

The Green Cemetery in America
Plant a Tree on Me

by
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ABSTRACT

Green Cemetery Practices in America: Plant a Tree on Me

Sustainability issues face America today. We look for ways to live that do not deplete the resources and opportunities of future generations. I examine American burial practices for simple ways to increase our sustainable practices and decrease waste and pollution. Green burial practices use no toxic chemicals and require fewer resources. Trees adorn graves as markers. I cover American practices over the last 200 years showing how we have come to our current situation today. It also looks at American attitudes towards death, the Green Burial Council's ideals, and how green cemeteries may work for future benefits. By embracing an environmentally sensitive practice we can fulfill a basic human need. Our choices today about the meaning of our own death rituals offer the opportunity for creating a better world for generations to come. With a slight alteration of current practices we can embrace more sustainable options that will provide a better life for tomorrow.

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Introduction

Life is like a library book, you don't own it and can only have it for so long, and exceptions to this rule are never made. It is subject to immediate recall by another borrower even if you haven't finished with it. Attempts to excessively prolong human life are attempts to steal the library book and cheat the earth community, to take nurturance from others but not to give it back (Plumwood, 2008).

Serious environmental issues face the world today. To address many of these challenges we need to revise current practices that drain our resources. In this thesis I address the question: Can sustainable burial practices or green cemeteries provide a way to use fewer resources and provide future benefits? Green cemeteries are a place where green burials take place, using biodegradable and sustainably produced materials and no toxic chemicals. Often a tree or native plant is used as a grave marker. Green cemeteries are an immediate way to start creating multi-functional sites for the betterment of the community. By focusing on our human needs we can more easily embrace this idea and have our needs better served through this process. The choices we make today reflecting our values will influence future generations. Through the focus of this thesis on green cemeteries, I explore a larger set of meta-questions: What can we do to create a better future? How do we improve what we are already doing, with what we find important, and how do we serve multiple goals? How do we create bounty with less waste? How do we make our actions useful towards a better future?

Because addressing the environmental impacts of burial in the United States is complex, I take an interdisciplinary approach in this thesis. Cemetery studies are by their very nature interdisciplinary (Rugg, 2000). This work examines literature in several broad areas of study, including anthropology and ecology. The overt characteristics of the cemetery can be delineated and examined, including the social importance of

cemeteries, as well as many other topics. These areas of study can incorporate work from social science and physical sciences, as well as sub-headings under these. Cemeteries vary over areas as do the people who use them (Jean & Francaviglia, 1972). Vast cultural differences and practices of burial in America in past centuries created diversity of all the local cemeteries throughout the country. I am unable to reference all, although many are noteworthy and worth visiting. The religious aspects are myriad and the topic for another paper. However, religion will not be completely excised. Military cemeteries differ greatly from the type of cemeteries discussed in this paper. Regulations for military cemeteries, such as concrete liners for all burials, come from a federal level (Marino, 2009). There is some interesting work being done in places such as Hawai'i at a military cemetery; however they are not likely to be replicated at other military cemeteries.

Current burial practices changed with America's needs over the last two centuries; and thus continue to have potential for improvement. These present as a fluid system rather than a static one. Although our burial practices create our own American experiences, they draw heavily on European influences. I will delve into European influences only where needed to illuminate a point. Green burial gained popularity in England before it did in the United States, so there will be some examination of examples in this region simply because there is a longer time frame in which to follow them. The first green burial took place in England in 1993. My work will mainly focus on the last 200 years in America's predominant cemetery plot purchasing culture. I examine what we do now and how we may be able to slightly alter current practices for a greater benefit.

Grief occurs as a natural on-going process, which may persist, evolve and change over time. This work will look at the multiple purposes a cemetery serves, and by examining those, find ways to better serve today's needs as well as potentially benefiting the future. I will briefly examine other options for the disposal of remains available to consumers. The most popular choice is cremation. Many other options are available, although most of these require cremation first. These options may have significant localized economic, social, or environmental benefits, but these choices are usually constrained geographically, technologically, or by some other factor that makes widespread adoption of the practice less feasible. We must always consider the consumer's personal choices for themselves and their families.

This work is important because it examines the most widely available burial practices that are followed in the United States, and how with changes may provide benefits beyond the material need of burial. This literature review examines burial practices in America and how green cemeteries can be applied to the many problems facing us today. Academic journals, books, trade journals, state law, websites, and other media sources were employed in the research of this topic.

Currently, our world faces problems such as pollution, environmental fragmentation, loss of ecosystem services, loss of open space and natural areas. Although changing our burial practices may not address these problems in their entirety, some changes may address aspects of these problems. Now, more than ever, we need to find ways to maximize benefits with the least amount of costs, because those costs get higher every day. The cost of mitigating for these losses increases with decreasing resources and over time. New approaches to secure sustainable futures for cemeteries are being

formulated (Francis et al., 2000). Green cemeteries give a simple but striking example of providing multiple benefits, some of which are not even directly associated with the initial purpose.

Green Burial Practices

Green burial is essentially the way that burial has been practiced across the ages until the nineteenth century (Green Burial Council, 2010). Green burial, also called natural burial, eco-burial, or woodland burial, is the act of burying remains without the use of chemicals, concrete, ores, or tropical hardwoods. This usually requires a simple wood box, preferably locally and sustainably harvested, or a shroud of biodegradable materials, precluding toxic embalming or concrete liner (Rabideau-Silvers, 2009) (Kerrigan, p. 185). If one wishes for burial to take place more than 24 hours after death, botanical embalming fluids may be used in some places to prepare the body for visitation purposes (Vyhnak, 2009).

Green burials occur in a green cemetery. Often the cemetery operator chooses to mark the gravesite with a native tree or shrub (Kerrigan, 2007, p. 185). They may also be marked with a low stone from the surrounding area or with Global Positioning System (GPS) coordinates (O'Connell, 2010; Rabideau-Silvers, 2009). They tend to be less regimented than traditional cemeteries (Kerrigan, 2007, p. 185).

Green cemeteries create less environmental pollution than cremation and the graves require less maintenance than traditional options (Francis, 2000). Green burial indicates a trend towards a reciprocal relationship with nature. Bounded ecological areas within cemeteries are managed with an enhanced understanding of natural processes.

Research conducted in the United Kingdom found increased decomposition when cadaveric materials were repeatedly reburied on the same site (Carter & Tibbett, 2008). Decomposition was enhanced through soil microbe activity with increasing efficiency with each burial of ovine (sheep) muscle tissue. Soil microbes did not increase in total amount, but the site favored zymogenous soil microbes able to enhance rapid decomposition (Carter & Tibbett, 2008). The importance of this information for green cemeteries concerns site efficiency rather than reburial in the same plot as is available in the United Kingdom.

