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DEATH POSTPONED: CRYONICS AND A TRANSHUMAN FUTURE

Abstract

This essay reflects on the concept of cryonics as a technology that will in the future enable cryopreserved people to be returned to life when the cure for the disease that killed them is found. The longstanding dream of prolonging human existence, mainly with recourse to cryonics, will be examined through the lens of Don DeLillo's *Zero K* (2016), Robert Begam's courtroom thriller *Long Life* (2008) and Clifford D. Simak's *Why Call Them Back From Heaven?* (1967). The fantasy of cryonics is becoming increasingly visible in contemporary culture, with recent books and films addressing this subject. The utopian, transhumanist vision of a future where much longer life spans will be achievable is a dream that only the wealthy elites can afford, with megacorporations usually exploiting those with less funds but who also wish to undergo cryosuspension for later resurrection. Recent work by a number of bioethicists such as Francesca Minerva (2018), Ole Martin Moen (2015) and David Shaw (2009) on the case for and against cryonics from a bioethical point of view will help shed light on the main thematic concerns these works of speculative fiction engage with, pointing the way to future scenarios that the rapid advancement of biotechnologies will make possible.

Key words: cryonics, bioethics, life extension, transhumanism

Introduction

The fantasy of cryonics, of preserving the body of a (recently and) legally “dead” person at liquid nitrogen temperatures through a process called vitrification, with the goal of reviving that person when a cure for their disease is found, is becoming increasingly visible in contemporary culture, with recent books and films addressing this subject. Salient examples include James L. Halperin's *The First Immortal: A Novel of the Future* (1998), Lois McMaster Bujold's *Cryoburn* (2010), Don DeLillo's *Zero K* (2016), the American TV series *Altered Carbon* (2018) and Jeanette Winterson's *Frankissstein: A Love Story* (2019). Cryonics, already on offer in three facilities in the United States and one in Russia, offers a scientific, medical avenue suggesting the dream of a greatly extended lifespan might one day be fulfilled.

This essay will briefly look at three novels that address the fantasy of cryonics and that ask similar and probing questions about the meaning of life and death, the medical, ethical and legal aspects of cryonics, the role of the government and megacorporations in providing access to this technology, and the transhumanist future of humankind: Clifford D. Simak's *Why Call Them Back From Heaven?* (1967), Robert Begam's courtroom thriller *Long Life?* (2008) and Don DeLillo's *Zero K* (2016). In all three novels hope for a scientific way to circumvent death is tempered by the greed of some business

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enterprises keen on exploiting the citizens' belief that the technology they offer will deliver what it promises.

“We reverse the text here, we read the news backwards. From death to life” (*Zero K*, 128)

Don DeLillo's novel *Zero K* (2016) is a philosophical meditation on human life and death and the meanings of time, with strong transhumanist overtones, emphasizing the ambition to overcome death by means of scientific and technological advances. It can be read as an allegory of the vicissitudes of human existence and the promise of an afterlife, of coping and desisting, of a journey into the underworld of myth and fantasy, couched in a transhumanist hope that technology, in this case cryonics, will deliver people in suspended cryonic animation from their limbo into a future world of meaningful existence, including potentially meeting that person's loved ones again or their descendants.

Zero K is centrally about the love of a man for his wife and the deep-seated yearning to be reunited with her not only in death but also after they are brought back from cryonic suspension and are given a new lease of life. At least that is the hope, a hope that also runs through numerous examples of fiction and film, gaining traction in the popular imagination with this increased visibility that transhumanist philosophers and scientists have also contributed to bringing about. After all, given the irrevocability and irreversibility of death, any glimmer of hope given by science, even if it involves technologies that at present have not yet proved their potential, is better than the unalterable finality of death. As Ole Moen points out, advances in cryobiology and nanorobotics suggest that there is a non-negligible chance that cryonics will be successful at some point in the future. Consequently, given that the “alternatives to cryonics are burial or cremation, and thus certain, irreversible death, even small chances for success can be sufficient to make opting for cryonics a rational choice” (De Lillo, 2016:677).

Zero K describes a cryonics facility called the Convergence, in southeast Kazakhstan, deeply embedded in the desert, with many underground levels, a safe house immured against natural cataclysms, where the cryopreserved bodies will be protected.¹ The narrator of *Zero K*, Jeffrey Lockhart, travels to the Convergence to meet his father, Ross Lockhart, one of the founders and benefactors, who is there with his terminally ill second wife, Artis Martineau, who will soon undergo cryopreservation. Ross, who was mostly an absent father, confesses to his son his plan to also be cryopreserved at the same time as his wife, even though he is perfectly healthy. Jeffrey feels doubly abandoned, “diminished” (De Lillo, 113), as he puts it. Eventually his father decides not to do it at that time, although he will return two years later to undergo the procedure and join his wife.

