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Unearthing the Potential of Green Burials: Mitigating Environmental, Financial, and Occupational Challenges for a Sustainable Future

If you think the final disposition of the dearly departed is free from misinformation, then you need to think again. Cemeteries are governed at the state level, and although no state outlaws green burials, many states have laws in place that make green burials or conservation cemeteries virtually impossible. These laws are entirely based off fear tactics, put in place because of how much money there is in pumping the deceased with chemicals to “protect” them after death. “We’re wasting all of these resources -- concretes, metal, hardwoods -- hiding them in vast underground fortresses. When you choose burial at the cemetery, your dead body is not coming anywhere near the dirt that surrounds it. Food for worms you are not” (Doughty, 2016). In fact, about 60% of people are interested in exploring greener funeral options not only for the ecological benefits, but also to save money (“Statistics”). This really shouldn’t come as a surprise considering that the average funeral in America costs just under \$8,000 (“Statistics”). By lifting these absurd restrictions put in place at the state level, thus making green burials more accessible, we can significantly lessen our country’s individual debt, air pollution, ground pollution, risks of injury to industry professionals, and vastly increase the amount of Protected Area.

Some states have put in place laws stating that there must be paved roads to burial plots, or fencing around cemeteries, both of which would only add to the problem of habitat

fragmentation while also defeating the point of having a Protected Area in the case of conservation burials (Brown 2019). “In 2008, for instance, commissioners in Georgia’s Mason-Bibb County adopted an ordinance requiring leak-proof containers for burials after neighbors complained about a proposed green burial cemetery” (Brown 2019). Education is crucial, as many of these laws were likely put into place because of misguided fears that the dead carry communicable diseases, or that formaldehyde is “leaking” into the groundwater. (It’s not, but that’s another paper for another day). Many states require new cemeteries to put in place a large endowment fund for future land maintenance, “which green burial advocates say is a burdensome requirement for places that are intended to be left in their natural state” (Brown 2019).

Green burials are not a new, ground-breaking phenomena; humans have been placing their deceased in holes in the ground for hundreds of thousands of years. “Although green burials vary widely, there are three characteristics required of a burial for it to qualify as “green”: toxic chemicals are not used to preserve the human remains or maintain the burial ground, biodegradable containers or shrouds are used for burial, and practices prioritize restoration or preservation of the natural habitat. Some green burial providers eschew the use of non-native grave markers, opting instead for native grave markers or GPS coordinates” (Haneman 2020). It is nothing more than getting back to simplicity and reconnecting back to the earth.

The Green Burial Council believes that the green cemetery movement is becoming more popular for both cost and environmental reasons. Unfortunately, “cemetery operators all over the country say outdated state and local laws have made it difficult for green burial to gain a foothold” (Brown 2019). This organization “certifies funeral homes, cemeteries, and suppliers with the goal of both reducing death’s environmental footprint and using burial as a new way to

protect nature. ‘We’re not reinventing the wheel here,’ she says. ‘we’re just going back to the way death used to be’ ” (Blakemore, 2016). This council looks at every aspect to encourage the most sustainable and least invasive funerals possible, from the chemicals used, to the transportation of the deceased, and even where the wood for caskets is sourced. “Green burial itself may take place in hybrid cemeteries (offering both conventional and green burial options), natural burial grounds (committed to sustainable, organic practices), or conservation burial grounds (to ensure perpetual protection of the land through deed restriction or conservation easement)” (Haneman 2020). Conventional cemeteries can be certified as “hybrid,” if they offer vault-free burials, biodegradable caskets, plant-based embalming, or a lack of embalming. Facilities that can hold themselves to strict standards concerning things such as waste disposal, energy use, and land conservation can become certified as “natural” or “conservation burial grounds.”

Ramsey Creek Preserve in West Minister, South Carolina is a beautiful scenic landscape filled with meadows, quiet trails, streams, and Appalachian woods. You wouldn’t realize it by looking, but there are about 500 graves here and it’s the nation’s first green cemetery. “If people think they’re in a cemetery, we’ve screwed up,” says a representative from the preserve (Blakemore 2016). Here, all the graves are dug by hand, and the bodies of the deceased are kept on ice until they’re ready to be lowered into the ground in either a simple box or cloth shroud. Only rough-cut boulders serve as markers. “The whole process of modern death seems to deny decomposition and prevent people from returning to the earth” (Blakemore 2016). A green burial gives the deceased the opportunity to give back to the earth, giving plants, insects, and microbes fertile soil that helps them flourish. The activity of bacteria and microbes account for about 90 percent of carbon and nitrogen mobilization in a given environment. Taking humans out of the

decay cycle is robbing the planet of nutrients that it desperately needs back. “In fact, decomposition is second only to photosynthesis for the cycling of nutrients and energy” (Pokines & Symes 38).

