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FAILED FUTURES, BROKEN PROMISES, AND THE PROSPECT OF CYBERNETIC
IMMORTALITY: TOWARD AN ABUNDANT SOCIOLOGICAL HISTORY OF CRYONIC
SUSPENSION, 1962-1979

BY

GRANT W. SHOFFSTALL

DISSERTATION

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Doctoral Committee:

Associate Professor Brian Dill, Chair
Associate Professor Zsuzsa Gille, Director of Research
Professor Norman K. Denzin
Associate Professor Behrooz Ghamari-Tabrizi
Professor Richard Stivers, Illinois State University

Abstract

This dissertation offers an interpretation of cryonic suspension, or “cryonics,” the practice of preserving human corpses by way of perfusing them with chemical protectants and gradually subjecting them, at the pronouncement of legal death, to extremely low temperatures (-360° F, -196° C), which are then controlled and maintained over the long term by liquid nitrogen filled “cryocapsules.” Cryonics is ultimately motivated by the hope that medicine will at some future point achieve the requisite kinds and levels of technology to facilitate the rejuvenation and “reanimation” of the “deanimated,” those who lay in cryonic suspension.

The interpretation of cryonic suspension that I set forth departs quite abruptly from existing academic engagements with the practice—it is rooted in a wealth of previously unutilized archival materials from the 1960s and 70s, all of which are virtually inaccessible to those operating outside the cryonics community. The interpretation cuts across, takes as its substantive focus, and is periodized with respect to three different though related moments in the history of cryonic suspension: 1) the emergence of cryonics in 1962 and the previously unexamined ties of the practice to the postwar science of cybernetics and NASA’s Cyborg Spaceflight Program; 2) the subsequent performance and material instantiation of cryonics, marked by the plights of those who froze and were frozen throughout the American 1960s and 70s; and, tied to and fomented by the lattermost especially, 3) catastrophic failure, marked by the collapse of the Cryonics Society of New York in 1974, and the discovery, in 1979, of several abandoned, thawed, and radically decomposed cryonics “patients” interned in the Cryonics Society of California’s underground “cryo-crypt” at the Oakwood Memorial Park Cemetery in Chatsworth, California; what is infamously known in cryonics circles as the “Chatsworth Scandal.” The dissertation as such offers several novel interpretive claims about cryonic

suspension, all of which take shape in sustained dialogue with cultural studies of science and technology, and especially the history of cybernetics.

The dissertation's principle theoretical intervention involves deploying these claims to offer an alternative to prevailing interpretations of cryonic suspension, both popular and academic, as an unintelligible pseudoscientific "anomaly." I argue to the contrary that cryonic suspension emerged in a space produced by what Anthony Giddens and especially Zygmunt Bauman regard as *the* principle constitutive feature of modern social *life*—the ultimately futile yet pervasive modern impulse to sequester death, dying, and the dead from the realm of the living. I furthermore argue that the distinctly modern logic of sequestration is *replicated* in the reigning epistemic norms and practices that shape sociological theory and research proper, in that academic sociology, whatever its professed stripes and leanings, tends overwhelmingly to regard death, narrowly conceived in decidedly modern terms as an "end of life event," as being only marginally important to apprehending the shape of the modern social, when in fact death's sequestration *constitutes* the social realities upon which sociologists tend to train their analytical focus. The key to the intervention I make with respect to cryonic suspension's intelligibility thus hinges upon recognizing that the otherwise seemingly "anomalous" practice emerged in a space *produced* by the institutional shortcomings death's sequestration under western modernity, and thus presents a lived reality that places *considerable strain* upon the conceptual comfort zones of modern epistemology and historiography. It is in this sense that cryonic suspension, as I argue following Robert Orsi, evidences an *abundant phenomenon*. Instead of "passing over in silence" the epistemic discomfort presented by cryonic suspension's abundance, the narrative accounts of cryonics that I develop are pressed into the service of *countering* those authorized ways of knowing that safely accord with modernity's sequestration of death. I thus opt for an historical

sociological treatment of cryonics, one *centered about* death's sequestration—that is to say, an *abundant sociological history* of cryonic suspension.

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My odyssey into the world of cryonic suspension began during my undergraduate years at Illinois State University. My interest in the practice was encouraged and cultivated by professors of extraordinary talent: Diane Bjørklund, Frank Beck, David K. Brown, Nick Maroules, and Richard Stivers. In the course of pursuing graduate study in sociology at the University of Illinois at Urbana-Champaign (UIUC), the project continued to take shape, and received encouragement and support from many in the UIUC Sociology Department: Cindy Buckley, Brian Dill, Tim Liao, Anna Marshall, Monica McDermott, Clarke McPhail, Ruby Mendenhall, Judith Pintar, Becky Sandefur, Markus Schulz, Dan Steward, and Assata Zerai.

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Chapter 1: Origin Stories, Atrocity Tales, and Cold War Simulacra

With all the breath-taking miracles modern medicine offers, and more still which it (given sufficient funds) promises, death ... 'does not yield to science and rationality.' Having cast death as a concern and responsibility for reason and reason-fed technology, modernity could not but expose reason's inadequacy to the task. And so, in the end of the day, 'we are perforce impelled to employ the heavy artillery of defense,' namely, a recourse to magic and immortality.