Emerging in time with life from this subterranean compound, after a long period in cryonic suspension, with the disease that had caused death in the first place cured and the body regenerated, could be read as the metaphorical equivalent of mythological characters managing to escape from the Underworld. Ross Lockhart, for instance, could be seen as in part equivalent to Orpheus, who travelled to the Underworld in an effort to bring back his wife, Eurydice. Unfortunately, when they were almost at the entrance to the upper world, he could not resist the temptation to look back at her, an action that was the condition *sine qua non* of her release, and she disappeared back into the Underworld. Ross Lockhart, similarly, even though he was physically healthy, could not bear to leave his own wife, Artis, there, in a cryonic pod, “a body that would not age . . . more or less immortal” (De Lillo, 258),² so he returns to join her, going into cryonic suspension before his time is due, thus bringing forward his own death, in effect committing euthanasia.

The fantasy of being reunited with one's loved ones after death is also a recurring motif in many religions, a fantasy updated and given scientific credence in *Zero K*. Like Book VI of the *Aeneid* (written between 29 and 19 BC), which can be described, in Christopher Carroll's words, as “about the impossibility of which we all dream—a reunion with people loved and lost” (Carroll, 2016), Virgil, guided by the Cumaean Sybil, goes down to the Underworld where he communicates with his father's

¹ The Convergence may be based on an actual facility called KrioRus, founded in Russia in 2005.

² As Nathan Ashman (2019:2) argues, these “cryonically postponed entities are neither before or after death, but are instead perpetually “in death,” a state that lucidly actualizes the very “deathlessness” of death itself. As a consequence . . . *Zero K* creates a new modality of death”.

spirit. *Zero K* also centrally revolves around an impossible but hopeful quest, on the part of Ross Lockhart, to find and potentially accompany his wife in her journey to an afterlife and putatively a return to life.

Rows of human bodies in gleaming pods (*Zero K*, 256)

Another text propelled by a profound spiritual yearning for redemption and reunion with a loved one is Dante's *Divine Comedy*, in particular the *Inferno*. Meaningfully, there are numerous striking parallels between Dante's *Inferno* and DeLillo's *Zero K*, which can be read as a philosophical engagement and critical dialogue with Dante's work. In many ways Ross's quest for immortality and his yearning to be with Artis in their hope of deliverance from their cryopods, suspended side by side in the Convergence, can be seen as paralleling Dante's journey through the nine circles of Hell guided by Virgil, with Ross, together with his son, Jeffrey, thirty-four, a close counterpart to Dante's thirty-five, being shown around the Convergence with a guide. Ross, like Dante, can be seen as a pilgrim, engaged in a sort of peregrination through the Underworld.³ The frozen bodies in cryonic suspension are interpretable, in the context of Dante's symbolism in the *Inferno*, as having been punished for their hubristic ambition to be as great as God, that is, coveting immortality, a sin that led to Satan's downfall, his expulsion from Paradise and fall into the frozen Lake Cocytus in the ninth circle of hell.

Despite being enclosed in ice because of their rebellion against nature, death and dying, in *Zero K* being frozen evokes, by daring to defy the idea that death cannot be vanquished, the hope of resurrection, of being brought back to life. In this reading, Artis, Ross's second wife, can at least in part be seen as a symbolic equivalent to Beatrice in Dante's allegory, with whom he is reunited in Heaven.

When Dante and Virgil look at the bodies of the sinners captured in ice in Lake Cocytus there is a striking parallel in *Zero K*, when Jeffrey Lockhart and his father are led by a guide to a place where they can view the bodies that will be or have already been cryopreserved: "We stood in the aisle above a small sloped gallery and looked at three human figures in a plain space so deftly lit that the outer margins dissolved in shadow. These were individuals in clear casings, in body pods, and they were naked" (140). They were humans "entrapped, enfeebled, individual lives stranded in some border region of a wishful future" (De Lillo, 2016:256) as Jeffrey Lockhart thinks of them, like the bodies of the sinners in Dante's *Inferno* trapped in ice, unable to move. The equivalent passage from Dante's *Inferno* (Canto XXXIV, 109) portrays a similar vision of bodies visible through the transparency of ice:

Now was I, and with fear in verse I put it,
There where the shades were wholly covered up,
And glimmered through like unto straws in glass.