Green cemetery practices nourish and foster life through enhanced habitat and provide an alternative to current burial practices (Plumwood, 2008). The burial commemorates the way one lived, and the act of giving one's body back to the earth expresses hope and commitment to the future (Feagan, 2008). Green cemeteries provide an opportunity for people to reconnect with the biotic community, literally embedded and embodied. Experiences come together to create culture, which is passed to the next generation (Feagan, 2007), and it is a relatively short leap from traditional burial to green burial. Green cemeteries create an ecosystem and the deceased becomes an integral part (Kerrigan, 2007, p. 185). Return and connection resonates with clients as well as with proprietors of green cemeteries.

Multiple positive outcomes become available by participating in a green cemetery project. In some instances, green burial can also facilitate ecological restoration and landscape-level conservation. Green cemeteries preserve ecosystem function by taking land out of circulation for other resource use, such as forestry or development.

Educational opportunities exist for all ages, and everyone who participates in the place

has a stake in it. This creates a renewed sense of community, regional restorative thinking, and even possibly becoming a source of plants for other regional projects (Tummons, 2007). Green cemeteries, as a cultural practice or that of an individual, have a secular pragmatic orientation (Feagan, 2007), common across the globe.

A History in American Burial Practice

“Now there is a society whose funeral industry got completely out of control”

-Jessica Mitford quote at an Egyptian embalming museum exhibit

There is diversity in death, and in the words of the sage Lily Tomlin, “We’re all in this alone”. As a rite of passage or impending threat that helps us focus, death gives definition to our lives (Kerrigan, 2007, p. 187). In dying we are alone, but the practices that occur after death have more to do with sustaining the community. People all around the world commemorate death by some sort of ceremony or rite (Feagan, 2007). Each person will have their process, each community their ritual. Each culture will have tradition. Understanding how burial practices have changed throughout American history will help us understand our current practices and shape the future. The living must dispose of the dead, and therefore the funeral and burial practices become embedded in cultural traditions (Kerrigan, 2007, p. 43).

My purpose in writing this history is not to gloss over these rituals and traditions, but to provide a basic framework of how things are done now in America. I do not mean to deny any regional or local importance to any cemetery or group, but simply to focus on my point at hand.

The largely agrarian, pre-modern world, labeled “the period of the Tame Death” with dying and death characterized by acceptance and tranquility. Family and community surrounded the dying or the dead, goodbyes and prayers said, and final instructions given to the family (Feagan, 2007). Colonial American funerals generally offered a service at the church, with mourners participating in the service by carrying the casket to the grave, saying brief prayers, and filling the grave. Communal work valued personal service (Pine, 1975, p. 15).

American undertaking changed slowly, becoming more professionalized at the end of the eighteenth century in larger cities. The urbanizing eastern cities of the United States followed European trends (Kerrigan, 2007, p. 157) in regards to burial practices and professionalization. The nineteenth century American undertaker unified the occupation, taking over functions formerly provided by the family and community (Pine, 1975, p.16) especially women (Kerrigan, 2007, p. 157). Upon someone’s death, the undertaker was called to the home to direct the funeral. Embalming techniques were performed in the home (Pine, 1975, p. 16). The undertaker prepared the dead for immediate and local burial (Troyer, 2007).

In 1851 Thomas Bridgeman crusaded for the preservation of Boston’s early burial grounds, arguing that they demonstrated the cultural and historic values of American burial grounds and thus should be protected. The Rural-Cemetery movement established cemeteries as places for contemplation and recreation (Matero & Peters, 2003). These cemeteries often took advantage of hilly locales and followed European designs (Potter et al., 1992).

During the Civil War many soldiers died far from home increasing the popularity of embalming (Pine, 1975, p. 16; Kerrigan, 2007, p. 159). Often, the remains were sent back to their families in other parts of the country. It was the first conflict to have embalmers working in the camps, hospitals, and rail lines to serve the fallen and their families (Troyer, 2007). Regulations became needed at train depots to inspect for improperly embalmed bodies, broken caskets, and infectious diseases, and enforcement fell mainly to state and local government. The lack of funds and political will severely restricted the regulatory ability of the National Board of Health (Troyer, 2007).

The mechanically preserved body became a new consumer product for the American public, allowing a body to be on display without requiring a quick burial (Troyer, 2007). Historically embalming consisted of essentially a pickling process of opening the cadaver, removing and washing the organs in preservatives and bathing or immersing the body in preservatives. The mechanical method left most of the body intact, using mechanical means to pump preservatives through the body's own systems. After the assassination of President Lincoln, the public viewing of his funeral procession which traveled for two weeks by train from Washington D.C. to Springfield, Illinois, also increased public enthusiasm for embalming (Pine, 1975, p. 16).

Nineteenth century death photography captured the deceased at a moment of still looking vital. The embalmer could slow the biological processes and thus at least visually, standardize the American corpse (Troyer, 2007). In the time before embalming or death photographs, viewing the body had to take place before nature took her course. A fundamental shift to a standardized embalmed vision of the corpse affected how the observer viewed the deceased (Troyer, 2007). Biology no longer controlled death

processes; they became under human control. The modern embalmed corpse became a product, with human control exerted over inner chemistry (Troyer, 2007). American funeral directors gained power as licensed embalmers and produced a standardized vision of the dead body. The work of funeral directors gained legitimacy through the implementation of transportation rules (Troyer, 2007).

In the post Civil War period, funeral practices started taking on a distinctly American quality (Kerrigan, 2007, p. 157). Headstones increased in size and became more ornate and laid out in regular grid style (Francaviglia, 1971). In American cemeteries analysis of plot costs, location and stone size indicated a reflection of social status in life and peaked during the 1880s and 90s (Francaviglia, 1971). Minority exclusions reflected the times and often separate facilities were established (Francaviglia, 1971).

In 1883 Dr. Alexis Julian lectured before the New York Academy of Sciences, describing no better test by material means to test longevity and decay on stone and metal as a cemetery (Matero & Peters, 2003). Dr. Julian recognized the interdisciplinary aspects to cemeteries for education and crafts people long before it became fashionable.

The Art and Science of Embalming, written as a textbook for embalmers in 1896 gave four reasons for embalming: to prevent putrefaction of the body until the body viewing, disinfection, preservation for identification, and to look lifelike (Troyer, 2007). This same text claimed that the embalmer prevents the corruption of the grave, keeping the body entire for religious resurrection and giving death no more power over us than a long sleep (Troyer, 2007).

Towards the end of the nineteenth century all aspects of the disposition of the dead came under new legislation and licensing from states. Death certificates became required by state laws (Pine, 1975, p. 16). Attitudes toward death and the body changed radically in the nineteenth century, creating the expected image of the dead body in the twentieth and twenty-first centuries (Troyer, 2007). The technological advancements and legal requirements helped reinforce undertaking as a specialty occupation (Pine, 1975, p. 16).

