

Immortality

The Search for Everlasting Life

S T E V E N B . H A R R I S

Since the 1960s when the late Joseph Campbell's *The Hero with a Thousand Faces* began to be read on college campuses, and most especially since the Bill Moyers PBS interviews with Campbell (1988) which made his work still more popular, many people have begun to look at mythology in a new light. We all know, or thought we knew, what a myth was—one of those weird stories that people in other cultures tell. Our stories, by contrast, were called “religion,” or “scripture,” and were not weird at all. In fact, Joseph Campbell (tongue firmly in cheek) once defined myth as “someone else’s religion.”

Myth is not only religion, of course, but something more inclusive. Myth might broadly encompass such things as rituals and beliefs, but most especially myth is the collection of primitive stories that we tell ourselves in order to have a narrative psychological framework with which to deal with the world. In the largest sense, myth includes (but is not limited to) any story which answers the difficult questions of life, such as: Who am I? Where did I come from? Where am I going? What is the far future going to be like? What is expected of me? Who are the heroes? What’s going to happen to me when I die?

In life it is important to answer these questions (even if the answer is insupportable fantasy), since excessive worry about them may

detract from basic survival efficiency. We know from recent psychological experiments, for instance, that compared with objective assessment, people with normal “healthy” mental outlooks consistently overestimate their own abilities and strengths; whereas people who are depressed are far more realistic in such judgments. Why would human nature saddle us with a normal mental state which gives us an unrealistic view of the world? The answer may lie in the fact that anxiety saps strength and ruins performance (as many an Olympic athlete has discovered). Anxiety is so bad that sometimes it is worth a small cost in objectivity to be rid of it.

A major function of myth (and of a large part of human culture) is to relieve anxiety by answering unanswerable questions. Karl Marx once said that religion is the opiate of the masses, but perhaps what he would have said today (given modern pharmacology) is that religion is the Valium of the masses. The same can be said of superstition. Superstition, in fact, is also just another name for other people’s religion.

Of course, there is also much art in myth. Myths may not be factual, but that does not mean that in some sense they are not true. As Professor Campbell reminds us, all metaphors are (in the narrow sense) lies. After all, the moon is not really a ghostly galleon, tossed on

cloudy seas. Myths are metaphors—metaphors for something that cannot be said any other way; they are stories that speak to a basic and very old part of the human consciousness—the part of the consciousness that holds basic cultural programming.

Mythic stories (to adopt a technical metaphor) are a little like the programming in the “read-only memory” chips of a computer; they represent programming that is more or less permanent. Once you are culturally programmed the first time, you are stuck with it for good, and after that (i.e., after a certain age), any new cultural myths will sound foreign and alien to you. As any missionary can attest, mythic re-programming is often not completely successful because of this effect. The same effect appears when people lose faith later in life—we remember Bertrand Russell’s famous thesis that Catholic atheists are quite different sorts of people than Protestant atheists.

The Mortal Hero

Much of cultural programming is in stories, and since the time of James Joyce’s introduction of the idea of the “monomyth,” it has been argued that there are only a few basic stories, and all good tales are variations on these. The basic love story, for example, in all its permutations, never seems to tire if told well. There are also basic creation myths, including a cycle of myths involving feminine forces and goddesses (as Robert Graves reminds us) which seem to be important in artistic inspiration. Finally, from the masculine side, there are stories of the hero, an often semidivine and usually male adventurer who is on a quest or a journey, and who must win a victory of some kind before returning home with the power that he has won. (The traditional hero, being at once both masculine and

admirable, is presently out of fashion in many university English departments, but Campbell’s paradigms seem to work best for the science fiction themes we will cover.)

Although the hero is often semi-divine, it is a feature of many hero tales that he be at least partly human, and thus mortal. It is important to note that the rules of conduct are manifestly different for Gods; Gods are beyond morality in myth, and many of the Greek myths about divine behavior (especially as retold later in Latin) are as amoral as modern TV soap opera. Morality and the question of “The Good,” however, are important for mortal humans (who have only a limited time to learn from mistakes), and thus the tale of the mortal hero is often a morality play. Hero tales are often stories of the mortal human who manages, as a hero, to make of himself something more. Given this fact, one of the most popular and one of the oldest of the hero myths is that of the hero who seeks the boon of immortality. We will now examine how this myth is played out in religion, science, and science fiction.

Resurrection and the Hero

We suspect that tales of resurrection have been around for as long as there have been people. Neanderthal graves have been found with food and tools in them, and we are led inexorably to the idea that these things were included in the grave because it was thought that the deceased might one day need them. From this we infer that Neanderthals had some form of language, since it would seem impossible to communicate something as abstract as “life-after-death” with a few grunts and barks. By this loose chain of reasoning we can guess that even Neanderthals had a culture, and that culture told immortality stories.

The oldest written story known is a more than 5,000-year-old Sumerian tale of a hero in

search of immortality—the story of Gilgamesh the King. Heros are often semi-divine as well as royal, and King Gilgamesh is 2/3 god and 1/3 man. Gilgamesh's human part presumably confers mortality on him, and in one of the Gilgamesh tales he realizes that he is one day going to die, and so starts out looking for the secret of life. After he finds immortality he foolishly loses it, and thus Gilgamesh becomes one of the first tragic heros.