Some prone are lying, others stand erect,
This with the head, and that one with the soles;
Another, bow-like, face to feet inverts.

Later in the novel, Jeffrey Lockhart is led on another tour of the Convergence at the request of his father, who is already being prepared for cryopreservation. The scientist takes him down a few more levels, reminiscent of the circles of Hell in Dante's *Inferno*. There were "rows of human bodies in gleaming pods . . . There were lines, files, long columns of naked men and women in frozen suspension" (*Zero K*, 256).

"Humans as mannequins" (*Zero K*, 146)

These bodies appeared to Jeffrey Lockhart "regal in their cryonic bearing" (256), a form of "visionary art" or "body art" (256), a counterpart to the many instances of art installations scattered around the Convergence, "humans as mannequins" (146), reminiscent of the mannequins dotted across

³ Indeed, references to pilgrims abound in *Zero K*.

the garden and in a catacomb Jeffrey comes across,⁴ interpreting these figures as an “ancestral version of the upright men and women in their cryonic capsules, actual humans on the verge of immortality” (133). He also stumbles across a pit full of naked mannequins, “men and women stripped of identity” (134). As Jeffrey observes, the “dead, or maybe dead, or whatever they were, the cryogenic dead, upright in their capsules” (74) constituted “art in itself” (74). Indeed, the Convergence was strewn with instances of “earth art, with human bodies in states of suspended animation” (16).

Artis’s body, displayed in a transparent case, is in itself an art installation, almost as in a gallery setting. With her organs removed, her body is an instance of Deleuze and Guattari’s body without organs, emblematic of a Baudrillardian simulacrum of a body. She is a body-in-waiting, in a constant state of deferral of death, a body in limbo or Purgatory, a sinner against nature for defying natural death and thus deserving of punishment. In this sense, she also defies contemporary society, predicated on speed and instant gratification of desires, in her “death without death state”, a continually suspended death which challenges the boundaries of time allotted to human life. These are “bodies-in-waiting” (92), bodies in stasis in a perpetual state of postponed death, “mannequined lives” (146), similar in their artistic connotations to the mannequins scattered around the grounds.

In another instance of this same complex register of the cryopreserved bodies as “body art”, when Jeffrey contemplates his father’s naked body on a slab, already anesthetized, about to be taken to be cryopreserved, he thinks of the latter’s body as a “spectacle” (251), as a piece of art, an aspect further highlighted by a woman in the room who appears to say “*Gesso on linen*” (251), terms used in art. This scene and Lockhart’s inert body are strongly evocative of Ron Mueck’s *Dead Dad* (1996), a sculpture of the artist’s dead father’s body, naked, which in its slightly reduced scale evokes a sense of unease and uncanniness close to that probably experienced by Jeffrey.

Significantly, in Jeanette Winterson’s *Frankissstein* (2019) the cryonics facility in Phoenix, Arizona, whose CEO is meaningfully called Max More, after the founder of the Extropy Institute and transhumanist Max More, is described by one of the characters as “a little like an art installation”, reminiscent of Damian Hirst’s *The Impossibility of Death in the Mind of Someone Living* (1991), a shark preserved in formaldehyde in a tank, an uncanny visual articulation of life and death in eerie juxtaposition.

Another meaningful and interlinked intervisual echo in *Zero K* evokes Damien Hirst’s sculpture *For the Love of God* (2007), an 18th-century human skull covered with 8,601 diamonds with what appears to be a mocking, sardonic smile, reminiscent of the Bakhtinian grotesque. During their meanderings around the Convergence, Ross and Jeffrey Lockhart come across a similar piece, an “oversized human skull mounted on a pedestal . . . the eyeholes . . . rimmed with jewels” (63), suggesting the risible nature of the human hope of avoiding death. Alternatively, it can be seen, in Rudi Fuchs’s (2007) reading, as “a glorious intense victory over death – at least over the temporal, physical and ugly aspect of it: rotting decay”.