Dead bodies that resist decomposition become an opportunity for the sale of consumer goods, such as funeral objects and accessories, thereby making the industry more profitable (Troyer, 2007). Headstones and caskets became catalog items (Francaviglia, 1971). During this time, undertakers traveled to the home of the deceased and set up gear in the parlor. Religious services held in the home of the deceased or at church preceded a procession to the cemetery. The undertaker removed all signs of the funeral from the home so when the family returned, none of these tasks remained (Pine, 1975, p. 17).

Urbanization changed family living situations, spreading people over wider geographic areas with often smaller dwellings. These new housing situations were not always equipped with appropriate space for laying out of the dead or holding large gatherings. Undertakers started to use their own homes for these purposes, usually the large parlor rooms. Specialty stores arose from this practice, usually with a home like setting for the undertaker to keep his wares and equipment, becoming known as a funeral parlor (Pine, 1975, p. 17). This provided a permanent and specialized site where it became possible to increase the merchandise and services offered. Larger and less

mobile embalming equipment required space and the funeral parlor allowed room for a laboratory. The parlor, laboratory, and chapel-like facility evolved over time to become modern funeral homes (Pine, 1975, p. 18). Through this process, the undertaker evolved into the “funeral director” who provided a necessary service to society as well as the merchandise connected to this service. The funeral director developed managerial and administrative skills as well as provided counseling services. This encouraged the growth of the professional occupational orientation of this work (Pine, 1975, p. 18). By the beginning of the twentieth century many families and communities no longer sewed shrouds, laid out the dead, or any of the other direct responsibilities relating to the death of a family member (Kerrigan, 2007, p. 159); funeral homes assumed the tasks, plying consumers with products and services.

Cemeteries changed during this time as well. Lawn cemeteries appeared at the end of the nineteenth century, with styles that eschewed the regimented forms of the past. Instead of tombs, statues and monuments, the lawn cemetery offered a park-like setting with low grave markers (Kerrigan, 2007, p. 159). People were choosing lower headstones all across America at this time (Francaviglia, 1971). It has been suggested that headstone heights in the modern era lowered because they ruined the landscape (Francaviglia, 1971). Maintenance became easier with the mowers able to go over stones instead of around them (Francaviglia, 1971). Streets established in these lawn cemeteries reflected suburban developments, and often follow the land contours (Francaviglia, 1971). There is little visual monument to remind the viewer of death in the pastoral garden-like cemetery (Francaviglia, 1971). These reflect changing values, though forms

in cemeteries may persist as they may pertain to cultural values or symbolize a group (Jean et al., 1972).

A conference of the organizations most involved with the problems of shipping bodies across state lines convened in 1906. The National General Baggage Agents' Association, the National Conference of Health Officers and the National Funeral Directors Association (founded in 1881) created a set of nine rules for overseeing standardization of licensing for embalmers who prepare the dead for interstate shipping (Troyer, 2007). These rules disallowed the shipping of bodies with certain communicable diseases and created a protocol for other issues (Troyer, 2007). The 4th Annual Joint Conference of the Embalmers' Examining Board of North America (EEBNA) met in 1907 to discuss issues of inadequately embalmed bodies being shipped across America. The age of travel and migration turned the undertaker into the embalmer (Troyer, 2007)

In 1963 Jessica Mitford wrote a book called "The American Way of Death", accusing the industry of aggressive marketing, false claims, and preying on people when they were vulnerable. Many people had been persuaded that embalming would keep the body in perpetuity and was required by United States law (Kerrigan, 2007, p. 160). Embalming preserved the body through the funeral and is only required in certain cases (Troyer, 2007). In post-war America eager consumers spent money on the latest technological "advancements", practices and processes (Kerrigan, 2007, p. 160). Although none of these processes were required by law they were culturally embraced.

America worked hard for racial and cultural integration and funeral practices reflected this. Many funeral providers started offering a wider array of services reflecting the needs of their customer base after the 1960s. Until this point, often each cultural community would have their own service provider, but these rites became part the melting pot of selections available to all consumers.

Fred Kniffen coined the term “necrogeography” in 1967 to describe spatial and cultural dimensions of mortuary landscapes ranging from simple burial or tombstone to complex landscaped cemetery sites (Matero & Peters, 2003). Necrogeographies provide important information, such as birth and death dates, ethnicity, sex, life span, migration, occupation, social status, religion, and other demographic information. The materials used for tombs and markers, especially stone and metal, provide information for scientists, conservators, architects, and sculptors (Matero & Peters, 2003).

The Federal Trade Commission (FTC) passed the Funeral Trade Rule in 1984. This prohibited funeral care providers from engaging in unfair or deceptive practices. This act required a complete, itemized price list and permission for embalming for a fee. Consumers were not required to purchase a casket for cremation nor could the purchase of products be contingent upon the purchase of other goods and services. This allowed the consumer to choose the appropriate offerings from one or more providers. Providers clearly had to abide by laws and were not allowed to misrepresent the legal requirements in such places as crematoria or cemeteries. Amended in 1994, the Funeral Rule expanded the definition of funeral providers (Federal Trade Commission, 1999).

By 2007 there were over 100,000 Americans employed in the funeral industry, with nearly \$12 billion in business annually. Corporations now see cemeteries as big business, with the top four publicly traded companies accounting for 10% of the overall market share (National Funeral Directors Association, 2010). Casket use steadily declined from 79% of all deaths in 1998 to 71% in 2008. The average price of an American funeral in 1960 was \$708 and in 2010 it was \$6,550, with an additional cost of \$1,195 if a vault is desired (National Funeral Directors Association, 2010). Each year America uses over 827,000 gallons of embalming fluid, 1.6 million tons of reinforced concrete, 20 million board feet of wood, and thousands of tons of metals for traditional burial (Feagan, 2007).

Cremation gained popularity throughout the twentieth century in the United States (Kerrigan, 2007, p. 174). The belief in resurrection of the body kept many Christians from this option, but even the Catholic Church dropped its objections during the Second Vatican Council in 1963, and a common practice among their group today (Kerrigan, 2007, p. 174). In 2005 the United States cremated an average of 30.88% of all dispositions, with the highest cremation rates being in Nevada and The District of Columbia of over 65%. The lowest rate occurred in Mississippi with 9.59%. Washington State consumers chose this option over 64% of the time in 2005. Cremation accounted for 38.15 % of dispositions nationally in 2010 and 51.12% in 2025 projections (National Funeral Directors Association, 2010; Appendix I).

Cremation has numerous environmental downsides (Green Burial Council, 2010). It consumes fossil fuels, requiring 27 liters of natural gas to cremate a 150-pound body (Vyhnak, 2009). Older crematoria are not as fuel efficient (Green Burial Council, 2010).

If present, mercury emits from the burning of dental amalgam (Kerrigan, p. 185), although new facilities that can fully mitigate mercury pollution are planned to be available on the market as early as 2011 (Green Burial Council, 2010). The Cremation Association of North America (CANA) works towards greener cremation systems through recycling medical parts, adopting fuel-efficient cremation containers, and supporting dispositions with positive environmental purposes (Green Burial Council, 2010), although these practices will take time to implement fully.