Almost every culture has its tale of the divine but mortal hero in search of the gift of immortality (although the hero is usually more successful than Gilgamesh), for example, Adonis, Tammuz, Dionysus, etc. One of the most important myths, however, is that of the Egyptian Osiris, a god who comes to Earth to be a teacher, and here gets assassinated and dismembered (if heroes are fully divine, they are often still vulnerable). Later, after being reassembled by his divine brother Horus, Osiris goes on to become God of the Dead. His sacred name is thereafter used in the ritual in which the dead of Egypt make the journey through the underworld to be immortally reunited with the breath of life. Egypt is the first society we know of to link the ideas of immortality and resurrection with human technology—in this case the technology of mummification—but the application of the technology was ritualistic and thoroughly religious.

The biblical Pharisees believed in the resurrection of the dead, and the myth of the resurrected hero was, according to the Gospel of Matthew, present in Palestine in the time of Jesus. According to Matthew (16:14), Jesus asks the disciples who people are saying that he (Jesus) is, and they reply in part that some people think that he is really John the Baptist. John the Baptist had already been beheaded by this time (Matt. 14), so the disciples are obliged to repeat the popular myth of a popular hero getting killed and coming back to life to work miracles. And all this is before the crucifixion of Jesus. Thus, anyone who takes the

testimony of the New Testament literally must also admit that mythic folk-stories of the return of a popular dead figure were then widespread, just as they are now.

Resurrected hero stories seem to occur in all cultures. When the Roman Catholic church made it to the New World in the 16th century, some of the resurrection myths the natives were telling were so close to the Christian one that some of the Jesuits listening to them were convinced they were the work of the devil. A more Jungian view is that these archetypal stories are reflections of the way the human collective unconscious is constructed; or, if you prefer modern neurophysiology, the networking of the neural architecture. In any case, if we do not have a God-shaped place in our souls, we at least may have a resurrected-hero myth in our psychological make-up.

Mal-resurrection and the Anti-hero

It is interesting to examine what happens mythologically when the resurrected individual is not a hero, and no official religious process is involved. There has always been a darker side to resurrection stories. It may be expected that Kings and demigods return from death; but people do not always want the same for their more mundane elderly relatives, particularly in areas of scarce land or resources. Here we have a source of anxiety, with which it is the social function of myth to deal. In mythology, the newly dead (unless royal) are always dangerous unless properly dealt with, and are apt to give trouble to the living in various ways until they have completely decayed to safe bone. It has been popular in many cultures worldwide, in fact, to ritually treat a new corpse in various ways to insure that it stays in the grave and does not become a revenant.

Originally, many mal-resurrection stories and myths probably had their origin in misun-

derstanding of what happens to an unembalmed human body after burial. Today we know that the natural decay process sometimes results in bloated corpses which look fatter, which may exhibit a discharge of blood from the mouth, and have skin changes which appear more life-like, rather than less. Unso-phisticated people, on seeing these changes, apparently were apt to infer that the corpse had been out and about, and feasting on blood. A collection of such stories later loosely inspired an enduring personification of evil immortality and resurrection—Stoker’s *Dracula* (1897).

The walking mummy of the Karloff movie is of course closely related to the vampire. In mythic terms, resurrection from the dead is possible, but without a standard religious mechanism, or at least a royal or divine heropatron (such as Osiris or Jesus), such resurrections in myth are evil, and can be expected to produce monsters. In the case of the vampire and the mummy, the result is a living dead man who is not the original person, but rather a transformed and murderous demon. In fiction, as in myth, the general message to the common public about coming back from the dead is: “Do not try it without the religious seal of approval.”

Immortality through Resurrection and Resuscitation

Before we return to mal-resurrection, we must consider a second theme—that of technology and medical progress. The critical element in science fiction is the speculative impact of technology on individuals and culture, and it is technical progress and its implications which have, more than anything else, made the mythic vampire and his cousins more immediate in our time. *Dracula* and *The Mummy* are rather late figures in the history of horror, and

as immortal personifications of mal-resurrection, both are recognizably literary grandchildren of Mary Shelley. Long before Shelley and the birth of science fiction, however, came certain developments in the science of resuscitation which made people think differently about resurrection.

Historically, there is some suggestion of mouth-to-mouth resuscitation in the Bible (II Kings 4). Although the story appears a bit garbled, like the story of the resuscitation of the child before it in I Kings 17, both stories contain descriptive elements of chest compression, and there is clearly something more than mysticism going on in the account. For centuries, however, the Western world made little progress in the matter. In the middle ages, when much of the advancement of medical science was in Moslem hands, Arabic medical books told of a little-known secret which had been passed down from midwife to midwife: if one blew into the nostrils of a stillborn infant, sometimes it began breathing. We know that Arab physicians also did some experimenting with attempting to resuscitate corpses with bellows, but word of this work was not widespread either.

Then, in the middle of the 15th century, everything was changed by the invention of the cast-metal movable-type printing press. Suddenly, written knowledge became relatively cheap to own because the work to manufacture it was now drastically less. Science, whose treasure-trove was a wealth of experimental detail which did not lend itself well to oral tradition, was particularly benefitted by printing. In fact, partially linked to this important device was not only the Renaissance and Reformation, but the Scientific Revolution.

