the literature. However, by using a collection of varying resources, novel insight can be gained on the similarities and differences of these practices around the world. The information collected in this research has covered a wide range of cultures and societies, which in turn can assist in broadening one's perspective on this taboo subject. By using a thematic analysis, the information from literature reviewed can be categorized and sorted into groups that help the reader make connections and conclusions.

In the future, more in-depth analyses of literature and a broader range of reliable sources would improve conclusions made on this relationship. Being able to retrieve information from more peer-reviewed journals would make this collection more complete and have a stronger argument. If more attention were drawn to this specific subject, perhaps a collaboration could be made to combine resources into a single piece. While this was the initial intention of this work, more time and resources would be required to put it into effect.

## **6. References**

Bauer, K. (2014). Vultures of Tibet. *American Anthropologist*, 116(2), 425–428.

<https://doi-org.libproxy.unl.edu/10.1111/aman.12103>

Beard, V. R., & Burger, W. C. (2017). Change and Innovation in the Funeral Industry: A Typology of Motivations. *Omega: Journal of Death & Dying*, 75(1), 47–68. [https://doi-](https://doi-org.libproxy.unl.edu/10.1177/0030222815612605)

[org.libproxy.unl.edu/10.1177/0030222815612605](https://doi-org.libproxy.unl.edu/10.1177/0030222815612605)

Bios Urn. (2019). Bios Urn Environment S.L. Retrieved from <https://urnabios.com/>

Boring, P. (2014). Death of the Death Care Industry and Eternal Life Online. *Forbes*. Retrieved from <https://www.forbes.com/sites/perianneboring/2014/04/25/the-death-of-the-death-care-industry-and-eternal-life-online/#24bbf4e41c1a>

Brenner, E. (2014). Human Body Preservation – Old and New Techniques. US National Library of Medicine National Institutes of Health. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3931544/#>

Capsula Mundi. (2020). Project. Retrieved from <https://www.capsulamundi.it/en/>

Carlson, K. (2016). Here, Living With Dead Bodies for Weeks-Or Years- Is Tradition [Video file]. Retrieved from <https://video.nationalgeographic.com/video/magazine/00000153-3e1f-d365-a5d3-3f5f4a300000>

Congregation for the Doctrine of the Faith. (2016). Instruction *Ad resurgendum cum Christo* Regarding the Burial of the Deceased and the Conservation of the Ashes in the Case of Cremation. Retrieved from [http://www.vatican.va/roman\\_curia/congregations/cfaith/documents/rc\\_con\\_cfaith\\_doc\\_20160815\\_ad-resurgendum-cum-christo\\_en.html](http://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_con_cfaith_doc_20160815_ad-resurgendum-cum-christo_en.html)

Cremation Association of North America. (2019a). Alkaline Hydrolysis. Retrieved from <https://www.cremationassociation.org/page/alkalinehydrolysis?&hhsearchterms=%22alkaline+and+hydrolysis%22>

Cremation Association of North America. (2019b). History of Cremation. Retrieved from <https://www.cremationassociation.org/page/HistoryOfCremation>.

Doughty, C. (2017a). From Here to Eternity: Travelling the World to Find the Good Death. New York, NY: W. W. Norton & Company, Inc.

Doughty, C. Ask a Mortician. (2017b). Why Are You So Mean to Embalming? [Video]. YouTube. Retrieved from <https://www.youtube.com/watch?v=eMw5E2rzKWg>

Fitzharris, L. (2019). Embalming and the Civil War. Retrieved November 1, 2019, from <http://www.civilwarmed.org/embalming1/>.

Fry, R. (2020). Millennials Outnumbered Boomers in 2019. Pew Research. Retrieved from <https://www.pewresearch.org/fact-tank/2020/04/28/millennials-overtake-baby-boomers-as-americas-largest-generation/>

Gross, L. (2006). Switching Drugs for Livestock May Help Save Critically Endangered Asian Vultures. US National Library of Medicine National Institutes of Health. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1351926/>

Hiatt, A. (2015). The History of Cremation in Japan. JSTOR. Retrieved from <https://daily.jstor.org/history-japan-cremation/>

Hyunchul, K. (2012). The Purification Process of Death. *Asian Ethnology*, 71(2), 225–257. Retrieved from

<http://search.ebscohost.com.libproxy.unl.edu/login.aspx?direct=true&db=aph&AN=85689827&site=ehost-live>

Little, B. (2016). See Pictures of Death and Burial Rituals from Different Cultures. National Geographic. Retrieved from <https://www.nationalgeographic.com/news/2016/03/160314-pictures-death-ritual-funeral-burial-ceremony-people-culture/#close>

The Living Urn. (2020a). Bio Urn, Tree Burial, Cremation Tree. Retrieved from <https://www.thelivingurn.com/>

The Living Urn. (2020b). How Much Does It Cost to Cremate? Retrieved from <https://www.thelivingurn.com/blogs/news/how-much-does-it-cost-to-cremate>

Jigme, C. (2019). Tibet Mountains. Tibet Vista. Retrieved from <https://www.tibettravel.org/tibet-travel-advice/tibet-mountains/>

Olson, P. R. (2014). Flush and Bone: Funeralizing Alkaline Hydrolysis in the United States. *Science, Technology & Human Values*, 39(5), 666–693. <https://doi-org.libproxy.unl.edu/10.1177/0162243914530475>

The Order of the Good Death. (2020). About. Retrieved from <http://www.orderofthegooddeath.com/about>

Pettitt, P. (2002). When Burial Begins. (S. Denison, Ed.) *British Archaeology*, (66), 8–8. Retrieved from <https://web.archive.org/web/20160615142318/http://www.archaeologyuk.org/ba/ba66/feat1.shtml>

Schenke, J. (2017). Urban Cemeteries Running Out of Space as Baby Boomers Enter Twilight Years. Forbes. Retrieved from <https://www.forbes.com/sites/bisnow/2017/11/03/urban-cemeteries-running-out-of-space-as-baby-boomers-enter-twilight-years/#309f9111579c>

Selected Independent Funeral Homes. (2020). Understanding Your Disposition Options. Retrieved from <https://www.selectedfuneralhomes.org/Consumers/Arranging-a-Funeral/Understanding-your-Disposition-Options>

State Symbols USA. (2020). Size of States. Retrieved from <https://statesymbolsusa.org/symbol-official-item/national-us/uncategorized/states-size>

University of New Mexico. (2020). Day of the Dead. Retrieved from <https://www.unm.edu/~htafoya/dayofthedead.html>

U.S. Bureau of Labor Statistics. (2017). The Rising Cost of Dying, 1986–2017. Retrieved from <https://www.bls.gov/opub/ted/2017/the-rising-cost-of-dying-1986-2017.htm>

The World Factbook. (2020a). Japan. CIA. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/ja.html>

The World Factbook. (2020b). United States. CIA. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/us.html>