The act of sprinkling cremated remains in natural areas can have consequences. The Mountaineering Council of Scotland asks people to avoid sprinkling on the most popular summit sites because worries that the volume of ash was changing soil composition (Kerrigan, 2007, p. 184). Conservation officers on Snowden, Wales's highest mountain, ask people to consider the ecological effects on the vegetation and spread their ashes elsewhere (Kerrigan, 2007, p. 184).

The American Way of Death, Currently

The entropy of an open system must increase. Since we are all open systems, this means that all of us are doomed to die. Yet it is so often ignored or deliberately forgotten that the unending death-roll of all creatures, including ourselves, is the essential complement to the unceasing renewal of life (Lovelock, 1987, p. 125).

In twentieth century America, most models for death, burial and grieving echo medical, industrial and scientific thinking, reflecting the dominant discourse of society (Feagan, 2007; Howarth, 2000). Death certificates, appropriate disposal legislation and the designation for places of burial and cremation became formalized (Howarth, 2000).

The 1960s brought ideological leanings towards individualism (Howarth, 2000). An enterprise culture focused on individual survival, anonymous situations of shared experience replaced the community (Howarth, 2000). People construct their own worlds, filled with their own self-identity and meaning.

Human exceptionalism and individualism influence heavily our culture, our views of ourselves, and even our deaths (Plumwood, 2008). People display a defining modernist quality of a desire to control mortality (Howarth, 2000). American cemeteries express an exceptionalist view of death with strong caskets interred deep below the soil activity. A concrete slab placed over a plot slows decomposition (Feagan, 2007) and essentially prevents one from becoming food (Plumwood, 2008). The cosmetic-concrete-casket complex embraces the modernist ideals of professionalization and sanitation (Feagan, 2007). These practices encourage detachment, privatization, commodification and remove death from the lives of the living (Feagan, 2007).

The “Finality Thesis” claims that death is the end of the story (Plumwood, 2008). We try to evade death through transcendence, privilege and technological mastery (Plumwood, 2008). Modernist liberal individualism tells us that we own our lives and dominant concepts of this identity place us outside of the food chain. We believe we can partake but never need to give to the “feast in a chain of reciprocity” (Plumwood, 2008). The cemetery itself may be viewed sacred in contrast to the profane area for daily life beyond the gates (Plumwood, 2008). The sacredness eschews the need of the living to be part of the food chain, not allowing our decay to nourish other forms of life (Plumwood, 2008).

Some feel that society constructs the life-death boundary (Howarth, 2000). In 1909, Gennep created the concept of liminality, describing the time and experiences between statuses, between becoming and the rite of passage, such as between death and the completion of the funeral ceremonies (Howarth, 2000). Wife to widow exemplifies this status change. Extended mental or physical illness can create a “social death” long before physical death occurs (Howarth, 2000). This extends the period of liminality for the family living with the ill person. Medical technology extends life longer than what constituted the life-death boundary in the past (Howarth, 2000). The crisis in loss becomes a loss of self (Howarth, 2000) and the change of status that may not be easily removed, such as “parent” at the loss of a child (Howarth, 2000). Increasingly in contemporary Western societies, grieving people continue relationships with their deceased friends and loved ones (Howarth, 2000).

The shift to modern burial practices in North America as well as our fragmented ideas of place brings us to where we are (Feagan, 2007). We face social and environmental fragmentation resulting in isolation. We cannot simply construct a new model for grief (Howarth, 2000). By being aware of the issues that have brought us to our current state of affairs, we can choose how best to direct our efforts for future benefit.

The Cemetery: An Overview

The dead have always left us material and spiritual legacies (Howarth, 2000). The idea of burial space is mutable; it does not carry the same significance in a uniform way across all cultures and the meaning does not remain static over time (Rugg, 2000). Cemeteries provide a created and purposeful cultural landscape made to serve the functional and material purposes of disposing of corpses (Francaviglia, 1971).

Designed and used by people (Francaviglia, 1971), cemeteries become cultural entities, rich and complex, with meaning socially constructed over time (Matero & Peters, 2002). They offer memorials for the individual as well as society (Francis et al., 2000) creating opportunity for appreciation over a long-term period. Past and current meanings beyond the primary purpose of burial require recognizing their importance and potential as cultural, historical, scientific and scenic resources (Matero & Peters, 2008). Landscapes mature over time and communities and customs change (Rugg, 2000). Cemeteries record and reflect cultural inclusion and assimilation within communities at different times (Francis, et al., 2000). Wide ranges exist among different communities concerning the underlying purposes and meanings held by a cemetery (Francis et al., 2000; Rugg, 2000).

A common American practice sites cemeteries on hilly land. It is less prone to flooding and in the past considered less desirable for agriculture or town expansion. Settlements located cemeteries near but not necessarily within their boundaries (Rugg, 2000; Northway, 2005). A very old cemetery may maintain the original soil profile or native plants providing an ecological link to the past (Wexler, 2008). Removing cemeteries for residential development in America is not a common practice. The sentiment expressed is “That’s where we laid them, that’s where they should stay” (Francis et al., 2000).

Cemetery development generally occurred with similar historical pattern, and most did not originally have a regular plot layout (Francaviglia, 1971). The earliest graves cluster in the center, very similar to city settlement patterns (Francaviglia, 1971). If the cemetery sits on a hilltop, there may be even, concentric rings of burial down the

sides. Usually, cemeteries develop into a more sprawling, suburban type expansion, with the oldest portion located on the highest ground (Francaviglia, 1971). Large family plots evolve over a long period of time and may be a microcosm of the larger cemetery (Francaviglia, 1971).

Definable visual markers make the cemetery distinct from other types of landscape (Francaviglia, 1971). A defined entrance states the purpose of the site literally and symbolically. The perimeter fence serves two purposes, to keep the living from the dead and the dead from the living (Rugg, 2000). A specific perimeter encloses an area demarcated for burial and maintains an ordered layout within (Rugg, 2000) expressing spatial and architectural preferences of the time. Variations of time and location create recognizable trends (Francaviglia, 1971).

Early cemetery plots were offered in perpetuity, giving the plot eternally to that person, and their remains were never to be disturbed (Rugg, 2000). Families claim control over their plots and conduct culturally appropriate funerary rituals (Francis et al., 2000; Rugg, 2000). They serve and sustain families, the whole community, town or district and become part of their history (Francis et al., 2000; Rugg, 2000). The cemetery reflects the social and economic stratification of the times (Francaviglia, 1971). This in turn reflects the community over many generations, all in the same place, each in their own space (Rugg, 2000). Cemeteries record the changes in culture, religion and wide social influences (Francis et al., 2000). They record the intra-generational information as well as longer term inter-generational kinship relationships (Francis et al., 2000). There is an ongoing and changing story paying tribute to the past and turning to the future to carry on tradition and values (Francis et al., 2000).