One of the earliest influential books of the Scientific Revolution was Andreas Vesalius’ atlas of the human body, where (among many other things) Vesalius describes techniques for resuscitating asphyxiated dogs with bellows. Similarly, Paracelsus, an alchemist and one of

the great physicians of his age, was also said to have attempted the resuscitation of a corpse using bellows, a trick he perhaps picked up from Arabic medical writings. Physicians eventually learned that simple mouth-to-mouth resuscitation sometimes worked on recently asphyxiated adults as well as it did on newborns.

By the 1740s, several cases of successful mouth-to-mouth resuscitation had been reported, the most famous of which was Tossach's 1744 report of the resuscitation of a clinically dead coal miner (no breath or heart-beat) who had been suddenly overcome after descending into a burned-out mine. By the 1760s, in the wake of such reports, a number of groups advocating the resuscitation of drowned persons had sprung up in Europe. In 1774 a society was founded in London to promulgate the idea that "dead" people in some cases were not dead. Called, after a bit of experimentation, the "Society for the Recovery of Persons Apparently Drowned," it quickly evolved into the Humane Society (still later, with official patronage and funding, the Royal Humane Society, which it remains to this day). The Humane Society advocated techniques which were highly advanced. Three months after the society's founding, as an example, a society member had the opportunity to minister to a 3-year-old child named Catherine Sophie Greenhill, who had fallen from an upper story window onto flagstones, and been pronounced dead at the scene. The society member, an apothecary named Squires, was on the scene within twenty minutes, and history records that he proceeded to give the clinically dead child several shocks through the chest with a portable electrostatic generator. This treatment caused her to regain pulse and respiration, and she eventually (after a time in coma) recovered fully.

The resuscitation of little Catherine Greenhill was probably the first successful cardiac defibrillation, and it followed earlier sugges-

tions by American scientist Benjamin Franklin and others that electricity might possibly be used to "revivify" the human body. And so it proved able to do in selected circumstances. By 1788, a royal silver medal was awarded to Humane Society member Charles Kite, who was by this time not only advocating the resuscitation of victims in cardiac arrest with bellows and nasolaryngeal intubation, but had also developed his own electrostatic revivifying machine which used Leyden jar capacitors in a way exactly analogous to the DC capacitative countershock of the modern cardiac defibrillator.

The enlightened state of the late 18th century as regards resuscitation was not to last. From the very first, dark images from the human psyche began to gather in resistance to the new ideas. Technology never intervenes in a major way into human life without creating new anxieties and a certain amount of social backlash. Resuscitation had its problems. To begin with, the discovery that "death" was not a sure and objective state did not exactly sit well in the public mind. Charles Kite was of the opinion that not even putrefaction was a sure sign of permanent death, since it might also be due to advanced scurvy! The public was wondering: if one could be mistaken for dead, like Shakespeare's Juliet, when one was in fact resuscitatable, did that imply you could be buried alive? It did.

The result of this realization was a psychological terror familiar from Edgar Allan Poe's "The Premature Burial." Poe, however, popularizing the problem for early 19th-century America, was actually late to the controversy. In 18th-century Europe the fear of premature burial or dissection was not just the preoccupation of macabre writers—whole classes of people were affected, albeit in different ways. Upper class persons took to fitting coffins and crypts with special signalling devices which could be used to alert the outside world in case the occupant should inexplicably revive. The

lower classes had their own special problems, too, since anatomical dissection (long a part of the punishment for heinous crimes because it denied the malefactor an intact bodily identity or a grave) had now taken on a special meaning. To wit: it killed.

Resurrection in Science and Fiction

With scientific resuscitation, technology had finally intruded into the macabre. The horrific potential of the new electromechanical resuscitative technology had its first fruitful literary influence on Mary Shelley, a teenager who in late 1816 had first set out to write a ghost story, but had instead ended up producing *Frankenstein* (1818), a cautionary tale of the technological resuscitation of a monster composed of pieces of corpses by a medical experimenter. “Frightful it must be,” writes Shelley of her vision of the monster in an 1831 introduction to the book, “for supremely frightful would be the effect of any human endeavour to mock the stupendous mechanism of the Creator of the world.” Given the spirit of the times Shelley’s story touched a public nerve as though with one of the new electrical machines, and *Frankenstein*’s monster was an instant sensation. In keeping with its archetypal nature, the tale, completed while Shelley was still only nineteen, remains her most famous and enduring work.