-Zygmunt Bauman, 1992.¹

There is an “extraordinary cognitive power,” writes Jonathan Z. Smith, that comes with Viktor Shklovky’s strategy of “‘defamiliarization’—making the familiar seem strange in order to enhance perception.”² The other side of this is also true—there is an extraordinary cognitive power that comes with rendering the seemingly strange familiar, part of the ordinary every day. Taking principle direction from this lattermost position, the present study sets out to underscore the ordinariness of a seemingly strange if not all together bizarre practice indeed: cryonic suspension, or “cryonics,” the practice of preserving human corpses—and in some instances only human heads—by way of perfusing them with chemical protectants and gradually subjecting them, at the pronouncement of legal death, to extremely low temperatures (-360° F, -196° C), which are then controlled and maintained over the long term by liquid nitrogen filled “cryostats” or “dewars”—*technological coffins of fiberglass and stainless steel*. The narrative threaded-through cryonics is as explicit and straightforward as it is fantastic: science and modern medicine, cryonics proponents forecast, will at some future point achieve the necessary kinds and levels of technology to repair virtually any damage sustained by the human body, cure

¹ Zygmunt Bauman, *Mortality, Immortality, and Other Life Strategies* (Stanford, CA: The Stanford University Press, 1992), 143.

² Jonathan Z. Smith, *Imagining Religion: From Babylon to Jonestown* (Chicago: The University of Chicago Press, 1982), xiii.

disease, halt and initiate a reversal of the aging process, and yes, rejuvenate and “reanimate” the “deanimated,” those who lay in cryonic suspension. Radically extended life spans, cryonics advocates maintain, if not immortality and eternal youth, may soon be within reach. Thus the quirky expression, coined in the tumultuous American 1960s, but which has since become something of a hallowed commonplace among latter day cryonics advocates: “*freeze-wait-reanimate.*”

Cryonics has suffered significant, perhaps irreparable, setbacks since its emergence in the American 1960s. The history of cryonics is indeed quite dramatic; the lives of its progenitors, early advocates and practitioners are punctuated by episodes of internal strife, heartbreaking loss, catastrophic failure, and venomous accusations of fraud and pseudoscientific quackery. This history, however, these lives (and deaths), have for the better part of fifty years remained out of focus, unexplored, not at all well understood. Indeed, what few academic treatments of cryonics there are have tended overwhelmingly to engage the practice tangentially and in its more contemporary manifestations, i.e. post-1980, and from quite conventional analytical vantages.³ While researchers have in a variety of ways gestured toward the question of cryonics’ history,⁴ no existing treatment of cryonics reflects a serious attempt to understand and reconstruct the time

³ See Richard Doyle, *Wetwares: Experiments in Postvital Living* (Minneapolis and St. Paul: The University of Minnesota Press, 2003); Carl Elliott, “Humanity 2.0,” *The Wilson Quarterly* (Autumn 2003); John Gray, *The Immortalization Commission: Science and the Strange Quest to Cheat Death* (New York: Farrar, Strauss, and Giroux, 2011); Céline Lafontaine, “The Postmortal Condition: From the Biomedical Deconstruction of Death to the Extension of Longevity,” *Science as Culture* 18, no. 3 (September 2009):297-312; Tiffany Romain, “Extreme Life Extension: Investing in Cryonics for the Long, Long Term,” *Medical Anthropology* 29, no. 2 (2010):194-215.

⁴ See Stephen B. Harris, “The Immortality Myth in Technology,” in *Immortal Engines: Life Extension and Immortality in Science Fiction and Fantasy*, ed. George Slusser, Gary Westfahl, and Eric S. Rabkin (Athens, GA: The University of Georgia Press, 1996), 45-67; Oliver Krüger, “The Suspension of Death: The Cryonic Utopia in the Context of the U.S. Funeral Culture,” *The Marburg Journal of Religion* 15 (2010):1-19; Jill Lepore, “The Iceman,” *The New Yorker*, January 25, 2010, 24-30; Jill Lepore, *Mansion of Happiness: A History of Life and Death* (New York: Vintage, 2012), Ch. 10; W. Patrick McCray, *The Visioneers: How a Group of Elite Scientists Pursued Space Colonies, Nanotechnologies, and a Limitless Future* (Princeton, NJ: The Princeton University Press, 2013), Ch. 6; Bronwyn Parry, “Technologies of Immortality: The Brain on Ice,” *Studies in History and Philosophy of*

bound and highly contingent “social work”⁵ that was performed by the progenitors and early advocates of the practice; with minimal regard for delineating and analyzing the context and cultural elements that conspired in producing the technoscientific expectations, existential fears, and futuristic imaginings that both motivated and guided their activities in the real time of practice.⁶ Similarly, existing treatments of cryonics consistently come up short on the most significant defining event in the history of the practice—the discovery, in 1979, of nine abandoned, thawed, and decomposed cryonic suspension “patients” interned at the (now defunct) Cryonics Society of California’s underground crypt at the Oakwood Memorial Park Cemetery in Chatsworth, California.⁷