Cemeteries may serve a function as a place of joy and remembrance (Huang, 2007), as well as enshrine the deceased placed within (Rugg, 2000). Society protects cemeteries from inappropriate or disrespectful activities (Francis et al., 2000; Rugg, 2000). A cemetery is a sacred space, a place for friends and family to return. Sacredness can be seen in religious terms, but also can include other meanings for cemeteries. These interpretations may be for permanence, visitation, and as a context for grief (Rugg, 2000). These spaces may become more or less sacred over time due to shifting attitudes (Rugg, 2000). The functionality of the site as well as providing an emotional context for grief makes them both sacred and profane locations (Francaviglia, 1971).

Many cemeteries are primarily secular, privately or governmentally owned and operated. These quasi-public facilities accommodate limited public access (Northway, 2005). Often located near population centers cemeteries compete with other development for the same desirable land (Francaviglia, 1971; Northway, 2005). Many people may not want to live near a cemetery, adding complications (Northway, 2005).

Ownership and management practices change over time, as each generation defines their own appropriate landscape for grief (Rugg, 2000). In many western countries, cemeteries incorporate into the park system or become tourist attractions (Huang, 2007). Older cemeteries may transform into heritage sites, bringing new problems such as commercialization, looting, vandalism, and inappropriate restoration. These problems can lead to diminished function for venerating the dead (Matero & Peters, 2003).

Generally a cemetery operator can expect approximately 1,000 plots per acre (Northway, 2005). Managers and planners must consider different ways of using limited available space for burial (Francis et al., 2000). Double depth plots, the practice of layering one body atop another, increases interments per acre, creating revenue opportunities. This saves space and allows the customer to save money (Northway, 2005), although it has not caught on in the United States (Rugg, 2000). Mausoleums offer another value added plan for cemeteries, allowing families to pay a premium for a smaller but more visible location that can hold several deceased (Northway, 2005). The increasing size of the average American requires design changes in new mausoleum construction. It is impossible to retrofit existing mausoleums for larger bodies and not uncommon for cemetery operators to receive requests for oversized plots (Northway, 2005). Vaults made of concrete and metal can be used above a casket and below the soil, or may be used above and below the casket. Required by many traditional cemeteries they prevent settling, allowing the ease of use of large lawn maintaining machinery. Created off-site and transported to cemeteries, the concrete and metal vaults have a large carbon footprint. Each vault requires 1.6 tons of reinforced concrete (Green Burial Council, 2010).

Our architectural forms and life patterns affect the cemetery and may be a result of complementary or competing influences. These interests may include cultural practices, propriety, time, ownership and responsibility (Francis et al., 2000). Cemetery operators provide upkeep to older portions of the cemetery while still turning a profit, although limited resources can inhibit success (Francis et al., 2000). They provide us an

opportunity to explore our preferred and resulting landscapes as important and valued public resources.

Ideals of Green Burials

A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise (Leopold, 1970, p. 262).

We need to look for new ways for the creation of abundance: economically, environmentally, and socially and to conserve that value for future generations (Moore & Manring, 2009) and we hope to leave a positive legacy. Concrete liners separate us from life and cremation removes us entirely. Green Burial offers an opportunity to reaffirm our connection with life (Feagan, 2007). Green burial may not be for everyone, but it is an option that is gaining popularity, just as cremation gained popularity throughout the last century (Rabideau-Silver, 2009).

On a personal level, death ends what we know, but can serve as an affirmation of our part of the ecological cycle (Plumwood, 2008). But the body does not just end; it decomposes. It loses the organization as we knew it and incorporates into other life forms (Plumwood, 2008). Usually static images dominate our thinking about the body after burial. Composed of the earth's constituent elements, our corporeal body transitions back into these elements actively. Feagan desires for his own burial a green interment, a social and festive celebration for family, friends, and community, appreciating the ecological values embodied in the choice of burial rite. It embraces an environmentally sensitive practice to work with a human-centered need (Feagan, 2007).

Some people choose green burial for reasons such as less cost, a spiritual connection, or for land conservation and preservation. Muslim and Jewish traditions use this type of burial (Rabideau-Silvers, 2009), others prefer “dust to dust” as in Genesis 3:19. Some see it as a way to not contribute to further environmental degradation with the overuse of water, pesticides and herbicides, soil and water pollution, wood harvesting and mining practices for use in caskets (Feagan, 2007). It does not require fossil fuels as used for cremation. Other factors leading the green burial movement are the need for people such as farmers to find ways to diversify their incomes (Feagan, 2007). One farmer echoes the sentiments expressed by many farmers before him, wishing after death his burial be simple and his family farm be protected from development (Feagan, 2007).

The tree of life universally symbolizes immortality and nourishment (Feagan, 2007), especially the evergreen (Francaviglia, 1971). The adoption of trees as grave markers creates an object of memory as well as environmental benefit (Clayden & Dixon, 2007). Trees may embody personal and cultural memories, perceived as permanent, and facilitate a relationship beyond the separation of death. Green cemeteries provide an ecological link to the future by preserving and fostering nature.

Still in the early stages in this country, green burial initiates rituals with a more comprehensive environmental ethic (Feagan, 2007). Whatever we hope to achieve by satisfying our social and cultural needs through the ritual of burial, we can also assist the living to be more conscious of our ecological selves. Green burial offers us a way to express concern and address ecosystemic needs, our integral ties to the world, our spiritual and personal tributes and our human social needs (Feagan, 2007). Connection, continuity and responsibility express truths about appropriate values orientation. Ethical

positions can expand our moral sense of the critical need to think about intergenerational equity.

Green cemeteries offer the consumer the opportunity to participate in long-term land holding that may serve multiple purposes, such as urban open space, arboretum, buffer, nature area, in addition to a place for burial. The green cemetery gives another choice of many that allows the consumer to act upon their values and appropriately venerate the dead. It reflects a preference for a personalized non-religious funeral, and returning to nature when one dies (Feagan, 2007). This is about more than a headstone (O'Connell, 2010).

The Green Cemetery as an Economic Enterprise

Funeral care solved a persistent problem -decomposing corpses- and turned it into an economic opportunity (Troyer, 2007). As a pragmatic environmental orientation, green burial providers, called entrepreneurs, explicitly utilize business aspects. This essentially illustrates the commodification of conservation, creating a status symbol of conspicuous non-consumption (Feagan, 2007).

In the 1990s enterprises of every size used environmental and social factors as strategic considerations. A connection between business and the environment provides opportunities to help stave off the threat of inevitable collapse of society. Ecological overshoot means “depleting the natural environmental capital instead of living off the interest” (Moore & Manring, 2009). An enterprise gains greater profitability through sustainable practices and can optimize their rate of sustainable change (Moore &

Manring, 2009). Green cemeteries exemplify a simple solution to replenishing some of our environmental capital.