After the *Frankenstein* sensation, something strange happened. Shortly after the publication of Shelley’s famous story, the new medicine began to go out of favor, and the science of resuscitation began to suffer on both the technical and mythological fronts. It happened for several reasons. Mouth-to-mouth resuscitation was discarded for bellows, which, in turn, were discarded for technical reasons. Electrical resuscitation fared no better than mechanical “respiration” (ventilation). The new phenom-

non of electricity early-on was transformed into a quack cure by the practice of “galvanism” (passing mild shocks through the body in an attempt to cure disease) and its reputation accordingly tarnished. Then, and perhaps even more devastatingly, the charming new electricity was in turn transmuted into a powerful and dangerous force by the giant alternating current transformers of George Westinghouse (maligned from the first for their deadliness in a rival Edison PR campaign) and also by the newfangled American electric chair (1890). Technologies may suffer from social stigmas as well as people. Mary Shelley had originally not specified the method of the revivification of her monster, but Shelley’s group of literary friends (as she tells us) had been discussing galvanism a few hours before the vision of the artificial monster came to her in a nightmare. By 1931, in the new electrified America, Dr. *Frankenstein*’s monster came into the movies electrically charged, and soon the electric chair was producing its own monsters in the cinema (e.g., Boris Karloff’s *The Walking Dead*, 1936).

For more than a century after Shelley (and indeed to this day) *Frankenstein* colored resuscitation as it appears in science fiction. An exception is Edgar Allan Poe’s 1845 story “Some Words with a Mummy,” which is social commentary rather than horror. The mummy of the title is resurrected by galvanism, and is one of a race of ancient Egyptians who have perfected suspended animation, and have used it to travel rapidly through time at pleasure, as tourists and revisionist historians. As such the tale is one of the first positive fictional treatments of suspended animation.

Poe had an antecedent for the idea, for “Some Words with a Mummy” echoes some much earlier optimistic thoughts on the subject by Dr. John Hunter (1728–1793) who had, in the year 1766, experimentally frozen live fish in an attempt to prove the idea that human beings might be able to see the far future

by being intermittently frozen for long periods (the fish died and Hunter soon abandoned the idea). Another scientist to take an interest in suspended animation was Hunter's transatlantic contemporary Benjamin Franklin. Franklin not only foresaw advanced treatments for aging as a result of science, but in a 1773 letter to his friend Jacques DuBorg, the inventor wished that he might be preservatively embalmed "with a few friends," in order to see eventually what might become of his beloved America in the far future. Franklin thus is not only one of the first men to speculate about seeing the future in such a scientific way, but he is also the first to see that such thoughts inevitably move one to want to take some of your social network with you for company. Poe's story and the private 18th century views of Hunter and Franklin stand in contrast to the much more common and much more alienating views of long delayed revival of individuals, a time-travel-to-the-future genre which perhaps can be said to begin with Washington Irving's dark and poignant "Rip Van Winkle" (1820), and which continues with H.G. Wells' time traveler and sleeper.

Poe's other exploration of attempts to bypass the immediate effects of death, written at about the same time as "Some Words with a Mummy," is more typically macabre. In "The Facts in the Case of M. Valdemar" (1845), the Frenchman Valdemar dies while under a deep hypnotic trance. So deep is the trance that, although heartbeat and breathing have stopped, Valdemar's tongue still obeys commands—"I was sleeping, but now I am dead," he states in one of the most famous lines of the genre. For seven months this state of suspended animation continues in Poe's tale, with the dead body (save for the horribly moving tongue) locked in rigor mortis, but basically unchanged. Finally, at the end of the story, the experimenters decide to end the trance, and the hypnotized man turns, in less than a minute, into a "nearly liquid mass" of decay.

In the long-delayed and unnaturally rapid decay of Poe's released hypnotic subject, we recognize the traditional fate of staked vampires, those other escapees of traditional mortality. As in Rider Haggard's *She*, Wilde's *Portrait of Dorian Grey*, and Hilton's *Lost Horizon*, slowing or arrest of nature's aging or dying process in fiction often runs up a kind of cosmic credit card bill which may later become due all at once, with dire consequences. Such themes suggest a cultural psychological heritage which views death and decay as inevitable forces which, like some bottled-up natural flow or pressure, are apt to produce explosive and terrible results if held in abeyance even temporarily.

To be sure, this kind of universal debt does not accrue to the original monster in Shelley, which does not age. In *Frankenstein*, rather, the price which the monster pays for its artificial life is alienation and social ostracism (it is horribly ugly). The monster also suffers neglect and abandonment by its only "parent"—its creator. With few exceptions, however, secularly resurrected figures in fiction since the beginning of the genre have usually paid a more direct kind of price for their existences. The same is true of those who direct the reanimation, as well, although the ignorant sometimes escape the ultimate price (as in W. W. Jacobs' 1902 story "The Monkey's Paw").

The next major comment on scientific reanimation of the dead is from that gentle but slightly unhinged dropout from life, H. P. Lovecraft. Lovecraft's first professional sale, "Herbert West, Reanimator" (1922), is his tribute to Shelley, though it would be some time in Lovecraft's own writing before he would be able to explore the psychology of horror as deftly as Shelley did. "Herbert West, Reanimator" is a straightforward story of a young medical student of a materialist bent who seeks to reanimate corpses by chemical means. He is only partially successful—his reanimated beings are murderous, even if they were good

people in life (one of the demonic monsters is a late kindly and philanthropic Dean of Medicine). Like Shelley, Lovecraft carefully never gives any of his reanimated corpses what it takes to be human: those bodies that are whole behave as animals, and those which have human intelligence and understanding are horribly mutilated. And like Shelley's, Dr. West's resurrections, are mal-resurrections; West, as creator of the beings, is inevitably destroyed by them.