These events in the history of cryonic suspension, emergence in 1962, catastrophic failure by 1979, mark the approximate sociohistorical parameters of the present study. It merits heavy underscoring that my ability to focus the study on this period in cryonics’ history, marked as it is by events on which existing scholarship is all but silent, is owed entirely to my having been granted access to a veritable wealth of primary cryonics materials, which range across four basic types: (1) original documents of the early cryonics organizations, their founders, members and dissenters: newsletters, personal notes, correspondences, public relations materials, mortuary

Biological and Biomedical Sciences 35 (2004):391-413; Arlene Sheskin, *Cryonics: A Sociology of Death and Bereavement* (New York: Irvington Publishers, 1979); Grant Shoffstall, “Freeze-Wait-Reanimate: Cryonic Suspension and Science Fiction,” *Bulletin of Science, Technology, and Society* 30, no. 4 (2010):285-297.

⁵ On “social work” and attending to it in historical studies of science and technology, see Fred Turner, “How Digital Technology Found Utopian Ideology: Lessons from the First Hackers’ Conference,” in *Critical Cyberculture Studies*, eds. David Silver and Adrienne Massanari (New York: New York University Press, 2006), Ch. 22; see also Stuart Hall and Lawrence Grossberg, “Postmodernism and Articulation: An Interview with Stuart Hall,” *Journal of Communication Inquiry* 10, no. 2 (1986):45-60.

⁶ See John R. Hall, *Cultures of Inquiry: From Epistemology to Discourse in Sociohistorical Research* (Cambridge: The Cambridge University Press, 1999), 210-215.

⁷ Charles Platt, “Robert Nelson and the Chatsworth Scandal,” *The Immortalist* 37, no. 11-12 (Nov.-Dec. 2005):10-13.

records, technical manuals and reports; (2) films and photographs; (3) legal documents; and (4) news and popular press coverage from the early 1960s through the 1980s. These materials are quite obscure; all but a small fraction are generally inaccessible to those operating outside the cryonics community. Indeed, the overwhelming majority of these materials have neither before been systematically archived by a professional historian or librarian nor utilized as sources for the purpose of conducting sociohistorical research.⁸

Given the quite limited accessibility of the requisite materials to engage cryonic suspension historically, the “presentist” focus exhibited by existing accounts of cryonics is in a sense understandable. This tendency, however, understandable though it may be, has not been without historiographical consequence. Lacking recourse to a robust account of the historical record, existing interpretations of cryonic suspension have been haunted by the combined effects of what I will call an “origin story” and an “atrocious tale”—caricatured surrogates, in other words, respectively, for sociohistorical treatments of cryonic suspension’s emergence and catastrophic failure. Access to the aforementioned source materials has allowed me to discern these surrogates and their effects, and has furthermore led me to adopt the position that grasping the nature, contextual complexity, and sociohistorical significance of cryonic suspension in many ways follows from their undoing. In other words, deflating the “origin story” and the “atrocious tale” both reveals the significance of and opens up for analysis the period which is bookended by the historical emergence of cryonics and its catastrophic failure at Chatsworth. Thus the periodization of the present study has not been arrived at willy-nilly, but instead reflects a basic historiographical intervention that follows from careful examination of previously unutilized

⁸ I offer an overview of these materials and how I came to access them in “Chapter 2: Theory, Method, and Source Materials.” Here, my aim is simply to introduce them for the purpose of underscoring how they have enabled me to conceptualize and pursue the present study.

source materials, up against existing treatments of cryonic suspension, both academic and otherwise.⁹

Of Origin Stories...

The cryonics origin story and atrocity tale have over time had the combined effect of bracketing from consideration matters of cultural and historical context. This follows principally from the fact that both center attention on individuals—*lone men*—in reference to whom the emergence and failure of cryonic suspension tend to be explained, discussed, and attributed. The origin story, to this end, centers about a lone man, Robert C. W. “Bob” Ettinger, and his book, *The Prospect of Immortality*. Privately published and circulated in 1962, and significantly expanded for distribution by Doubleday and Co. two years later, the commercial release of Ettinger’s “freeze and wait” manifesto, the story goes, launched the so-called “cryonics movement.”¹⁰ Indeed, in one way or another virtually all of those active in cryonics, past and present, credit *The Prospect Immortality* or Ettinger’s 1972 follow-up, *Man into Superman*,¹¹ with bringing them into the cryonics fold. Consequently, and in no small measure due to the

⁹ Aside from the other relevant sources cited below, the style of analysis that involves deconstructing “origin stories” and “atrocity tales” has been adopted principally from John R. Hall, *Gone from the Promised Land: Jonestown in American Cultural History* (New Brunswick, NJ: Transaction Books, 1987). The mechanics of the intervention presented here furthermore draw from Hall’s methodological remarks on events, turning points, and the temporality of narrative employment in *Cultures of Inquiry*, 210-216, and William H. Sewell Jr.’s remarks on context, historical structure, and eventful temporality at the crossroads of history and sociology in *Logics of History: Social Theory and Social Transformation* (Chicago, IL: The University of Chicago Press, 2005), Ch. 3.

¹⁰ Saul Kent, “The First Cryonicist,” *Cryonics* 32 (1983):9; R. Michael Perry, “Rare Cryonics Book to be Reissued by the Venturists,” *Cryonics* 10, no. 3 (March 1989):2.

