DUST TO DUST

Across the ages, we've come up with some very creative ways to dispose of our dead. Yet to be answered for the future is what part funeral service will play in the circle of life.

BY CURTIS ROSTAD

"In the sweat of your face shall you eat bread till you return to the ground, for out of it you were taken; for dust you are, and to dust you shall return." – Genesis 3:19 NKJV

According to the Book of Genesis, God's curse upon mankind for eating the forbidden fruit was a life of labor and that all would die and return to the earth. The Christian burial rite expresses it as, "Earth to earth, ashes to ashes, dust to dust." The opening song of *The Lion King,* composed by Elton John with lyrics by Tim Rice, calls it the Circle of Life (cue the music).

So, what happens when we die? If you are asking if another life is to come, you engage in a philosophical and religious discussion that has occupied our minds from the very beginning. In the physical realm, the presence of a dead body presents a more immediate problem. Something has to be done with it. Immediately the body seeks a state of thermal equilibrium. It either warms or cools to match the temperature of the environment. The soft parts begin the unpleasant process of decomposition, with its accompanying odor. Even when that process is complete, the hard parts remain and something must be done with them.

Since the beginning of human history, humans have come up with some very creative ways to dispose of their dead.

BURIAL

The most widely practiced solution to the problem of having the dead among us has been to bury the body in the ground. It has been practiced by the Chi-

nese, Japanese, Bali, Jews, Christians, Muslims and many others. A few feet of dirt discourages scavengers, masks odors and contains disease. It is both simple and environmentally friendly as the body returns to its constituent elements. Modern practices of embalming and sealing caskets and burial vaults may slow the process but cannot stop it.

ENTOMBMENT

The placement of the body in a building or structure is sometimes referred to as above-ground burial, one of many oxymorons used to describe the methods of human disposition. The most obvious examples are the great pyramids of Egypt, in which kings were placed after a lengthy and expensive embalming process.

A second example is the Taj Mahal in Agra, India. It was built by Emperor Shah Jahan between 1632 and 1653 in memory of his wife. Both of their bodies lie inside.

The National Cathedral in Washington, D.C., has been the site of the funerals of many politicians and prominent residents of the nation's capital, including four presidents. But it is as much a mausoleum as a place of worship, with more than 200 of the dearly departed resting there, including the body of President Woodrow Wilson.

St. Peter's at the Vatican in Rome is another example. Catholic tradition says it is the burial site of Peter the Apostle. It is also where some 100 popes are interred. Finally, we should mention the placement of Jesus of Nazareth in a garden tomb in Jerusalem, although according to Christian belief, his body wasn't there very long.

SKY BURIAL

This practice, strange to the West, is mostly practiced by some Tibetans and Mongols. The body is placed on a mountain top or specially constructed tower to allow animals or birds to consume it. In Tibet, it is called "giving alms to the birds."

BURIAL AT SEA

Disposal of the body into the ocean is the practical means of disposition for the Navy. It can also be an option for civilians with an affinity for the sea. The body can be wrapped in a shroud or placed in a casket with holes in it to allow it to sink. Weights ensure that the body or casket stays submerged. It is regulated by the Environmental Protection Agency, which issues about 2,500 permits each year for this form of disposition.

CRYOGENICS

For those who want to explore the idea of immortality along with the disposal of their body, we present cryogenics, sometimes referred to as cryonics – the freezing of the body using either liquid nitrogen or liquid helium. The goal is to preserve the body until the disease that caused death in the first place can be cured and the technical knowledge exists to revive the body. Some have chosen to store only their brain hoping it can be revived in the future. It is believed that there are approximately 250 citizens who

have opted for a chance of scientific reincarnation through cryogenics.

Early attempts at cryonic preservation began in the 1960s and early 1970s. The process was given a media boost when it was reported that Walt Disney, who died in 1966, had his body frozen for eventual "reanimation" (pun intended). From there, the story morphed into just his brain being frozen and maintained somewhere on the grounds of Walt Disney World.