The artificial garden in the Convergence is another example of art with a postmodern twist. Nothing in the garden was “natural” (122), including the flowers, “all seemingly coated or enamelled, bearing a faint glaze” (122), a piece of bio-art reminiscent of Marc Quinn’s installation *Garden* (2000), where an eclectic array of plants, which because they thrive in different climates would not naturally bloom at the same time, are immersed in aquariums filled with liquid silicone, which keeps them in perfect condition virtually forever, in a type of artificial immortality. Quinn’s frozen flowers can be placed in critical conversation with the representations of the bodies in cryopods. As Quinn himself explains, in words that emphasize the uncanny artistic contiguity and continuity of these flowers with the cryobodies:

If you take a real flower and put it into the silicone, it immediately freezes. Obviously it dies. In that moment of immersion, it transforms from a real object into a sculpture of that object made from the same atoms that the real one had been made from. There is a magical transformation from reality into art, but it stays looking the same. For me, that is the purest form of sculpture.⁵

⁴ Part one of *Zero K*, “In the Time of Chelyabinsk”, refers to a city in west-central Russia with a pedestrianized street lined with statues of people. Given the relative geographical proximity to the Convergence these urban statues might be more than a random coincidence.

⁵ Quoted in Romaine (2011).

According to James Romaine (2011), *Garden* engages with the “coexistence, even the interdependence, of life and death. *Garden* appears immortal, yet it was created by a process of death. *Garden* is a death without decay”, with the garden installation in the Convergence eerily echoing the indeterminate state of the cryopreserved bodies.⁶ Quinn even borrows the Biblical vision of the resurrection of the dead, when he reflects on the existence of plants that would not normally grow together since they bloom in different seasons of the year, a situation only made possible by human intervention: “It’s like the Last Judgment of the vegetable world, with all of the plants emerging from the ground together”. In its “sacred stillness”, *Garden* is thus a “prophetic vision of paradise”⁷ in Romaine’s words, with the walls behind the aquariums of liquid silicone containing the frozen flowers covered with mirrors, thus providing a reflective surface where people can see themselves as if they were inside the garden. For Romaine, in addition, in *Garden* “natural time and space are suspended; our experience is one of being both in and out of our bodies”, a state evocative of that of the bodies in cryopreservation.

The Convergence is thus a site of contradictions and paradoxes, blending avant-garde, state-of-the-art technologies with a spiritual search for the meaning of life couched in a New Age type of mysticism. In this context, the transhumanist ambition to overcome death that cryonics symbolizes can be inscribed in the rhetoric about ends and beginnings, the Christian notion of the end of times, that permeates life at the Convergence. In this sense, the newly reborn bodies emerging from their cryopods, when a cure for their diseases has been found, would be like the resurrected in a Christian allegory of Heaven, those chosen to attain an “afterlife”.⁸

Indeed, the transhumanist techno utopia of a new lease of life promised in the Convergence, couched in a mix of post-apocalyptic language of the end of times and new beginnings, the resurrection of the cryopreserved bodies described in redemptive, Biblical language, is in stark contrast to the skeptical tone of the narrator. Jeffrey Lockhart, indeed, is deeply suspicious of the disconnection between the grandiose, if subdued, bio-art installation that is the Convergence, with its blend of Bluebeard’s Castle secrecy in a multi-levelled bunker in the desert, and its state-of-the-art medical research facility. This sense of disconnection is further compounded by the combination with the post-postmodern Baudrillardian procession of simulacra displayed on screens as a parade of atrocities and ecodisasters outside this biobunker. This incongruence of the spectacle of disasters outside, contrasting with the stability and stasis of the bodies inside the cryopods, the deceptive techno utopia inside, with its New Age overtones, becomes jarringly dissonant for Jeffrey. In addition, the feeling of disorientation that characterizes his sojourn in the Convergence can be said to be partially mirrored by Artis’s residual consciousness after her cryopreservation, when she is suspended in her transparent cryopod, as in limbo, or Purgatory, to engage again with the Dantean intertext. In a hesitant and fragmented stream of consciousness we hear her disjointed voice, pondering on the illusion of being in and out of time.

In addition, the spiritual dimension that underscores the ideological substratum in the Convergence often appears to be at odds with the scientific advances on which cryonics is predicated. After all, this spiritual and physical rebirth that is promised is only available to the very wealthy, an elite that can afford to finance and avail themselves of these new technologies. Indeed, while contemplating the bodies in their cryopods Jeffrey Lockhart considered that he might be looking at the

⁶ Romaine’s (2011) description of Quinn’s *Garden* further emphasizes the symbolic contiguity with the cryopreserved bodies:

The entire garden is housed in a walk-in stainless steel refrigeration case over forty feet in length. From the outside, *Garden* resembles a meat locker, a storage house for dead flesh; seen from inside, the sepulcher appears full of life. Within this frozen world, the flowers are protected from both air and natural light; they will remain as they are, so long as *Garden* is plugged into an electrical source.