Right now customers fit a particular demographic for green cemeteries (Feagan, 2007). Typical customers are over fifty, pre-planning and environmentally conscious for years (Vyhnak, 2009). The baby boomers look for alternatives in death as they look for alternatives in their lives (Feagan, 2007). Younger people also pre-plan with their ideals in mind, appreciating the ease of the conversation about green burial (Rabideau-Silvers, 2009). The need for a less expensive form of burial factors into customer choice and natural burial provides this (Feagan, 2007; O'Connell, 2010).

Citizenry pay directly for the beneficial effects of green cemeteries, public or private, through the purchase of plots. Cemeteries, often owned and operated by municipalities or counties, can become an asset through green or hybrid cemetery practices. These perform all of the functions of traditional cemeteries as well as provide ecological and social benefits with increased green space. In urban areas, green cemeteries may offer a link between larger green spaces or simply be a refuge of green in the concrete jungle. In many places, city parks departments maintain cemeteries. These departments already have tools and structures in place for the minimal care needed, such as litter and weed removal and the staff people to do the work. Land trusts work in concert with cemeteries that offer green burial. Communities benefit from non-profit entities starting natural cemeteries, since often the local authorities need to use resources to maintain existing cemeteries (O'Connell, 2010). Every plot a non-profit creates means one less that the public has to maintain.

Green cemeteries may manifest in many ways depending upon the needs of the community and the skills of the entrepreneur, in either private or public works. If a special piece of land needs conservation or preservation, such as an historic farm, a wild place, a special community space, it may take the form of a calculated minimum number of burials needed at what price to save it. In this way, it is preserved not only as a cemetery in name and income, it can continue to function as it has with little disturbance, and if well thought out, may increase the functionality of the environmental services provided.

Conservation value depends upon size location and type of land (Rabideau-Silvers, 2009). Carefully and thoughtfully sited, green cemeteries can maximize positive benefits. Each community will have their own location, needs, desired benefits, and ways to establish. Remote sites may offer beauty and environmental importance, buffers or corridors between other natural areas. Ideal urban sites may be within walking distance of population centers or sites that can be accessed by public transportation (O'Connell, 2010). A green cemetery that followed natural contours may provide a property edge ideal for walking and biking, providing many benefits to the public and the environment.

In another form, a green cemetery may provide a buffer from other human activities. An example: areas experiencing an environmental clean-up. In cases where noisy machinery will be used over a long-term period, a cemetery buffer could start before the project. After the site has been cleaned the cemetery would eventually fill in the space it had buffered. The benefits from the clean-up become part of an ongoing, living restoration project.

Another example: A tree farm that is a member of a timber certification cooperative for sustainable wood production. Depending on law, a given stream buffer is maintained for health of habitat. A tree farmer could double the size of the buffer bay creating green cemetery along the upper edge. The upper edge of the cemetery requires an added demarcation to provide obvious visual separation from the tree farm, such as fence and path. This would provide the tree farm with added income and a hedge against future increases in legal changes in stream buffer size. It also maintains stream buffer integrity.

Tactics used in other historical preservations are used with old and new cemeteries, and should be used with green cemeteries as well. The basic principles include documentation, surveying site conditions, developing an emergency program, and allocating resources based on historical and cultural values (Matero & Peters, 2008). Documentation includes recording and analysis of site conditions and surrounding area, archival field work, recording past and present practices, ethnographies and other such information in an organized fashion. An emergency program develops protocols for temporary protection programs, inventory and treatments (Matero & Peters, 2008). These should lead the organization to allocate funds according to current and ongoing threats and opportunities for the greatest return on investment. These tenets should inform all preservation work, with the standards for documentation and treatment aiding in analysis and planning (Matero & Peters, 2008).

Hand dug graves take approximately four to six hours each, depending upon soil quality, compared to 30 minutes for a machine dug grave. Hand digging preserves the peacefulness of the sanctuary for humans and animals (Wexler, 2008), and if done well

causes much less disturbance to the soil profile. Green cemeteries require very little upkeep to achieve their goals.

Limitations exist with the concept of green burials. Federal regulation requires concrete liners at military facilities. Lowering a body into a double depth plot needs sturdier material than a shroud can offer (Marino, 2009). If needed, exhumation poses an issue as green burial allows much faster decomposition than traditional burial (Marino, 2009). Remote locations require access by automobile which creates a downside (O'Connell, 2010), although no different than that which any other cemetery faces. Opponents feel it provides very little for a cultural movement other than simulated woodland (Clayden & Dixon, 2007).

Organizations Offering Certification

Green cemeteries must abide by all local and state laws. They may also wish to participate in certification programs to enhance their profiles and credibility. Both organizations featured represent major certification programs. The National Funeral Directors Association (NFDA) provides expertise for all facets of the funeral industry, while The Green Burial Council exists for green cemetery practices only.

NFDA created a green certification for members who wish to participate. This program gives recognition to funeral care providers that offer sustainable practices to support their business, clients, employees and communities. They must abide by legal and programmatic rules set forth in their Green Funeral Practices certification program, such as one or more green service package or itemized option, one or more sustainable or biodegradable casket or urn with no metal or harsh chemicals, offer a formaldehyde-free

option for short term preservation, education requirements in green burials for at least two employees within the last 18 months, and create and submit a green practices plan to the NFDA (National Funeral Directors Association, 2010). The NFDA identifies many reasons for a business to go green, such as positive media exposure, positive consumer reaction, reduced overhead, and bringing in new families. They clearly state, “There is no downside to going green” (National Funeral Directors Association, 2010).

The Green Burial Council (GBC), founded in 2005 as an independent non-profit organization, works to encourage environmentally sustainable funeral care and burial as a way of protecting natural areas. They see themselves as a conduit for conservation, collecting representatives from environmental and conservation backgrounds, consumer organizations, and academia (Green Burial Council, 2010). The GBC organizes a diverse group of stakeholders through extensive outreach campaigns, including stakeholders such as land trusts, parks, religious organizations, government entities, schools, and death care providers (Green Burial Council, 2010). There are over 300 GBC approved providers for green burial services in the United States and Canada. They cross constituencies for the common goal of inter-generational land conservation.

The vision statement for the Green Burial Council states a desire for eco-friendly end-of-life rituals as a viable option for honoring the dead, healing the living and inviting the divine. Legitimate benefits exist to environmentally sustainable death-care, such as reduction of emissions, toxification and waste. This provides way to acquire, restore and steward natural areas. This vision also desires that these values bring about a new ethic in funeral care rooted in transparency, accountability and ecological responsibility. The

culmination of this vision means that each of our deaths makes a difference (Green Burial Council, 2010).