The Sociology of Resuscitation and Resurrection

Possibly for some escapist reason, in Lovecraft's own heyday the Great Depression had triggered a spate of American films about horror, and in many cases their content was quite scientific and the lead scientist usually a biologist. (It was not until 1945 that the smock of the mad scientist passed from biologist to physicist. Recall that it is said the First World War was fought by the chemists, the Second by the physicists.) *Frankenstein* starred Boris Karloff (1931), who also played the title role in *The Mummy* (1932). A few years later (after the success of Universal's *Son of Frankenstein*), Columbia Pictures made a quintet of Karloff horror movies (1939–42) with even more explicit themes of scientific life-prolongation or resuscitation. In *The Man They Could Not Hang* (1939) Karloff plays a doctor who has discovered a way to place humans into suspended animation with an artificial heart machine. In the script, the authorities mistake a suspended man for dead (the "Juliet problem" again) and Karloff is sentenced to death for murder. After he is hanged, a student uses the same machine to resuscitate him. The resuscitated Karloff is evil and vengeful, however, and soon sets about killing the people who

convicted him—another scientific resurrection that failed to do anyone any good.

A positive view of scientific resuscitation and life prolongation does not occur in the movies until the great Robert Wise film *The Day the Earth Stood Still* (Twentieth Century-Fox, 1951). This movie is the tale of a human-like alien named "Klaatu" who visits Earth in a flying saucer (that looks remarkably like the "real" UFOs that began appearing soon after), accompanied by a giant robot named Gort. While trying to deliver a warning to humanity, Klaatu is killed by the army. In the film's climax Klaatu's body is recovered by Gort, and then resuscitated with the aid of machinery inside the saucer. Klaatu, now risen from the dead, is free to deliver his message and ascend to the heavens.

The Day the Earth Stood Still not only delivers a political message about the threat of nuclear war, it presents deliberate and shameless biblical allegory—the resurrected hero myth recast in science fiction terms. Klaatu is to be understood as a Christ figure who is sent from the heavens to warn mankind of its sins. (As a particularly poignant touch his earthly pseudonym is "Mr. Carpenter!") Although Klaatu's coming is attended by wondrous events, his wish for a meeting with the political leaders of the world is rejected. Like Christ among the common folk, Klaatu now finds himself in the home of an ordinary citizen. His uncommonness is all too apparent, however; Klaatu's teaching of the famous Einstein-figure Professor Barnhardt (Sam Jaffe) is as much a personal self-revelation as that of the boy Jesus in the temple confounding the Rabbis. Eventually Klaatu does go public, but being high priest of technology, he eventually demonstrates his power not by calming the water, but by calming and silencing the world's machines by neutralizing all electricity—the day the Earth stood still.

In keeping with the allegory, Klaatu is fi-

nally betrayed and murdered for his trouble by the very people that he came to warn. His body is taken to a jail cell (in lieu of a tomb), and there guarded by soldiers. The cell is opened by a mechanical servant in place of an angel, and there is finally the resurrection by Gort. (Patricia Neal is the Mary Magdalene figure, asking the questions for us.) Eventually, message of warning delivered, Klaatu ascends into the heavens.

In many ways *The Day the Earth Stood Still* is not a typical science fiction movie of its time. Alien beings from space are not seen in this film as marauding monsters. Even more intriguing is the idea that high technology, as manifested in space transportation, would naturally be expected to go hand in hand with youth-prolongation (Klaatu is 78 but looks 35; his people live twice as long as Earthlings). High technology is linked with advanced resuscitation capability, but not with horror. This is archetypally a bit odd, and possibly in consequence historically it did not go without controversy. Screenwriter Edmund H. North's script for the film (itself an adaptation of a 1940 Harry Bates short story titled "Farewell to the Master") originally called for the alien Klaatu to simply be resuscitated by Gort and thereafter to go about his functionally immortal business. Unfortunately, the Breen Censorship Board (an autocratic self-censorship mechanism of the movie industry especially active during the cold war years) was scandalized at the idea of Gort the Robot bringing Klaatu to life, saying "Only God can do that!" North's protestation that the movie was science fiction and that the action in question involved genuinely unearthly alien technologies got nowhere. Eventually, a compromise was worked out: Klaatu was to invoke deity (in the final script Klaatu asserts rather piously that the power of life and death belongs only to the "Almighty Spirit"); and he was also to issue a statement admitting mortality (in the final

script we find that the life conferred by the saucer machine is good only "for a limited period," which "no one can tell"—an obvious compromise with the censors. With these changes, the Breen Board, apparently satisfied that it had protected the public from the un-American idea of scientific immortality, withdrew its ban. The scene in which Klaatu explains that scientific resurrection is (in effect) not all it is cracked up to be remains as a monument to popular resistance to the idea of casting scientific progress in any form resembling God.