⁷ Quinn’s *DNA Garden* (2001) can be regarded as a related artistic intervention. It is an altarpiece, a triptych which draws inspiration from Hieronymus Bosch’s *The Garden of Earthly Delights*. In Quinn’s words, the *DNA Garden* is a kind of “literal Garden of Eden” containing the DNA of “75 species of plants and that of a man and a woman”. <http://marcquinn.com/artworks/single/dna-garden1>

⁸ Roberto Paura (2016:23) considers transhumanism a “cult of our times, a product of a particular social imaginary of the techno-scientific development”.

“controlled future, men and women being subordinated, willingly or not, to some form of centralized command” as “mannequined lives” (146) that have paradoxically lost control over their existence, while placing their hope and money on a scientific resurrection. Emphasizing the spiritual element of the “journey towards rebirth” (237) that the soon-to-be-cryopreserved are told they are on is described in biblical and post-apocalyptic terms of endings and beginnings.⁹

“In my end is my beginning” (T.S. Eliot, *Four Quartets*, Part II, “East Coker”, V)

T. S. Eliot’s *Four Quartets*, a poem that can be read in dialogue with Dante¹⁰ and which meaningfully is also mentioned in Robert Begam’s *Long Life?* (335), can be seen as summarizing some of the conundrums present in the idea of cryopreservation. As Eliot wrote in *Four Quartets*, “In my end is my beginning” (Part II, “East Coker”, V), a hope deeply entrenched in the patients that use the cryonic services of the Convergence, encased in ice, like the sinners in Dante’s *Inferno* or those in *Four Quartets*, trapped in time.

“Burnt Norton” (I), in turn, addresses, amongst other topics, the nature of time and memory, thematic concerns recurrent in *Zero K*:

Time present and time past
Are both perhaps present in time future
And time future contained in time past.
If all time is eternally present
All time is unredeemable. . . .

The spiritual journey towards transcendence, rebirth and immortality in Eliot’s *Burnt Norton* is replaced by a scientific journey with similar results in terms of physical rebirth in *Zero K*. Religion is thus substituted by science and technology in this updated version of Dante’s pilgrimage through Purgatory, Hell and his subsequent ascent to Paradise (Regained), or T. S. Eliot’s narrator in *Burnt Norton*, who had embarked on a similar spiritual pilgrimage. These could also be seen as the stages of Ross Lockhart’s spiritual journey with his wife.

In their symbolic representation of the end of an era and the beginning of another, new one, the cryonic pods are oddly reminiscent of the maternal uterus, an aspect recurrently articulated in *Zero K*. Significantly, the cryonic pods are symbolic and ironic reminders of the maternal womb. Indeed, artificial wombs and cryogenic pods can be seen in an interesting (and potentially) disturbing line of continuity in that both provide the hope of new life. As Jeffrey muses, in the cryopods humans were “spliced back to fetushood” (144) and he imagines his father in the cryopod in his “uterine tube” (238). In related vein another character ponders: “Isn’t the pod familiar to us from our time in the womb? And when we return, at what age will we find ourselves?” (76). Analogously, another character in the Convergence considers the nature of time in a cryopod: “What happens to the idea of continuum—past, present, future—in the cryonic chamber? . . . How human are you without your sense of time? More human than ever? Or do you become fetal, an unborn thing?” (68).

Endings and beginnings become entangled in a paradoxical continuum that belies traditional beliefs and even biological destiny. Jeffrey, relatedly, muses about beginnings and endings, in enigmatic fashion: “If someone or something has no beginning, then I can believe that he, she, or it has no end. But if you’re born or hatched or sprouted, then your days are numbered” (131). The cryopreserved bodies, however, waiting for their “cyber-resurrection” (245) will be the “newborns” (245), reborn in a mechanical, alternative way, which Jeffrey describes in a satirical tone: “die a human, be reborn an isometric drone” (147), like a “newborn machine” (238).¹¹ But are they dead or do they keep a “minimal consciousness” (272) as Jeffrey imagines Artis does?

⁹ See also Cofer (2018).