¹¹ Robert C. W. Ettinger, *The Prospect of Immortality* (New York: Doubleday, 1964); Robert C. W. Ettinger, *Man into Superman* (New York: Avon, 1972).

commercial distribution of these texts, Ettinger is widely revered as the “father” of cryonic suspension.¹²

Ettinger’s canonization and the cryonics origin story it harbors have clear affinities with one of the “classic foundation myths” of modern science and technology—the lone man of science (and it usually *is* a man), generates ideas, which others then assimilate and put into practice.¹³ Recitations of cryonic suspension’s historical emergence that accord with the conventions of this myth have had the effect of concealing far more than they reveal about the practice and its history. For such an “origin story” attributes all credit for cryonic suspension to Ettinger himself, as if the idea somehow sprung from within him *de novo*; lending to Ettinger an internal coherence and agentive capacity that he does not and cannot possess.¹⁴ Thus, in academic texts, journalistic accounts, and the popular media alike, repeated recitations of this cryonics “origin story” have had the effect of bolstering Ettinger’s mythological resilience, placing sociohistorical inquiry all the more in abeyance.¹⁵ Even those who have made an effort to locate the cultural source(s) of Ettinger’s inspiration for cryonics have not gone nearly far enough in decentering him. When Tiffany Romain, for instance, claims that Ettinger “directly lifted” cryonics from the pages of science fiction¹⁶; when Arlene Sheskin notes that Ettinger conceived of cryonics as a result of encountering French biologist Jean Rostand’s experiments

¹² Anonymous, “Robert Chester Wilson Ettinger,” *The Immortalist: Robert Ettinger Memorial Issue* (August 2011):3-4; Charles Platt, “Bob Ettinger and the Cryobiologists,” *Cryonics* 32, no. 4 (4th Quarter—2011):19.

¹³ David A. Mindell, *Between Human and Machine: Feedback, Control, and Computing before Cybernetics* (Baltimore, MD: The Johns Hopkins University Press, 2002), 5.

¹⁴ See Bruno Latour, *The Pasteurization of France*, trans. Alan Sheridan and John Law (Cambridge, MA: The Harvard University Press, 1988), Introduction; see also Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley and Los Angeles: The University of California Press, 2002), 29-34.

¹⁵ See Hall, *Gone from the Promised Land*, Introduction.

¹⁶ Tiffany Romain, “Extreme Life Extension: Investing in Cryonics for the Long, Long Term,” *Medical Anthropology* 29, no. 2 (2010): 195.

using glycerol to freeze frog sperm¹⁷; when Bronwyn Parry ties Ettinger's idea to the successful freezing, thawing, and "reanimation" of whole animals carried out by cryobiologist Audrey U. Smith and colleagues in the 1950s¹⁸; and when Jill Lepore draws parallels between Ettinger's call to "freeze now" and the otherwise "unthinkable" Cold War connivings of Stanley Kubrick's *Dr. Strangelove*,¹⁹ these are all moves in the right direction—but they miss the mark on several counts. Left unexplored is the peculiar style of "social work" that Ettinger performed in writing *Prospect*; the nature of the *milieu* that inspired, enabled, and fed this work; his status as a community college instructor of math and physics, and thus an amateur scientist at best; and namely the fact that Ettinger was not alone in his initial convictions regarding what was at first called the "freeze and wait" idea. Indeed, Ettinger's *Prospect* was not even the first book of its kind!

In 1957 a small reading group formed in Washington, D.C., some five hundred miles removed from Robert Ettinger's home in Detroit, Michigan. The group came together with the common aim of "improving" the *Great Books of the Western World* program, "making it more contemporary, scientific, and germane to the existence of modern man."²⁰ The group's leader, Evan "Ev" Cooper, was a shy remittance man, boat enthusiast, and irregular liberal arts student at the University of Baltimore.²¹ Under his guidance, the reading group devised a supplementary program, *20th Century Books*. Over the course of three years the group worked through Einstein,

¹⁷ Arlene Sheskin, *Cryonics: A Sociology of Death and Bereavement* (New York: John Wiley and Sons, 1979), 12-13.

¹⁸ Bronwyn Parry, "Technologies of Immortality: The Brain on Ice," *Studies in History and Philosophy of Biological and Biomedical Sciences* 34 (2004): 404-405.

¹⁹ Lepore, *Mansion of Happiness*, Ch. 10.

²⁰ Nathan Duhring, *Immortality: Physically, Scientifically Now* (Washington, D.C.:20th Century Books, 1962), 1.

²¹ Mike Darwin, phone interview by the author, 11 June 2013.