They quickly came to understand that this issue needed a credible entity for third-party oversight. By encouraging the sharing of open source information and science behind green burial, the discussion and development of best practices can take place with the widest participation. The GBC provides certifiable and legally enforceable standards. They sought out traditional funeral homes and suppliers for green burial products and established standards for these. By creating language, protocols, and enforceable instruments, the GBC innovates new ways of protecting and creating habitat to lower the environmental impact of the burial process (GBC, 2010).

Green Burial Council Categories

GBC certification allows consumers the ability to distinguish between four levels of green burial ground. The four levels are: Hybrid, Low-Impact, Natural and Conservation. The listing of these categories reflects increasing requirements to meet the particular standard, with each level meeting the previous standards. It requires cemetery operators commit to a certain degree of transparency, accountability and third party oversight. It prevents future owners from renegeing on ecological or aesthetic promises made in the past, from limitations on burial density that protect a local ecosystem to prohibitions against the use of monuments that would negatively impact a vista.

Hybrid Burial Grounds commonly appeal to existing cemetery operations because they offer a new way to utilize portions of their land by extending the business model. A portion of the existing cemetery land set aside for hybrid use allows the practices

employed on the existing cemetery to remain unaltered. The standards for a hybrid cemetery preclude use of vaults, concrete liners or embalming, and allow for use of a variety of eco-friendly burial containers (Green Burial Council, 2010).

Low-Impact Burial Grounds (LIBG) must meet the standards for Hybrid Burial Grounds as well as adopting practices that are non-toxic and conserve energy. A LIBG may lie within a dedicated portion of an existing cemetery or exist as an entirely separate facility. Prohibitions exist against vault use and traditional embalming although the GBC allows approved non-toxic embalming products. Burial containers must be made from natural/plant-derived materials. The grounds must have Integrated Pest Management procedures in place (Green Burial Council, 2010).

Natural Burial Grounds (NBG) use plants and materials native to the applicable region and require use patterns of the landscape compatible with the regional ecosystems. They fulfill the requirements of the categories before them. Designed, operated, and maintained with a natural appearance as a goal, NBG do not need to fulfill full restoration standards at this level. Before opening a NBG, an independent professional in the fields of biology or restoration ecology must prepare a report addressing any impact to endangered plants or animals, cultural resources, and hydrology. Development of a plan for operations and a declaration of ideals employees, contractors and volunteers share the guidelines and vision. Procedures place limited visitation to sensitive areas, preserve scenic vistas, and prescribe appropriate memorial markers and the corrective action for those found inappropriate. An endowment established and maintained with 5% of all plot sales funds site upkeep (Green Burial Council, 2010).

Conservation Burial Grounds (CBG) meet all of the requirements set out for the levels listed above as well as further legitimizing land preservation. CBG establish a relationship with an existing conservation organization that will hold an easement specifically for conservation on the site or will place a deed of restriction guaranteeing long-term protection and stewardship (Green Burial Council, 2010).

All categories of certification must abide by rules. Any representations made to the public must not mislead or “blur the lines” between the different levels of certification. Families and friends must be allowed to participate in the burial ritual short of that prohibited by law or in conflict with the GBC standards. Funeral homes operating on GBC certified burial grounds require certification by the GBC. All levels of GBC certification excepting Hybrid Burial Grounds must adhere to requirements of deed restriction, conservation easement, or other legally binding and irrevocable instrument for the conservation and maintenance of the cemetery. These equate to requirements necessary for perpetual care in traditional cemeteries (Green Burial Council, 2010).

Green Burial in Action

Green burial took root as a viable public option in Western countries in 1993, when an established Victorian cemetery in Carlisle, Cumbria, United Kingdom created an extension of their grounds for natural burial. Trees marked the graves, no headstones allowed (Clayden & Dixon, 2007). It provided a solution to the problems of upkeep for graves as they age as well as lessened future liability of dangerous headstones with the added benefit of creating habitat (Clayden & Dixon, 2007). Between 1993 and 2007 over 200 green cemeteries were created in the United Kingdom. Most of these cemeteries

extend from existing local cemeteries, but also include privately managed sites and charitable trusts (Clayden & Dixon, 2007). The first green cemetery in Ireland had 80-90 presales before they opened their doors for burial and several hundred requests for information (O'Connell, 2010). Many people express a preference of a garden burial under a tree, although different landscape types, such as wildflower meadows carry great appeal.

White Eagle Preserve's 20 acres sits amid protected oak and pine forest, meadow, and steppe overlooking the Columbia River in Benton County, Washington State. They received GBC Conservation Burial Ground certification in 2008. The Sacred Earth Foundation owns and manages the 1,300 acre site surrounding the cemetery, including on it an "off the grid" ranch and horse camp for children. The proprietors feel a deep connection with the land and share it with their customers. Their website clearly states their policies, procedures, price list, and personal values. They offer services for both green burial and cremated remains. One may also have their pet buried on site. A child's death affects everyone and White Eagle Preserve offers plots for free to those less than 12 years old (White Eagle Preserve, 2011).

Moles Family Funeral Home celebrated the grand opening of The Meadow at Moles Greenacres, Washington State's first GBC certified Natural Burial Ground in 2009. This fourth generation family business operates a funeral home and crematoria. They own the cemetery, the only funeral home in Whatcom County to do so, as well as a cremation cemetery named Stillwater. Distinct boundaries exist between types of burial grounds.

Forever Fernwood describes itself as a leader in the green burial movement in the United States. Hills make up a large portion of 32-acre Fernwood in Marin County, California. Located near the Golden Gate National Recreation Area, native trees serve as grave markers and invasive weeds are removed (Wexler, 2008). Oak and bay trees ring the historic cemetery founded in the late 1880s. This site contains not only the historic and green cemeteries, but offers funeral home services and state of the art crematoria (Forever Fernwood, 2011). The National Wildlife Federation registered it as a Certified Wildlife Habitat because it provides food, water and shelter for wild animals (Wexler, 2008).

Forest Home Cemetery in Milwaukee, Wisconsin sold 25 plots for green burial within the first nine months of offering them (Rabideau-Silver, 2009), attracting customers from several surrounding states. Established in the 1850s it operates as a non-profit held in public trust and holds approximately 200 acres (Forest Home Cemetery, 2011).

Services provided by these cemeteries vary in style and location, organization type and age. Common themes among all of them include connectivity to community and place. Each cemetery chooses the appropriate certifying body as well as level of certification.

The Rethinking of Current Practices

We live necessarily through our bodies, and these bodies, in turn, necessarily live through the bodies of others- wheat, rice, steer, fish, microorganisms, bees, chickens (Wirzba, 2003, p. 86)

What sort of rethinking needs to happen to move toward the adoption of green burial practices? Is an eco-centric view needed or are humans able to find reason looking

beyond the here and now? Ecological connection, place and continuity, and a heightened level of responsibility should result from green burial (Feagan, 2007). Although leaving one's body for reintegration after the life-force leaves is a minor act, the moral content of a change in practice may bring critical changes in consciousness (Feagan, 2007).