Embalming became popular in the United States of America at the very start of the Civil War with Colonel Elmer Ephraim Ellsworth, who is known as the first Union officer casualty of the war and was a well-known national figure before the war as well. Abraham Lincoln was a friend of Colonel Ellsworth and invited the family to hold the funeral at the White House, while also bringing in Thomas Holmes to embalm the body at the Washington Navy Yard (Habenstein & Lamers 207). “And when Mrs. Lincoln viewed the body in the East Room, in company with a Mr. W. A. Kelly, the latter found Ellsworth’s classic face “natural, as though he were sleeping a brief and pleasant sleep.” Washington newspapers echoed his favorable judgment, and the reputation of Holmes as a successful embalmer was established in the nation’s capital” (Habenstein & Lamers 208). Although these practices were at the height of sophistication and technology in its time, it’s just no longer necessary; we have no need to “preserve” a body for three months while half the nation rides on a horse and buggy to come mourn and pay their respects. Even if we did have this oddly specific need, we have glass-paned refrigerators now.

“There is no single aspect of the conventional American funeral process that is so widely misunderstood or that has been so forcefully marketed to the funeral-buying public” (Slocum & Carlson 58). Most people don’t realize that embalming is almost never a requirement and is rarely done outside of the US and Canada. “In 19 states, embalming is never required under any circumstance” (Slocum & Carlson 57). Some religions, such as Judaism and Islam, prohibit embalming, unless absolutely required by law, as it is a desecration of the bodily temple.

“The grief-stricken consumer does not behave like the typical consumer and is forced to deal with an extraordinarily expensive expenditure at a time when he or she is particularly vulnerable and cognitively impaired” (Haneman). It’s manipulation, plain and simple. They up-sell you because many of them work on commission and you can show grandma how much you loved her by spending more on a shiny metal box. An ex-funeral professional that I know quit the industry because his managers pushed and pushed for him to take advantage of grieving families to up-sell and over charge for pre-need services. In a time where we are on the brink of recession, we should be looking for other options. The second-best way for the government to lift the “gatekeeping” on green burials is by “mandating funeral agencies provide information on conservation burials” as well as simple, green burials (Holden & McDonald-Madden).

“Whether they mean to or not, the funeral industry promotes this idea of human exceptionalism. It doesn't matter what it takes, how much it costs, how bad it is for the environment, we're going to do it because humans are worth it” (Doughty 2016). A common misconception is that embalming will keep your loved one “picture perfect” for decades, when in reality it comes down to the skill of embalmer and strength of solutions used. “I have disinterred deceased that were buried five decades ago, that with minimum preparation a second viewing could be arranged. I have also disinterred individuals buried a decade ago where the remains had degraded to a point where even I was unsettled” (C. Eckard, in-person interview, April 2023). Modern embalming practices are nothing like what the Ancient Egyptian art of mummification and embalming were. The Egyptians used frankincense, myrrh, wine, and salts; the mummies in Egypt are significantly better preserved than modernly embalmed bodies.

Embalming creates a danger for the embalmers while doing nothing to protect the health of the mourning friends and family. “Only six states recognize the potential health hazard from

embalming. Delaware, Hawaii, Missouri, Montana, North Carolina, and Ohio specifically forbid it in the case of [select] infectious disease, or require immediate disposition, which would preclude embalming” (Slocum & Carlson 62). “Evidence of tuberculosis, smallpox, anthrax, tetanus, and AIDS have all been found in embalmed bodies” (Slocum & Carlson 62). These diseases generally have no chance of infecting others after death, unless the body is opened, and blood to blood contact is initiated, or chest compressions are performed. “It’s a scientific fact that dead bodies do not pose a health risk to anyone except in very rare cases,” (Slocum & Carlson 63), this pertains to the general public, the embalmer is another story. An embalmer could still contract AIDS from a deceased person with an accidental slip of the scalpel or tuberculosis with inadvertent chest pressure, but no one simply viewing their loved one in a casket will be able to contract hepatitis or tetanus.

“Formaldehyde exposure has been associated with cancers of the lung, nasopharynx, oropharynx, and nasal passages. Prolonged or repeated exposure to formaldehyde may result in respiratory impairment” (Mayer 69). There are also health effects associated with skin contact of formaldehyde, as it is a severe skin irritant. These effects can include discoloration, drying, cracking, and scaling. “Prolonged and repeated contact can cause numbness and hardening or tanning of the skin. Previously exposed persons may react to future exposure with an allergic eczematous dermatitis or hives” (Mayer 69). There are also numerous risks associated with eye contact and ingestion. The Licensed Funeral Practitioner I consulted for this paper has a blind spot, in his left eye, due to an accident in the Preparation and Embalming room.