Freud, Pavlov, and Russell, at which point, not insignificantly, they began to “read closely and to analyze and discuss [Norbert] Wiener and the other cyberneticians.”²² By November of 1962,²³ shortly before the first, privately published draft of Ettinger’s *Prospect* saw print, Cooper, writing under the pseudonym Nathan Duhring—i.e. N. Duhring, *enduring*²⁴—was moved to privately publish and circulate a short book manuscript arguing for the feasibility of reviving and resuscitating the frozen dead, *Immortality: Physically, Scientifically, Now*. Both Ettinger and Cooper, though writing at the approximately the same time, were initially unaware of each other’s efforts. They became acquainted and began correspondence in 1963, only subsequent to the completion of their respective texts. Ettinger’s mailing copies of *The Prospect of Immortality* to several of those listed in *Who’s Who in America*, however, eventuated in both Isaac Asimov and Frederik Pohl publicly attesting to the feasibility of his version of the “freeze and wait” idea.²⁵ Ettinger’s manuscript, in no small measure following from these endorsements, was eventually picked up by Doubleday & Co; thus *The Prospect of Immortality* went on to see fairly wide distribution and readership. Cooper’s text did not.²⁶ While Ettinger enjoyed a brief moment of pseudo-celebrity in the wake of his text’s commercial release, Cooper and his text faded into relative obscurity.²⁷ This is today readily evidenced by the fact that extant scholarly

²² Duhring, *Immortality*, 1.

²³ R. Michael Perry, “Rare Cryonics Book to be Reissued by the Venturists,” *Cryonics* 10, 3 (March 1989):2.

²⁴ R. Michael Perry, “Robert Ettinger: Some Brief Historical and Personal Notes,” *Cryonics* 32, 4 (2011):16.

²⁵ Lepore, “The Iceman,” 24-30.

²⁶ In the estimation of Saul Kent, cryonics pioneer and friend of Cooper’s, only 50 or so copies *Immortality* were printed and circulated. Perry, “Rare Cryonics Book to be Reissued by the Venturists,” 2.

²⁷ Mike Darwin, “Ev Cooper: 1926-1983,” *Cryonics* 32 (March 1983):7-12.

and extra-scholarly recitations of cryonic suspension’s historical emergence are overwhelmingly *silent* on Evan Cooper.²⁸

Cooper’s role in facilitating the emergence of cryonic suspension extends far beyond his having penned a “freeze now” manifesto that preceded Ettinger’s *Prospect*, however. For it was Cooper, not Ettinger, who organized the first major cryonics conference (The First International Conference on the Scientific Prospects for Physical Immortality [January 1, 1964]),²⁹ formed the first cryonics organization (Immortality Communication Exchange [I-C-E, “ICE”], later renamed The Life Extension Society [LES]), coordinated the development of LES satellite chapters in the US and abroad,³⁰ and wrote, edited and distributed the first cryonics newsletter (*The Life Extension Society Newsletter*, later renamed *Freeze-Wait-Reanimate*).³¹ Cooper had a heavy hand in guiding the development of all this *before* the Doubleday edition of Ettinger’s text hit bookshelves on June 5, 1964.³² Ettinger’s *Prospect*, then, certainly popularized, but did not initiate, the so-called “cryonics movement.” The lion’s share of credit for that belongs to Evan Cooper.³³

The point in attending here to Cooper, however, is not to supplant one “origin story”—and thus as well one “father” of cryonic suspension, one “canonical” cryonics text—with

²⁸ I am exempting from this claim engagements with cryonics history as recounted by the cryonics insiders I am drawing from presently. In my reviews of the existing academic literature, however, I have managed to locate only one treatment of cryonic suspension that recognizes Evan Cooper: Krüger, “The Suspension of Death.” Given the aims of his research, however, Krüger simply mentions Cooper’s name in passing, neither citing nor seriously engaging the substantive thrust of Cooper’s corpus.

²⁹ Anonymous, “The Conference,” *Life Extension Society Newsletter* 1, 1 (January 1964):1-2.

³⁰ Ibid; R. Michael Perry, “Unity and Disunity in Cryonics,” *Cryonics* 13, 8 (August 1992):5.

³¹ R. Michael Perry, “Notes,” *Freeze-Wait-Reanimate Newsletter Collection*, ii, Alcor.

³² Anonymous, “Big News of the Summer,” *Life Extension Society Newsletter* 1, 3(August 1964):1.

³³ Kent, “The First Cryonicist,” 9.

another. The point, rather, is to call attention to the fact that the Ettinger origin narrative's silence on Cooper has long conspired in obscuring the ties of cryonic suspension to one of the dominant intellectual paradigms of Cold War America—cybernetics. Indeed, the chief claim of Cooper's "freeze and wait" manifesto is that "cybernetics [contains] either intentionally or unintentionally [...] a message about immortality."³⁴ Reading *The Prospect of Immortality* in tandem with Cooper's *Immortality* furthermore evidences that Ettinger's thinking is informed by cybernetics and, more broadly, the pervasive Cold War computational metaphor, of which cybernetics is a theoretical formalization.³⁵

As I elaborate in Chapter 3, cybernetics figured prominently in facilitating the emergence of cryonic suspension, in two principle ways. The first of these follows from the argument that existing treatments of cryonic suspension have unduly emphasized the *freezing* aspect of the practice. In terms of accounting for and understanding the emergence of cryonics in the American 1960s, freezing is notable only insofar as it is recognized as a form of activity that was initially prompted, organized and carried out in anticipation of the arrival of then emerging digital computers—"electronic brains," "machines that can think"—otherwise known as cybernetic (communication) machines.³⁶ Indeed, both Cooper and Ettinger issued their respective calls to "freeze now" in direct response to Norbert Wiener's famed proclamation that systems of computerized control would soon usher in a "second industrial revolution"³⁷—a

³⁴ Duhring, *Immortality*, 1.