¹⁰ Eliot himself acknowledged: “I regard his [Dante’s] poetry as the most persistent and deepest influence on my own work.” Quoted in <https://davidalton.net/tag/gerard-manley-hopkins/>

¹¹ Francesca Minerva (2018) provides an extra philosophical and ethical dimension to the potential of cryonics, suggesting that preserving a newborn baby or fetus in a cryopod, thus effectively postponing their birth, would

“Are they actually dead? Can we call them dead?” (*Zero K*, 71)

Don DeLillo’s *Zero K* is not concerned with such mundane questions as: is the patient dead (or legally dead) when the cryopreservation procedures begin? After all, Ross Lockhart, who contributed significantly to the funding of Convergence, is considering accompanying his wife when she undergoes cryopreservation even though he is in good health, which would amount to suicide, on his part, even though he does not himself commit it, but actively requests to be “killed”. Alternatively it could be seen as murder on the part of the doctors who prepare him to be cryopreserved. These, however, do not seem to be worried about legal issues such as whether they might be charged with killing a patient just because he asked, so that he could have the procedure together with and alongside his wife, in the hope of a new lease of life for both of them. In his case, however, his pre-mortem suspension would be particularly difficult to justify, since he would still have at least a couple of decades of healthy life ahead of him, whereas his wife, although she will also be suspended before her actual passing, is suffering from an incapacitating degenerative disease and is close to death.

Jeffrey brings up these questions when confronting his father with the latter’s decision to undergo cryopreservation before his death. He describes the procedure as “simple injection, serious criminal act” (114), wondering: “Is it outright murder? Is it a form of assisted suicide that’s horribly premature?” (114). He also muses that there was “more than one official definition” (139) of what constituted the end, “none characterized by unanimous assent” (139-140).

The Cryonics Institute is clear about this question. The process of cryopreservation involves “cooling a legally-dead person to liquid nitrogen temperature where all physical decay essentially stops”¹². According to the Cryonics Institute the “goal of cryonics is to halt that process (of decay) as quickly as possible after legal death, giving future physicians the best possible chance of reviving the patient”.¹³ Robert Begam’s *Long Life?* interrogates precisely what legal death entails.

“Are you legally dead, or illegally so, or neither of these?” (*Zero K*, 238)

Like *Zero K*, Robert Begam’s courtroom thriller *Long Life?* (2008) also deals with cryopreservation, but it revolves more specifically around the legal concept of death and of the legality of pre-mortem suspension. Begam himself is a prominent trial lawyer and past president of the Association of Trial Lawyers of America.

Both novels engage with the concept of cryoethanasia, a word coined by Francesca Minerva and Anders Sandberg to describe the process of provoking the death of a terminally ill patient in order to have a better medical chance of extending their life through cryonics. Minerva and Sandberg (2017:526) consider that since “administering cryoethanasia is ethically different from administering euthanasia . . . objections to euthanasia should not apply to cryoethanasia, and cryoethanasia could be considered a legal option also where euthanasia is illegal”.

In *Long Life?*, Rebecca Adler, a doctor and Director of a Cryonics facility in Phoenix, Arizona, called Omega Terrace, is charged with Murder in the First Degree for having performed, with the patient’s full consent, indeed at his active request, a “pre-mortem suspension” on a young man, Kent Eastman, who became ill with AIDS due to a blood transfusion. This means that Adler performed the procedure leading to cryopreservation while the patient was still alive. “Is the victim dead?” (45), as

enable more parents to rethink the timing of their child’s birth and women in particular could choose the most appropriate moment in their lives and careers to bring the baby home. In addition, it could be an alternative to abortion, providing women with more time to think about the fate of their baby. According to Minerva cryosuspension of pregnancy would be “preferable to both abortion and ectogenesis. The foetus would not be killed, as in the case of abortion, but would not be relinquished to some machine and then to strangers (unless the foetus were reimplanted in the uterus of the adoptive mother), as in the case of ectogenesis. Thus, the pregnant woman would not refuse to take the responsibility of raising the prospective child—she would only postpone this moment” (Minerva, 127). Diane M. Dresback’s novel *Postponement* (2017) addresses precisely the question of fetal cryosuspension.

¹² <https://www.cryonics.org/about-us/faqs>

¹³ <https://www.cryonics.org/about-us/>

one of the lawyers ponders, is the key issue that will divide the jury to the extent that they cannot agree and the judge returns a verdict of mistrial because of a hung jury.