The scale of anthropogenic effects upon the landscape seems insurmountable, especially in the form of a single green burial. The power of the act is symbolic, as a gesture to inform future values and help reshape them. A generation that has more interest in their own well-being and a general lack of interest in the future will engender those values to ones' children. Intergenerational equity means thinking and acting across generations for the preservation of the environment. De-centering ourselves as the sole arbiters of value, we become a part of nature, rather than apart from nature (Feagan, 2007). We need a rethinking in modernist society of continuity of life after death as it relates to the basic functions of the biosphere. This would result in a comprehensive and responsible ethical norm of returning our bodies to the environment as a conscious act and practice, recognizing intrinsic value of nature (Feagan, 2007).

We must acknowledge our social, cultural, and economic structures as they relate to our values and morals (Feagan, 2007). Re-conception of identity can re-imagine death in terms of reciprocity; an ethic of mutual nurturance (Plumwood, 2008). By placing ourselves and the future in an ecological framework through a rethinking of our narratives and practices, we see ourselves acting as part of continuity, rather than at war between life and death (Plumwood, 2008). This requires us to look to continuity for comfort, for our context in the future.

Cemeteries, long-standing, culturally important landscapes, serve a variety of purposes beyond the initial burial. We cannot simply create a new way of doing this out of context with social and cultural norms. Green cemeteries offer an opportunity for an alteration of practices for the purpose of a more bountiful outcome. Important to us now, cemeteries continue in importance into the future, even though styles change. Instead of being separated from life, cemeteries can become a place that fosters life.

The acceptance of the idea of green cemeteries will happen in its own way in each community, with each community deciding what their needs are and how green cemeteries can address them. The iterations of green cemeteries have the potential to address issues unique to those communities, and thus the potential to be expressed in their unique ways. Our connection to place through emotional ties helps to create our personal identity in concerns to culture and ecological connection. Geographic change of location has decreased our connections and feelings of responsibility to place even though people and place are interdependent (Feagan, 2007).

Advanced planning may give rise to personal and cultural apprehensions anticipating death (Francis, 2000), although not unusual and often a great relief to family and friends. Green cemeteries offer plots pre-need and can plant a tree for immediate ecological advantage. This allows a person to create something life affirming while still alive. Imagine having a family tree.

Feagan argues that we need a shift in our moral valuation away from anthropocentric to bio-centric. My assertion: using our anthropocentric values create care for these places, and because of their very anthropocentric value will easily show intrinsic

value. Ergo, the very fact that there are people buried under that forest will keep the forest in place and keep it sacred. Our dead are venerated here. The results provide a multitude of services valued by humans. Thus through our own desires and values, placing ourselves at the center of the universe, we have actually affected positive change through maximizing a slight alteration in something we are already doing. Landscapes emerge where the emotions of grief and nature are once again linked as symbolic partners.

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Appendix I

These cremation statistics compiled by the Cremation Association of North America (cremationassociation.org) and presented on the National Funeral Directors Association's website chart American interest in cremation and projected into the future (National Funeral Directors Association, 2010). This illuminates contextual information about the changing nature of dispositions in America. Information concerning data source is detailed at the end of this projection.

2025 Projections based on past 5 years' average percent change and Cremations to Deaths Projections-2010 and 2025

State	2005 Cremations	2005 Deaths	%	Projections 2010 %	Projections 2025 %
Alabama *	4,679	48,106	9.73	24.75	
Alaska *	1,764	3,058	57.68	63.54	
Arizona *	26,603	44,562	59.7	65+	
Arkansas *	5,457	27,654	19.73	23.98	
California *****	120,883	232,211	52.06	55.88	
Colorado *	16,486	29,563	55.77	62.43	
Connecticut **	10,240	29,515	34.69	39.66	
Delaware **	2,279	7,675	29.69	34.27	
District of Columbia **	2,454	5,391	45.53	65+	
Florida **	82,004	170,050	48.22	50.47	
Georgia **	13,794	65,683	21	27.52	
Hawaii *	5,961	9,329	63.9	65+	
Idaho **	4,910	10,665	46.04	52.42	
Illinois *	26,162	102,922	25.42	29.67	
Indiana **	11,925	54,874	21.73	47.12	
Iowa **	5,908	27,875	21.19	26.65	
Kansas **	6,280	24,774	25.35	34.59	
Kentucky **	4,880	40,386	12.08	18.41	
Louisiana **	6,346	42,012	15.1	21.31	
Maine *	6,844	12,806	53.44	62	
Maryland **	12,662	44,044	28.75	35.46	
Massachusetts **	14,448	53,447	27.03	30.29	
Michigan **	32,158	86,933	36.99	45.21	

Minnesota *	14,38	37,594	38.25	45.5	
Mississippi **	2,806	29,257	9.59	14.69	
Missouri **	12,746	54,692	23.3	32.05	
Montana *	5,050	8,554	59.04	65+	
Nebraska **	3,980	14,882	26.74	36.71	
Nevada *	12,815	19,692	65+	65+	
New Hampshire **	5,187	9,985	51.95	57.45	
New Jersey *	12,868	71,955	17.88	30.01	
New Mexico *	6,767	14,722	45.97	52.63	
New York *	36,841	154,147	23.9	28.13	
North Carolina **	16,715	74,693	22.38	29.65	
North Dakota *	632	6,143	10.29	11.58	
Ohio **	27,414	108,088	25.36	30.91	
Oklahoma **	7,257	36,278	20	27.73	
Oregon **	19,667	31,120	63.2	65+	
Pennsylvania **	34,830	128,401	27.13	33.71	
Rhode Island ²	3,022	10,177	29.69	NA	
South Carolina **	6,386	37,167	17.18	20.21	
South Dakota **	1,555	7,042	22.08	31.69	
Tennessee ¹	5,998	57,129	10.5	NA	
Texas **	35,001	154,994	22.58	30.79	
Utah **	2,946	13,356	22.06	27.24	
Vermont **	1,886	4,889	38.58	36.17	
Virginia **	15,057	57,715	26.09	33.33	
Washington **	29,412	45,951	64.01	65+	
West Virginia **	4,318	20,649	20.91	65+	
Wisconsin **	15,944	46,699	34.14	42.05	
Wyoming **	1,863	4,062	45.86	65+	
United States	778,025	2,432,000	30.88%	38.15%	51.12%
State	2005 Cremations	2005 Deaths	%	Projections 2010 %	Projections 2025 %

*Official 2005 preliminary figure from National Vital Statistics, State Health Department or similar entity. Fifteen states reported their numbers.

**Estimated using official 00-04 state data and 2004 confirmed death count from National Vital Statistics.

***2005 United States death total from the National Vital Statistics.

****California cremation total collected from the Association of California Cremationists.

1-TN cremations derived from surveying state crematories and 2004 confirmed death count from National Vital Statistics.

2-The state of Rhode Island began collecting cremation figures in 2005.