³⁵ Paul N. Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge, MA: The MIT Press, 1996), 147-173.

³⁶ Ronald Kline, "Beyond The Closed World," *History and Technology* 28, no. 4 (2012):408.

³⁷ Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York: John Wiley, 1948), 36-37.

cybernetic “new age” in which machines would outstrip human intelligence and capabilities. The religious and even millenarian connotations of Wiener’s pronouncement have been heavily underscored by Geoff Bowker.³⁸ For Cooper and Ettinger, as *Immortality* and *Prospect* readily attest, with the pronouncement of this coming “new age” came the hope of intelligent machines—“robot surgeons of the future,” Ettinger called them—that would possess unprecedented medical capabilities; machines capable of “fixing” disease, aging, and even death.³⁹ Those for whom death, then—“deanimation”—was certain to occur prior to the arrival of the machines, could be frozen and maintained as such, “shuttled” to the future, through a kind of medical “time travel.” For intelligent machines of the order anticipated, Ettinger and Cooper reasoned, in addition to fixing the “cause” of deanimation—cancer, for instance—would certainly also be able to repair the catastrophic cellular damage caused by the freezing process itself, facilitate revival, and ultimately enhance the revived cryonics “patient.” Thus the expression, coined by Evan Cooper, which captures the temporal logic of cryonics as an anticipatory practice, conceived and pursued in relation to Wiener’s heralding of a “second industrial revolution”—“freeze-wait-reanimate.”⁴⁰

Wiener’s pronouncement, then, his aims in issuing it notwithstanding, had the (unintended) effect of producing a space of anticipation, of hope, that mobilized Ettinger and Cooper, and thus facilitated the emergence of cryonic suspension in the American 1960s. But cybernetics was also quite prominently at play *within* this space. Indeed, Cooper’s *Immortality* and Ettinger’s *Prospect* are to be understood as the products of an imaginative style

³⁸ Geoff Bowker, “How to be Universal: Some Cybernetic Strategies, 1943-1970,” *Social Studies of Science* 23, no. 1(1993):107-127.

³⁹ Ettinger, *The Prospect of Immortality*, 37.

⁴⁰ Perry, “Notes,” ii.

of “social *work*” quite uniquely enabled by cybernetics. This then is the second way in which cybernetics figured in facilitating the emergence of cryonic suspension in the American 1960s.

Because cybernetics, in formalizing the computational metaphor, established ontological equivalence in the informational constitution and behavior of organisms, humans, and machines alike, it effectively collapsed otherwise conventional disciplinary boundaries, the trespassing of which it furthermore both prescribed and enabled under the (pretentious) auspices “universal science,” i.e. a science of “everything,” from “cells to society.”⁴¹ This in turn enabled the perpetration of what historians of cybernetics have termed *legitimacy exchange*, “a process by which experts in one area draw on the authority of experts in another area to justify their activities.”⁴² Cybernetics provided a site, in other words, where “an isolated scientific worker making an outlandish claim could gain rhetorical legitimacy by pointing to support from another field.”⁴³

In Chapter 3, I demonstrate that Ettinger and Cooper, in composing their “freeze now” manifestos, drew from several (techno)scientific fields, cybernetics among them, in an effort to win legitimacy for their proposed freezings of the recently deceased. I furthermore demonstrate that in an effort to buttress these legitimacy claims, they also perpetrated several instances of the *discontinuous transmission of ideas*. Cybernetics, Bowker explains, carved out a space in which “conceptual tools” could be “yanked out of one context (e.g. philosophy of mind) and plugged into another (e.g. automata theory), with the translation into the language of cybernetics,” i.e.

⁴¹ Kline, “Beyond the Closed World,” 408.

⁴² Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago, IL: The University of Chicago Press, 2006), 25.

⁴³ Bowker, “How to Be Universal,” 116.

the language of organism-machine equivalence, “doing the work of glossing the discontinuity.”⁴⁴

Taking as unproblematic cybernetics’ ontological flattening of organisms, humans, and machines, I demonstrate that Ettinger, Cooper, and cryonics devotees more broadly stitched together *seeming* continuities between ideas, empirical findings, devices, and especially predictions appropriated from a range of fields, among them cybernetics, cryobiology, transplant medicine, automata studies, and artificial intelligence.

While scholars of pseudoscience would likely insist that what I have outlined here are merely instances of “cherry-picking,” i.e. that Ettinger and Cooper simply “mined” data to locate findings and examples that would support their strange proposals,⁴⁵ the wager of this study is that something more significant, more complicated, and by far more interesting is at play. For one, tying the emergence of cryonic suspension to cybernetics is significant in that it lends evidence to historian Ronald Kline’s “disunity of cybernetics” thesis. While most cybernetics originators had universal aspirations, and while an earlier trajectory of scholarship on cybernetics tended to emphasize this aspect of the science—perhaps most notably Paul Edwards’ *The Closed World*⁴⁶—Kline argues that cybernetic universality operated as a metadiscourse, under which the science itself assumed, in practice, and through the work of legitimacy exchange and the discontinuous transmission of ideas, a range of forms and meanings, “depending on its national,

⁴⁴ Ibid; Turner, *From Counterculture to Cyberculture*, 24-28; Slava Gerovitch, *From Newspeak to Cyberspeak: A History of Soviet Cybernetics* (Cambridge, MA: The MIT Press, 2006), 89-101.