The Day the Earth Stood Still is considered one of a handful of contenders for best science fiction movie ever made. This honor is at least partly a result of the film's reworking of the old resurrection myth. The power of this particular theme may be gauged by the fact that the record box-office opening movie of all time, *E.T.: The Extraterrestrial* (Universal, 1982), pulls exactly the same psychological strings as *The Day the Earth Stood Still* (as does the even later "E.T. rip-off" *Starman*). In *E.T.*, we see the heavenly being visiting Earth with magic life-restoring powers (the glowing finger). Again, there is an unenlightened government sending squads of soldiers chasing after the visitor, who all the while is more content to spend his time with common folk and children. Again we see the visitor's death and technological resurrection (the difference being that in 1982 they had cardiac defibrillation, which was included). And again there is the ascension to the heavens, this time to the heavenly parents, since E.T. was only a child.

Cryonics: A Modern Prometheus

Horror writers seem to have a love of the cold, and both Shelley and Poe (*The Narrative of Arthur Gordon Pym of Nantucket*) employ a

frozen backdrop to good effect. Later authors follow in the same tradition, and the first writer to go so far as to employ cryogenic preservation for monsters is H. P. Lovecraft. In Lovecraft's novella *In the Mountains of Madness* (1931) an antarctic expedition unearths frozen half-animal/half-vegetable creatures dating from an earlier age. In a scene which has since become hackneyed (but Lovecraft did it first!) a scientist dissects one creature while the others are allowed to thaw, unattended. The result is carnage. Later it transpires that the monsters are an extinct intelligent species who long ago created all life on Earth. This created life includes not only the familiar forms that led to man, but also a race of servant monsters which (as the story progresses) end up turning upon their creators, Frankenstein-style. In Lovecraft, even the monsters are troubled with monsters!

Lovecraft may have been not only the first writer to consider the cold as a method of preserving horrific creatures, but also "dead" humans who refuse to be done with life. In "Cool Air" (1928), which obviously owes a great debt to Poe's "Valdemar," Lovecraft tells us of a physician-scientist who, because of a very curious illness, must keep his rooms at all times at low temperature. The narrator befriends the doctor, but eventually finds that his new acquaintance has not only begun to exhibit a strange odor, but (moreover) is requiring lower and lower temperatures as time goes on. Eventually the air-conditioning fails, and while the narrator is off trying to get a replacement part, the good doctor dissolves in the manner of monsieur Valdemar. It turns out that he has been clinically dead for 18 years, but has kept himself preserved by means of the cold.

Does Lovecraft now generally get credit for the cryonics idea? One of Lovecraft's stories ("The Whisperer in Darkness," 1930) uses the device of having creatures from another planet remove human brains and place them into mechanical supports for shipment across outer

space. This treatment (according to the story) makes them functionally immortal, and is also used to excellent effect as a device for horror as these Earthlings find themselves kidnapped, removed from their bodies as naked brains kept alive by machinery, and taken away into space by fungoid creatures from Pluto.

The Blurred Line between Science and Science Fiction

Would the far future be worse than death? We know that, in the real world, by 1935 *Time Magazine* was featuring the predictions of a Hollywood clinical chemist named Ralph S. Willard, who was claiming to be able to freeze monkeys and resuscitate them. Willard proposed to use the process on convicts in order to store them more cheaply, and even on jobless people (until times got better), would-be suicides (until a cure had been found for depression), and on those curious about the future. Today we are certain that Willard was a humbug, but before he disappeared into the mists of science fiction history we saw him one more time, acting as technical consultant to a Boris Karloff film entitled *The Man with Nine Lives* (1940), co-written by the same man who wrote *The Man They Could Not Hang*. Again we see the scientist who is conducting experiments in human suspended animation. Again there are the authorities who visit the lab of the mad scientist, see a frozen man, and decide that a murder has occurred. This time, however, the scientist is able to take revenge before he can be sent to jail; his solution is to lock himself and the visiting authorities (the coroner, the D.A., and the Sheriff) into a freezer in the basement of his island laboratory, where all undergo cryonic suspension. Ten years later the lab is re-discovered, and the suspendees all revived by another researcher. Again, the experience of resuscita-

tion from sleep/death has turned scientist into mad scientist (the mal-resurrection) and he begins to kill his fellow suspendees in a series of cryonics experiments. In the end the police arrive and put an end to him.

The history of the real practice of cryonics is less dramatic, at least at the beginning. Heedless of Boris Karloff's fate, a young soldier took up the idea of cryonics in the 1940s. While recovering from war wounds, Robert C. W. Ettinger read "The Jameson Satellite," and in 1948 wrote a cryonics science fiction story (*The Penultimate Trump!*) in which he first suggested the idea of a man dying of old age deliberately being frozen to wait for advances in human rejuvenation technology. Ettinger eventually went on to become a college physics teacher. Finally, in 1962, in a full length book titled *The Prospect of Immortality* (eventually re-published by Doubleday in 1964), Ettinger argued formally for a cryonics program to begin in the non-fiction world.

By the early 1970s it was known that some small crustaceans and worms, and even mammalian embryos, could be cooled in liquid nitrogen or helium to the point where all metabolism stopped, and there stored as long as anybody liked. Here was structure, but no function. Ettinger argued that because frozen organisms could be revived, "life" was not something that had necessarily disappeared simply because things did not run. Ettinger's view of death was that organisms are like automobiles; thus an organism which is not functioning may not be "dead" (in the sense of permanence) if whatever caused the failure to function is repairable. The only criteria that mattered in revival were the same criteria which one would employ in order to know whether one could repair a damaged automobile: What was the original structure? Did enough structure remain that one could infer what was, from what is? Did one have the tools to effect such repairs?