Despite numerous attempts to debunk this urban myth, some people still believe the story even though it is easily proved that Walt Disney's body, head and all, was cremated and that the cremated remains were interred in the family plot at Forest Lawn Memorial Park in Glendale, California.

But these early ventures ended in failure because all but one of the companies went out of business, and their stored human remains had to be disposed of. Cryonics is offered today by four companies, even though most scientists believe that reviving a long-dead body and brain is impossible. Too much damage, they say, will have been done by the freezing process itself. Still, there are those willing to take the chance – with costs as high as $200,000.

With both cremation and alkaline hydrolysis, disposition is incomplete. Something still must be done with the remains.

GREEN BURIAL

Loosely defined, green burial refers to being more mindful of the environment when burying human remains. This is usually meant to mean burial in a cemetery or designated portion of a cemetery where no vault or grave liner is required and no power equipment is used to dig the grave. It would include no use of embalming fluid or other chemicals. The casket or container that is used must be completely biodegradable, or the body can be simply wrapped in a shroud.

The intent is to have the land return to its natural state, so there is no grave maintenance, and markers are generally not allowed. Some green cemeteries offer only a GPS coordinate to indicate the approximate location of burial.

Some believe that any conscious steps taken to save the environment constitutes a green burial and thus there are many shades of green. While purporting to be better for the environment, digging a grave by hand is expensive and it does not provide a convenient means to memorialize a loved one.

CREMATION

Burning of the dead is probably as old as burial but historically has not been as widely accepted. Its popularity has been tempered because it has often been associated with human sacrifice and punishment. It was common but not universal in Ancient Rome and Greece. With the rise of Christianity, it declined and was even made illegal in some areas of Europe.

It was reintroduced in Europe in the 1870s. Many Western churches began to accept cremation, although the Catholic Church continued its opposition until 1963. It is still opposed by Islam, Judaism (especially conservative and orthodox) and certain Eastern Orthodox. It is the preferred method of disposition for Hindus and Sikhs. The use of cremation by the Nazis during the Holocaust also slowed the acceptance of cremation following World War II.

But beginning in the 1960s, cremation became increasingly accepted in the West and is now the predominate means of human disposition in the UK, most of Europe and Japan. Rather recently as well, it has accounted for more than 50% of dispositions in the United States. Cremation is not eco-friendly and is heavily dependent on fossil fuels.

ALKALINE HYDROLYSIS

A process used to dissolve the body is known as alkaline hydrolysis. It is also known by a number of oxymorons, including bio-cremation, flameless cremation, water cremation, aquamation, resomation, or, simply, AH.

The body is placed in a stainless-steel cylinder filled with water and potassium hydroxide (caustic potash) or sodium hydroxide (lye). The mixture is heated to 350 degrees and put under pressure to prevent the solution from boiling and to quicken the process. Depending on the equipment used, in about four to six hours, the soft tissue is dissolved and the skeletal remains reduced to white, porous bone material that can be easily crushed to the same consistency as the cremated remains.

The process was first patented in 1888 for disposal of animal carcasses but not used for human remains until the end of the last century; it was heavily promoted at the beginning of this one. While it is claimed to be more eco-friendly than cremation, it leaves a tank full of fluid and dissolved human remains (euphemistically called the "effluent") that must be disposed of, usually down the sewer system.

Therein lies its first objection, commonly referred to as the "yuck" factor. Even if they can accept the idea of dissolving their loved one, many people have a hard time accepting the idea of sending most of that loved one down the sewer. In addition, the process is generally more expensive than cremation.

Alkaline hydrolysis is legal in some 29 states. Legalization in the other states is usually held up by a discussion of the disposal of the effluent, opposition from various religious communities and a lack of resolve on anyone's part to effectively push the legislation.

One issue with both cremation and alkaline hydrolysis is that disposition is incomplete. Something still must be done with the six to eight pounds of bone material commonly referred to as "ashes." Most often, they are buried in a cemetery, placed in a mausoleum crypt (columbarium), scattered over land or sea, or placed in a decorative urn and kept at home by the family. Too often, they sit abandoned and unclaimed at the crematory or funeral home.