“Even cremation, which is usually considered the environmentally friendly option, uses, per cremation, the natural gas equivalent of a 500-mile car trip” (Doughty 2016). The most common emissions from crematories are nitrogen oxides, carbon monoxide, sulfur dioxide, and

particulate matter (Klein 146). Other emissions may include mercury, other heavy metals, hydrogen fluoride, and hydrogen chloride (Klein 147). Mercury can be emitted if the deceased had any silver-blend dental fillings, the use of which has been declining in recent years. Hydrogen fluoride and hydrogen chloride could be emitted in trace amounts if there happen to be any plastics or micro-plastics within the stomach contents (Klein 147). Under the EPA, crematories are not regulated as “solid waste combustion units” because “the human body should not be labeled or considered solid waste” (Klein 105). The Clean Air Act gives states the right to enact stricter requirements than the EPA, and many states have enacted regulations for crematories. Many people choose cremation because they think it’s the “greener” option, but how many tons of air pollutants could be saved if we had more access to a *truly* green option?

“Changing the way in which one is buried will not solve the problem of climate change, but it does respect the notion that one’s last act on earth should not be to harm it” (Haneman 2020). One type of green interment is conservation burial, which is still a green burial but tends to be more expensive as the funds are put towards acquiring and managing Protected Areas. “If conservation burials became commonplace, then the revenue generated could exceed the amount of money required to fund the conservation of every threatened species on the planet” (Holden & McDonald-Madden). Holden and McDonald-Madden break down the math in which funding conservation for every IUCN threatened species could be a reality with increased awareness and implementation of conservation burials. “The average U.S. casket and embalming costs \$2,395 and \$695, respectively. Therefore, if all Americans who embalmed their remains (45%) purchased a conservation burial instead, U.S. burials could produce \$3.8 billion in conservation revenue” annually (Holden & McDonald-Madden). The IUCN estimates around \$3.4 - 4.8

billion/year is required to protect and manage habitat for every threatened species on Earth (Holden McDonald-Madden).

States with laws requiring fencing around cemeteries make the management of these areas incredibly difficult. The fencing causes habitat fragmentation on the landscape and can act as a barrier for certain native species of plants and animals. “Muslim cemeteries in Albania, which use conservation-friendly burial practices, are correlated with a higher native orchid biodiversity compared to the average Albanian cemetery” (Holden & McDonald-Madden). These conservation cemeteries can double as public greenspace with systems of trails and places for the public to reconnect with nature, especially in cities where these areas are scarce. “Human exposure to greenspace improves physical, social, and mental well-being. Therefore, using burials to restore and conserve natural habitat in urban areas is not only an opportunity to increase biodiversity but also to improve the well-being of grieving individuals and the public” (Holden & McDonald-Madden).

There are very real, tangible green alternatives to the embalming and burial system we currently have in the United States. Green burials can save people money, keep pollutants out of the ground and air, and give nutrients to the soil to restore ecosystems. Conservation burial can save our biodiversity and multiply the amount of IUCN Protected Areas. The traditions we pass on to the next generation should be sustainable and natural. This is no call for revolutionary change, or new technological advance: a simple step back, or return to true tradition. We all once returned to the earth and to the earth we should return.

Works Cited

- Blakemore, Erin. "Could the Funeral of the Future Help Heal the Environment?" *Smithsonian Magazine*, 1 Feb. 2016, <https://www.smithsonianmag.com/science-nature/could-funeral-future-help-heal-environment-180957953/>. Accessed 12 April 2023.
- Brown, Alex. "More People Want a Green Burial, but Cemetery Law Hasn't Caught Up." *Pew*, 20 Nov. 2019, <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2019/11/20/more-people-want-a-green-burial-but-cemetery-law-hasnt-caught-up>. Accessed 23 April 2023.
- Doughty, Caitlin. "A Burial Practice That Nourishes the Planet." *TEDMED*, 2016, https://www.ted.com/talks/caitlin_doughty_a_burial_practice_that_nourishes_the_planet. Accessed 15 April 2023.
- Habenstein, Robert W., and William M. Lamers. *The History of American Funeral Directing*. 7th ed., National Funeral Directors Association, 2010.
- Haneman, Victoria J. "Tax Incentives for Green Burial." *Nevada Law Journal*, *Forthcoming*, 2020, <https://dx.doi.org/10.2139/ssrn.3537225>. Accessed 20 April 2023.
- Holden, Matthew H., and Eve McDonald-Madden. "Conservation from the Grave: Human Burials to Fund the Conservation of Threatened Species." *Conservation Letters*, vol. 11, no. 1, 2017, *ResearchGate*, <https://conbio.onlinelibrary.wiley.com/doi/10.1111/conl.12421>.

Klein, Colleen M. (2014). *Cremation Standards for Funeral Service Professionals*. National Funeral Directors Association.

Mayer, Robert. *Embalming: History, Theory, and Practice*. 5th ed., McGraw Hill Medical, 2012.

Slocum, Joshua, and Lisa Carlson. *Final Rights: Reclaiming the American Way of Death*. Upper Access, Inc. Book Publishers, 2011.

“Statistics.” *National Funeral Directors Association*, 2022, <https://nfda.org/news/statistics>. Accessed 24 April 2023.