Ettinger argued that we do not have such

tools today, but that we may have such tools tomorrow. Today's "dead" people might be resuscitatable by the standards of the future. Thus, we now probably conduct many autopsies on people who are, by the standards of the future, only very sick. If such people could be delivered to the future reasonably intact and undecayed (as by cryogenic preservation), and if future physicians were also able to repair the damage which was caused by freezing, then it would make sense to freeze people now who had been pronounced "dead," just in case something could be done for them later. In 1965, an early devotee of Ettinger suggested that the process be called "cryonics," and so it came to be. The word is now in common use.

The line between science and science fiction became further blurred on December 15, 1966, when Walter Elias Disney died of lung cancer. Reporters who covered the death had earlier in the day also happened to cover another press conference, coincidentally announcing the formation of the Cryonics Society of California (the first cryonics society on the West coast). Somewhere in all of the melee, the story surfaced that Disney himself had been frozen. Though it is almost certain that there was nothing to the rumor, Disney apparently once expressed interest in the concept of cryonics. What makes the story interesting is not so much the rumor's truth or falsehood, but rather its astonishing power. It was a rumor of amazing vitality that went so far as to insinuate itself as fact into at least one biography of Disney, even though there was not a shred of physical evidence to support it. To this very day, the idea that the great animator awaits "reanimation" somewhere in cold storage may still come up in casual conversation anywhere. In fact, this factoid is the only thing that most people in this country "know" about cryonics.

In the Disney story we see that some of the essential elements are present for a particular archetypal pattern. There is the element of

(possible) resurrection and attempt to beat death. Plus there is the fact that Disney was a hero to most Americans—a man who symbolized magic, wonder, imagination, kindness, daring, love of children, and (not incidentally) great wealth. He had ruled over his own Magic Kingdom, Castle, and Land. That a man with such personal power should make a try for the elixir of life was a story that fit well into the collective unconscious. There was simply something about the tale that made it “go,” even as there also seems to be about modern myths that such public heroes as John F. Kennedy (King Arthur of his own Camelot) or Elvis Presley (The King of Rock and Roll) have somehow managed to beat death and are off in the wings somewhere, waiting to return.

The result of all this was that cryonics received its maximum press from the Disney death in December of 1966. When later a non-famous man actually did make arrangements to be frozen at “death,” and followed through with the process (January, 1967), the news and the *LIFE Magazine* story were overridden in most of the country by the fatal Apollo spacecraft fire. The first man ever frozen to cryogenic temperatures was Professor James Bedford of Glendale College, who remains unchanged today, 25 years later, submerged in liquid nitrogen at 320 degrees below zero at the laboratories of the Alcor Life Extension Foundation in Riverside, California. Since 1967, 62 people have followed Bedford’s example.

In film, the fate of cryonically preserved people is generally bad. Individuals who are involuntarily cryonically suspended may be allowed to get away with only a severe case of alienation (*Caveman*, 1984; *Late for Dinner*, 1991), but it is clear that anyone who deliberately attempts to cheat death is in for the full Frankenstein treatment. In 1985, a made-for-TV movie called *Chiller* (directed by Wes Craven) featured a cryogenically suspended man who is revived, after which it is discov-

ered that (very much in the style of Lovecraft) the revived one has returned without a soul, and is now utterly evil. When Richard Kobritz, the executive producer of *Chiller*, was asked how the writers had finally come up with the plot for CBS (which wanted to do a horror movie with a cryonics slant), Kobritz stated, “Why, we just asked everybody we knew what bothered them most about the cryonics idea.” Mythically, cryonics seems in some ways to have been the recipient of a great deal of the backlash against life-extension and resuscitation caused by half a century of mal-resurrection horror films and stories.

Because of the unique world view of cryonicists, some actual encounters between real-world authorities and cryonicists have played out as though scripted in a horror film. In late 1987, for instance, when an elderly woman in poor health died and was frozen at the Alcor laboratory in Riverside, there was an investigation into the death. In 1930s B-movie fashion, the Alcor laboratory was visited by police and coroners looking for a body which they considered dead, but which cryonicists considered in suspension and possibly still revivable. Early in 1988, several cryonicists went to jail briefly for failure to produce the elderly woman’s cryogenically preserved remains, which had been hidden by her son against the possibility of autopsy. The action throughout was generally in keeping with the fine old “mad-scientist” genre in which the crazy researcher sees something more in the clinically dead body than do the “proper” authorities. In the Riverside case, the authorities never did get the remains and finally had to close the case.