SPACE BURIAL

Yes, someone actually floated the idea of placing bodies in a capsule and rocketing them into deep space, where they would forever travel through the universe. But it did not take long to realize that this was impractical and ridiculously expensive. Instead, since 1994, Celestis and other companies offer to send a tiny portion (a few grams) of cremated remains into space. Depending on destination, prices start at $2,495. Of course, it is not really a burial and it does not dispose of the cremated remains since most of the ashes remain.

MEMORIAL REEFS AND OCEAN BUOYS

Since the late 1980s, Eternal Reefs has offered the option of turning the cremated remains into an ocean reef. The remains are mixed with an environmentally safe concrete and formed into a "reef ball," which is placed to provide marine life habitat. The casting of the concrete allows the family to include handprints, private messages and a bronze memorial plaque. Larger balls can accommodate the ashes of multiple family members and even pets. The smallest reef balls are about 2-by-3 feet, weigh more than 500 pounds and cost about $5,000.

New on the scene is Bluewater Voyage Buoy, which offers a completely new method of scattering cremated remains at sea. Once the remains are packed inside the buoy, a Bluewater Voyage vessel deploys it into the Gulf Stream for a year-long adventure. Sensors in the buoy connect with an online portal through which family and friends can track their loved one's cremated remains. Once the buoy is deployed, one of three things will happen: 1.) At any given point during the trip, the family can scuttle (sink) the buoy to become a permanent ocean grave marker; 2.) If the buoy gets within less than 100 feet of water, it will be scuttled to prevent it from washing ashore; or 3.) At the 365.5-day mark, the buoy will be scuttled to become a permanent grave marker on the ocean floor.

JEWELRY

Keeping a lock of hair from the deceased as a keepsake was common in the 1800s. The hair was often incorporated into wall art or jewelry. With the increase in cremation, modern jewelry designed to hold a small portion of cremated remains became available in the late 1980s. And then they went one step further…

A company named And Vinyly will press ashes into vinyl and create a playable record featuring a song of your choice.

ASHES TO DIAMONDS

There are now several companies offering to take a portion of cremated remains and turn it into a real diamond. Instead of diamonds created by nature from naturally occurring carbon, these companies use the carbon in the cremated remains to create the diamond. The process can take several months and costs range from about $1,500 for a .25-carat stone to about $40,000 for a 3-carat stone.

AND THERE'S MORE...

- Commission a piece of art and have ashes mixed into the paint. The choice of painting is up to you.
- A company named And Vinyly will press ashes into vinyl and create a playable record featuring a song of your choice.
- The UK's Heavenly Stars Fireworks will add ashes into fireworks and shoot your loved one into spectacular oblivion. A three-minute show runs about $2,400; six minutes about $7,500.
- Ashes can be added to tattoo ink to create a permanent memorial of skin art.
- Glass Remembrance will encapsulate ashes into a swirling design of decorative glass. In Light Urns will create a functioning hourglass using ashes instead of sand.
- Bios Urn produces a biodegradable urn containing the ashes, seeds and nutrients for growing a tree; choose maple, oak, pine or redwood.
- For hunting enthusiasts, Holy Smoke in Stockton, Alabama, will use one pound of ashes to create 250 functional shotgun shells.

HUMAN COMPOSTING

The latest method for the disposal of human remains has emerged within the last five years or so and is called human composting. The process is also called terramation or natural organic reduction and is defined as creating an optimized condition for naturally occurring microbes and bacteria to break down the body.

One well-known company offering this service is Recompose, headquartered in Seattle, Washington. It is a fully licensed funeral home, so it competes directly with other funeral homes and cemeteries. It claims to have served "hundreds of families," but it is unclear whether this is the number of bodies processed or if it includes those who have committed to the process upon their death. The cost is $7,000, and the process is legal in only a handful of states so far.