Ryan Sullivan (2010:76) argues that “courts should recognize the distinction between suicide and cryonics” and should allow terminally ill patients to undergo pre-mortem cryopreservation, independently of their state’s stance on assisted suicide. While Sullivan acknowledges the state’s interest in preventing suicide and untimely death he deems this line of action improper in the case of pre-mortem cryopreservation, where the terminally ill patient is seeking life, not death. Thus, the “state’s interests in preserving life and preventing suicide are not offended” (Sullivan, 84). This is also the opinion of Velly B. Polycarpe (1993:1399-1400), who considers that

premortem cryopreservation should be constitutionally protected if the right is limited to competent, terminally ill patients. Grounding the right on the voluntary nature of the decision should also alleviate the fear that patients will be coerced into pre-mortem cryopreservation. Establishing procedures that require physicians to prove by clear and convincing evidence that the patient’s choice was made voluntarily, and that the patient was terminally ill, could curtail the possibility of coercion.

Polycarpe’s article can be seen as a parallel defense to that of the lawyer defending the physician, Dr Rebecca Adler, who practiced pre-mortem suspension with the patient’s full consent, indeed his earnest request for her to do so, in order to be placed in cryosuspension and have a chance of being brought back in the future.

Meaningfully, the narrator in Begam’s *Long Life?* also engages with Dante’s *Inferno*, drawing a striking parallel between the fall of Satan into the icy depths of Hell and Dr Rebecca Adler, depicted by the prosecution as potentially a “Satan who has turned her talent to sin and traps her victims in ice” (305). The irony is that it was Satan who was punished by being trapped in ice, while the cryopreserved patients, although unable to move in their cryonic cylinders, are described as being in a state of stasis, awaiting redemption and rescue from their frozen condition. These patients, on the other hand, can also be seen as having been punished for their hubris, their ambition to be like God and become immortal, a punishment that led to their “fall” into the frozen lake, their cryopods.

A Moral Imperative to Cryonics?

Another novel that engages productively with some of the issues around cryonics is Clifford D. Simak’s *Why Call Them Back From Heaven?* (1967). In the future society described in the novel, in the middle of the 22nd century, cryopreservation leading to immortality is taken extremely seriously. Indeed, if someone is found to have in any way neglected to enable a corpse to be prepared for cryopreservation, that person is guilty of a crime punishable with the death penalty. The book begins with a courtroom scene, reminiscent of those in Robert Begam’s *Long Life?*, where a man is on trial for having failed to deliver a corpse to the cryopreservation facilities. The jury in this case, however, is not made up of human beings, but a computer, which in effect means that the law was the only concern, and emotions, preconceptions and prejudices on the part of the jury played no role. In the case of the “State versus Franklin Chapman” (6), the Court hears, the “finding is that the said Chapman, the defendant in this action, did, through criminal negligence and gross lack of responsibility, so delay the recovery of the corpse of one Amanda Hackett as to make impossible the preservation of her body, resulting in conclusive death to her total detriment” (6). The verdict could only be death. The defendant’s lawyer, however, has a trump card up her sleeve. Her argument is that since the defendant could not carry out his responsibilities of retrieving the corpse due to mechanical malfunction of the vehicle used by him when carrying out his official duties, and since the Jury is also mechanical, the character of the evidence necessarily involves prejudice. As a result, the objectivity of the Jury may be (subconsciously) compromised. The Judge, however, denies the defense lawyer’s motion and sentences the defendant to effective future death by forfeiting the preservation of his body at the time of death.

All citizens in this future society are entitled to a second life, indeed they often lead their lives with great sacrifices so that they can save the money they need for that second life, which according to people’s beliefs would practically amount to immortality. The first life was “no more than a few years

of preparation for all eternity” (14). The Forever Center was the epicenter of this whole enterprise, a scientific facility for research and the cryopreservation of bodies, but also effectively the seat of the capitalist corporation that issued the rules that governed society. It is later found out that the scientific advances to resuscitate people have not been achieved yet, that fraud is rampant with many cryopreserved bodies missing so that the Corporation can keep their substantial funds and that the whole enterprise is predicated on a dream of immortality that may never be fulfilled.¹⁴

Even if the technology advances to such a degree that cryonics becomes a safe procedure, many complex social, economic and political issues will arise. Who will have access to this technology? Only the very wealthy? How will the health and security systems cope with an ageing population? These and many other questions are addressed by Francesca Minerva (2018), who provides a thorough and balanced overview of the many moral and ethical objections levelled against cryonics, including the potential economic, political, psychological and legal impact of the procedure, as well as its putative advantages for society and the individual.