Some of the “Juliet problem” of the modern Riverside cryonicists, of course, was inevitable, as we have seen from our fictional and historical discussion. To the cryonicist, someone whose heart has just stopped, but who has not yet suffered brain decay, is not necessarily permanently dead, but rather simply metabolically disadvantaged (or if you will, “flexionally

disabled,” or “thermally different”—choose your own politically correct term!). In any case, cryonicists do not consider fresh corpses as “things,” but rather as sick people (indeed, “patients”). At present writing cryonics remains legal in California, following a series of court battles between cryonics organizations and the State, culminating with a final appellate court decision (June, 1992). The California Board of Public Health had originally taken the odd public position that cryonics was illegal because there was no “cryonics” box to check on the standard paper form which the State of California used to keep track of the disposition of human remains. It soon became clear, however, that more philosophical and perhaps visceral problems worried the State. In one appeal before the court, for example, the State attorney acting for the California Department of Health Services asked: “Should cryonically suspended people be considered dead, or should a separate category of suspended people be created? How should such people be registered in official records? What happens to the estate and the assets of the ‘decendent’ after the decendent is put in cryonic suspension? What would happen to such estate and assets if and when cryonic suspension is successful and the decendent is restored to life? Whose identity is the person to assume or be assigned and what of the record of the person’s death?”

Science, Religion, and Immortality

From almost the beginning of the Scientific Revolution, the emerging technology of resuscitation began to suggest that the process by which human beings go out of existence is as much of a gradual and hard-to-define thing as the process by which they enter it. From the beginning of human culture a set of stories or myths has allowed mankind to deal with

threatening changes such as death, and such stories have come to be modified in the scientific age to allow humans to deal philosophically with a limited amount of resuscitation. Along the way, however, there have been plenty of nightmares.

In matters religious, moral, and philosophical, a fundamentalist can be thought of as a person who has little tolerance for ambiguity. Fundamentalists in many spheres are often Aristotelians—binary thinkers who can see only black and white in a world of continuous analog changes and shades of gray. In matters of death, the role of the fundamentalist is played by the vitalist, and by the legal views of the modern State (legal thinking is usually binary/Aristotelian in positing that all actions are intrinsically either legal or illegal). Such people reject the ambiguity which is suggested by resuscitation or cryonics.

It is my thesis that historically, many mal-resurrection stories have arisen as fundamentalist or vitalist reactions to the ambiguity in death which has been gradually introduced by science since the middle of the 18th century. From riots over dissections, to public worries over being buried alive, to the difficult-to-explain failure of resuscitative techniques to catch on in medicine for more than a century after they were invented, to modern attempts to suppress cryonics by the State of California, the anxieties and the stresses of vitalists have shaped the way in which resuscitation from a long period of clinical death might be viewed by society.

In the literature of science fiction, from Frankenstein to Poe to Lovecraft to Stephen King, scientific or secular resurrection and resuscitation are rarely seen in a positive light. Occasionally, non-horror scientific resurrection stories have had to fight censorship simply because they failed to add enough of the Frankenstein voice (e.g., *The Day the Earth Stood Still*). So strong has the literary tradition of horror in scientific life-extension become

since Frankenstein, in fact, that even traditionally positive stories of resurrection have since been re-cast by modern authors in darker terms: the walking mummy, for instance, is a re-working of ancient Egyptian religious belief regarding a technological resurrection, and even in Nikos Kazantzakis' *Last Temptation of Christ* the traditional Lazarus tale has mutated into a mal-resurrection.

As a society, we have tales of "out of body" experiences that let us cope mythically with short term resuscitations—most of these "just-so" stories involve having the soul jerked back and forth between the body and some kind of anteroom to Heaven (e.g., the popular film *Flatliners*). Such stories work well enough to allow even vitalists to deal with the realities of everyday medicine. It is probable, however, that the mythic structure which lets us deal with such true-life situations is due shortly to come under more strain. Consider the following:

On June 10, 1988, a two-and-a-half-year-old girl fell into a mountain stream of melting-snow runoff near her home in Utah, was quickly swept beneath the surface, and drowned. Her mother called rescue operations, who arrived and could not locate the body, but managed to dam off the flow to the side stream which contained it. Over time the water level gradually fell, until eventually (an hour later) one of the girl's arms was uncovered 60 feet downstream, where the body had wedged underwater near a rock. The little girl had been under water for 66 minutes; she was retrieved cold and with eyes open—no pulse, no heartbeat. Given CPR, she was transported

to a nearby medical center in Salt Lake City and resuscitated with the aid of a heart-lung machine. Although she had been clinically dead for over an hour, she recovered completely save for a slight residual tremor.

There is no reason to believe that an hour represents the limit for resuscitation from hypothermic clinical death. One authoritative text believes that the ultimate limit even "in the warm" may be as long as an hour, long enough to put us in the realm of *The Day the Earth Stood Still*. Experimental dogs have already been revived in good health from longer than four hours at the temperature of ice. Even these figures are to be regarded as applying only in the context of how far into the future our present knowledge of physiology will let us reasonably peer. What the ultimate limit is, only the future can tell. It is in the hope that the limits are wide that a few cryonicists are frozen every month in the United States.

Whatever the limit turns out to be, our speculative fiction and our myths must find some way to explain it to us at the emotional level; that is the reason we create them. Science fiction, in its ceaseless speculation about the boundaries of technology and human experience, will surely play a pivotal role in how we accept radical new resuscitation and life extension technologies, and how we live with them. Science fiction, hopefully, will escape entirely from the fundamentalists in this, and will remain free to explore all possible answers and all possible questions. That may be difficult to do, given mankind's long history of telling stories in one particular way, but we owe it to ourselves to try.