The unembalmed body is placed in a stainless-steel vessel, along with wood chips, alfalfa and straw. Microbes break down the body over a period of five to seven weeks while the temperature inside the vessel is monitored and the vessel rotated to increase oxygenation. When that portion of the process is complete, the organic material, including what was once a body, is removed. Inorganic material (such as artificial knees or hips) is removed and bone fragments are pulverized. The compost is then placed in a curing bin for an additional three to five weeks. At the end of the three-month process, about one cubic yard of soil weighing 500 pounds or more is produced – enough to fill a pickup truck bed. It can either be taken (or just a portion thereof) by the family or donated to conservation efforts arranged for by the company.

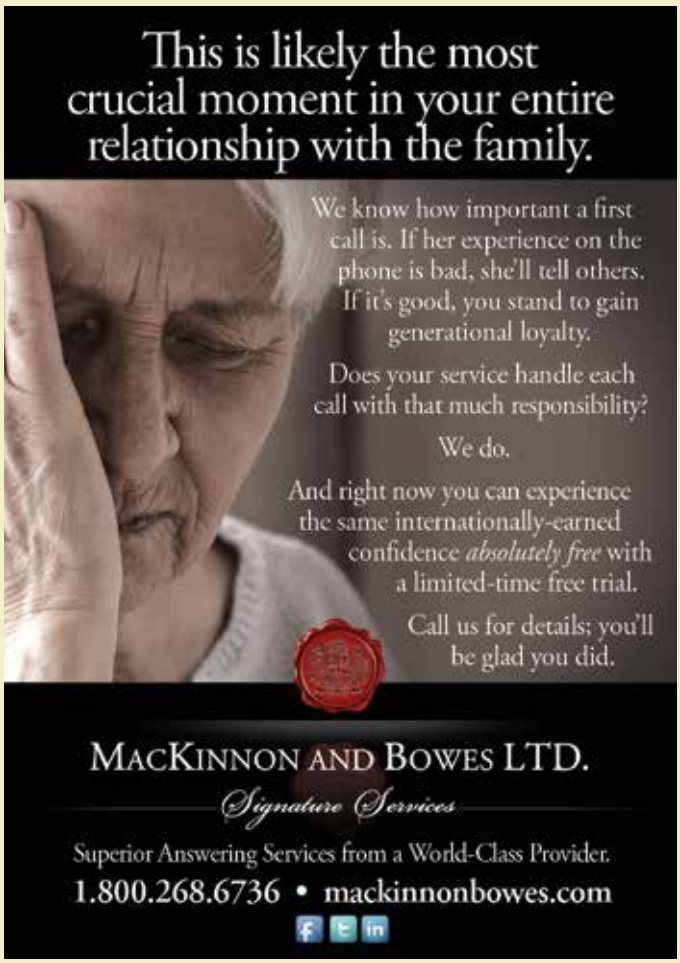
The Challenge

Like alkaline hydrolysis, cremation once had a yuck factor and few believed it would ever become widely accepted in the United States. Today, interest in alkaline hydrolysis and green burial has cooled considerably since they were first hyped. It's anyone's guess as to whether either will ever catch on. In 2021, green burial and human composting had combined revenue of less than $600,000 in a deathcare industry worth $20 billion. Both are marketed as eco-friendly. But while Americans openly embrace saving the environment, their interest seems to wane if it is inconvenient or costs more.

Some of these offerings are in direct competition with what funeral homes and cemeteries provide. Others might provide some level of referral income. The challenge to funeral homes and cemeteries is to be forward-thinking and ready to provide the services the consumer wants, yet without wasting time, energy or money on fads and scams.

The key to funeral service has always been service. Someone has to move the body from where it is to where it must go, and there has never been an overabundance of people willing to do that. No one knows better what administrative functions must be done immediately upon a death. And no one brings the community together to ceremonially honor the dead better than funeral directors.

Cemeteries have always been a repository of our history – fulfilling a basic human desire to be remembered. Regardless of what happened to the mortal remains, there is still a need for a place for people to go to remember and to honor.

For now, the Book of Genesis and Elton John have it right. Eventually, we return to the dust. Yet to be answered for the future is how we will respond and what part funeral service will play in the circle of life.

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