In 2016 the case of a British girl who won the right in court to be allowed to have her body cryonically preserved in the US so that she might have another chance to live, placed cryonics at the center of a heated discussion. The judge observed that while under the UK’s “Human Tissue Act” cryonics is not illegal, it is unregulated, and emphasized the necessity for new legislation regarding cryonics.¹⁵

David Shaw (2009:515), for one, is in favor of cryonic suspension, arguing that it “might be imprudent not to use the technology, given the relatively minor expense involved and the potential payoff”. Ole Martin Moen (2015:680), in turn, considering the psychological benefits of cryonics, observes that since “For some, fear of death is a significant evil. With the prospect of being cryopreserved, facing death might feel less like being dragged to the execution chamber and more like embarking on a dangerous journey”.¹⁶

While opinions around cryonics will diverge widely, the hope of vanquishing death with increasingly sophisticated technologies will only gain momentum, as science slowly tries to find alternatives to ageing and death. As a character in *Zero K* explains about the Convergence: “Here of course we refine our methods constantly. We are putting our science into the wonder of reanimation” (240), in an echo of Victor Frankenstein’s dream of bringing the dead back to life, an age-old fantasy increasingly visible and discussed in present day society.

Conclusion

The three novels briefly examined here provide challenging visions of transhumanist scenarios. *Zero K* asks many crucial and probing questions about humanity’s long-standing attitude and relation to death and a putative after-life, the process of dying and the deep-rooted ambition to overcome death. It provides a trenchant critique of a considerable slice of our contemporary society obsessed with consumerism, velocity of communication and instant gratification of desires without heeding deeper values associated with a quieter, more meditative pace of life. The ambition of a minority to realize their dreams of greatly extended lifespans based on not yet existent medical technologies is disparaged as a self-centered whim of the very wealthy, portrayed as a futile, almost artistic endeavor, to be inscribed alongside the ineffectual but creative effort that is the Convergence.

While *Zero K* is not specifically concerned with the legal and ethical questions revolving around the permissibility of euthanizing a body to maximize its chances of returning to life or pondering the

¹⁴ Lois McMaster Bujold’s *Cryoburn* (2010) also addresses the power of a mega corporation to control and profit from the assets of those that have paid to undergo cryopreservation, in a society where cryonics is so important that it steers the economy.

¹⁵ As Francesca Minerva (2018:4) notes, “although countries differ in their legal requirements for allowing a citizen to be cryopreserved, the option is generally open to any autonomous, consenting adult willing to pay the fee required by the cryonic provider”.

¹⁶ Beverley Clack (2016:121) points out that while death is regarded as a “problem for the individual” maybe it might be seen as a “feature of life which reveals something significant about our humanity, and, crucially, about our need the one for the other” (emphasis in the original), while cryonics emphasizes the loss of relational connections.

medical dilemma of when death occurs, Begam's *Long Life?* addresses these quandaries at great length. Simak's *Why Call Them Back From Heaven?*, in turn, discloses the pitfalls of unbridled and unethical capitalist exploitation of that deepest human yearning for extended longevity, advertising and implementing cryonic technology whose success remains unproved.

These novels are examples of speculative fiction that engages with age-old philosophical questions around the meaning of existence, the good life, freedom and whether some radical measures to change the expected human lifespan and take full advantage of untested scientific advances are justified. Indeed, it could be argued that until death has been conquered, human freedom is always already inevitably curtailed by that barrier to one's continuous becoming. Even if the science behind cryonics is "awash in irrepressible fantasy" (257), as the narrator of *Zero K* muses, it still provides hope to those who can afford that dream. In the future, cryonics facilities will probably come to occupy at least as much space as cemeteries, and provide hope of a much longer lifespan. As a scientist at the Convergence muses in *Zero K*: "We are born without choosing to be. Should we have to die in the same manner? . . . Isn't it a human glory to refuse to accept a certain fate?" (252-253). Believing in cryopreservation is the "first awakening toward the blessed state" (253).

Jean Baudrillard talks about immortality as "our ultimate fantasy, a fantasy that is also at work in all of our modern sciences and technologies—at work, for example, in the deep freeze of cryonic suspension and in cloning in all its manifestations" (2000:3). Indeed, the fantasy of cloning and that of cryonics are inextricably linked by the yearning to prolong life or be brought back to life. The two fantasies have been productively and polemically brought together in the TV series *Altered Carbon* (2018), (based on Richard Morgan's novels) where the cloned bodies of the very wealthy are kept on ice waiting for the moment they will be needed. Despite the numerous ethical questions around these procedures, *Altered Carbon* constitutes a salient example of the growing relevance and visibility of these technologies and the hopes associated with them in the popular imaginary. These utopian technodreams are here to stay.

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