⁴⁵ See Michael Shermer, “Science and Pseudoscience: The Difference in Practice and the Difference it Makes,” in *Philosophy of Pseudoscience: Reconstructing the Demarcation Problem*, ed. Massimo Pigliucci, Maarten Boudry (Chicago: The University of Chicago Press, 2013), 217.

⁴⁶ Edwards, *The Closed World*; see also Bowker, “How to Be Universal.”

historical, and disciplinary context.”⁴⁷ Both Andrew Pickering’s *The Cybernetic Brain*, a history of British cybernetics, and Slava Gerovitch’s *From Newspeak to Cyberspeak*, a comparative study of Soviet and American cybernetics, are notably apiece with Kline’s thesis in that they attend to how interpretations of cybernetics have differed quite significantly across national contexts.⁴⁸ Eden Medina’s more recent *Cybernetic Revolutionaries* furthermore emphasizes cybernetics’ transnationalism, explicating the prominent place of British cybernetics, specifically the work of Stafford Beer, in Salvador Allende’s outline for Chilean socialism.⁴⁹ Fred Turner’s *From Counterculture to Cyberculture* brings to the fore a quite significant though understudied aspect of cybernetics’ disunity, namely the circulation of cybernetics throughout American (popular) culture, i.e. *beyond* scientific disciplines and institutions, attending to how cybernetic concepts and techniques were appropriated, repurposed and elaborated by largely *non*-scientific actors, who figured centrally in the emergence of the American counterculture.⁵⁰ Turner’s work sets the strongest precedent for the present study. Not because the emergence of cryonics is intimately tied to the American counterculture, but rather because Ettinger and Cooper, in a vein quite similar to Turner’s counter-cultural entrepreneurs, engaged cybernetics, and exploited the rhetorical strategies of legitimacy exchange and the discontinuous transmission of ideas, as *non*-scientific actors, giving rise to cryonic suspension *outside* the institutional spaces of “legitimate” technoscientific production.

⁴⁷ Cited in Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende’s Chile* (Cambridge, MA: The MIT Press, 2011), 9; see also Kline, “Beyond the Closed World”; Ronald Kline, “Where are the Cyborgs in Cybernetics?” *Social Studies of Science* 39, no. 3 (2009):331-362.

⁴⁸ Andrew Pickering, *The Cybernetic Brain: Sketches of Another Future* (Chicago: The University of Chicago Press, 2009); Gerovitch, *From Newspeak to Cyberspeak*.

⁴⁹ Medina, *Cybernetic Revolutionaries*.

⁵⁰ Turner, *From Counterculture to Cyberculture*.

Attending to the emergence of cryonic suspension not only lends evidence to Kline's disunity of cybernetics thesis, but also offers a quite striking illustration of how science and technology more broadly acquire unintended meanings, and thus as well give rise to otherwise unanticipated projects, as they are variously consumed, appropriated, and repurposed, "downstream," as it were, by "lay," "amateur," or "non-" scientific actors.⁵¹ This then represents a sizable portion of the interpretive payoff that follows from interrogating the Ettinger origin narrative, an intervention enabled by the aforementioned and previously unutilized source materials to which I have been given access. This intervention also opens up a space through which to articulate one of the principle theoretical claims of the present study: Ettinger's *Prospect* and Cooper's *Immortality* are *simulacra* of cold war technoscientific proposals and predictions, and thus cryonic suspension itself is a *simulacrum* of cold war technoscience. I return to these claims momentarily, after having established the broader cultural and theoretical contexts their elaboration requires.

...and Atrocity Tales

As with the Ettinger origin story, the cryonics atrocity tale centers about a lone man, Robert F. "Bob" Nelson, aka "Robert Buccelli"—prize fighter, TV repairman, Robert Ettinger devotee, and co-founder and former president of the long-since defunct Cryonics Society of California (CSC). Nelson first rose to prominence in cryonics circles on January 12, 1967, when he helped put the "freeze and wait" idea into practice by coordinating, under the auspices of the CSC, the first cryonic suspension to be carried out under "controlled conditions"—that of James

⁵¹ On the recent turn to studies of science and technology "downstream," see Steven Epstein, "Culture and Science/Technology: Rethinking Knowledge, Power, Materiality, and Nature," *The ANNALS of the American Academy of Political and Social Science* 619 (September 2008):165-182.

H. Bedford, Ph.D., UCLA Professor of Psychology Emeritus—the details of which Nelson later recounted in his (somewhat fictionalized) 1968 memoir, *We Froze the First Man*.⁵² Ten years after Bedford, Nelson’s fame was on the fast track to becoming notoriety. His amateurish and highly suspect subsequent toilings in cryonics through the 1960s and 70s conspired in producing the most disastrous, damaging, and arguably the most significant defining event in the history of the practice—the abandonment, thawing, and decomposition of nine cryonic suspension “patients” interned at the CSC’s underground crypt at the Oakwood Memorial Park Cemetery in Chatsworth, California; what is infamously known in cryonics circles as the “Chatsworth Scandal.”⁵³

It would be difficult to underscore the macabre nature of this incident too heavily. Bodies, and tens of thousands of dollars, went missing. In cryo-suspension capsules designed for one, Nelson had crammed two, three, even four cryonics “patients,” leaving scant room for liquid nitrogen. Questions were evaded. Visitations were denied. Relatives were kept in the dark. Rumors of something amiss at Chatsworth circulated among cryonics activists from coast to coast.⁵⁴ *Valley News* reporter David Walker, who discovered the abandoned CSC facility on the morning of Friday, June 8, 1979, described a ghastly site: “Directly under the ladder [which descends into the crypt] are two 10-ft.-long white capsules, one stacked on top of the other. A blowtorch may have been used to sear open a gaping hole in the top capsule,” the bottom of which “is coated with a thick, murky slime.” “Dials and gauges designed to measure liquid

⁵² Robert F. Nelson with Sandra Stanley, *We Froze the First Man: The Startling True Story of the First Great Step Toward Human Immortality* (New York: Dell, 1968).

⁵³ See Platt, “Robert Nelson and the Chatsworth Scandal.” Bedford, miraculously, was not one of them. Indeed, Bedford is the only person frozen before 1974 who has not been thawed. He is presently in the care of the Alcor Life Extension Foundation in Scottsdale, Arizona. See Mike Darwin, “Dear Dr. Bedford (and Those Who Will Care for You After I Do), A Thank You Note to a Pioneer,” *Cryonics* 12, no. 7 (1991):15-22.

⁵⁴ Saul Kent, “Trouble in Southern California?” *Cryonics Reports* 4, no. 12 (1969), 2.

nitrogen pressure,” Walker continues, “register zero...a thermostat indicates the temperature in...the high 50s.” In the corner of the crypt, “a black body bag ... soaked and rotting.” All of this, and then the smell: “The stench near the crypt is disarming, strips away all defenses, spins the stomach into a thousand dizzying somersaults.”⁵⁵ When cryonics activist Mike Darwin made a visit to the Chatsworth site years later, on November 3, 1981, he could still smell the offensive intermingling of rot and DMSO⁵⁶—a lingering testament to the horrors befallen; the unsavory residue of Bob Nelson’s negligence.

Nelson defended his actions in an interview conducted shortly after Walker discovered the crypt in its abandoned state: “I haven’t done anything criminal, anything wrong other than a lot of bad decisions.” Nelson furthermore insisted that he “never promised anything.” “They were told they would be frozen for a period of time. Five minutes is a period of time.”⁵⁷ The bereaved and ultimately the state of California disagreed. In June of 1981, a California civil court found Bob Nelson guilty of “fraud and intentional infliction of emotional distress,” and ordered him to pay upwards of one million dollars in damages to those who brought the suit against him—the adult children of the CSC patients who under his watch were left to thaw and decompose at Chatsworth.⁵⁸

⁵⁵ David Walker, “Valley Cryonic Crypt Desecrated, Untended.” *The Valley News*, June 10, 1979, p. 11.

⁵⁶ Mike Darwin, phone interview by the author, 18 March 2014. Dimethyl sulfoxide, or DMSO, is a substance known to protect the integrity of biological tissue at low temperatures by inhibiting the formation of ice crystals. The bodies of many if not all of the patients at Chatsworth were perfused with DMSO.

⁵⁷ David Walker, “Former Head of Cryonics Society Defends Actions,” *Valley News*, June 13, 1979, 1, 7.

⁵⁸ Los Angeles Superior Court Case C-161229, First Amended and Supplemental Complaint for Declaratory Relief, Breach of Contract, Negligent Misrepresentation and Fraud, prepared and filed by Michael Worthington, December 1, 1970, Alcor.



Figure 1. Cryonics Society of California (CSC) suspension capsule, blowtorched and evacuated, post-Chatsworth, ca.1979.

Source: PAMD

As I write this, Academy Award winning director Errol Morris (*The Fog of War*) and writer-director Zac Helm (*Stranger than Fiction*) are involved in the early stages of a film project set to chronicle the plight of Bob Nelson and the events at Chatsworth. The film, tentatively titled *Freezing People is Easy*, will draw from Nelson’s *We Froze the First Man* and “Mistakes Were Made,” the overwhelmingly popular “cryonics” episode of Ira Glass’s hit radio program, *This American Life*. What transpired at Chatsworth was so bizarre, so revolting, so tragic, it is perhaps fitting that Morris and Helm have opted to engage the scandal through stylistic conventions approximating those of the cinematic genre deployed to such masterful effect by Stanley Kubrick in *Dr. Strangelove*—nightmare comedy.⁵⁹ Boasting a first-rate cast

⁵⁹ The comparison of cryonics to *Dr. Strangelove* is owed to Lepore, *Mansion of Happiness*, Ch. 10. On *Dr. Strangelove* as nightmare comedy see Charles Maland, “*Dr. Strangelove* (1964): Nightmare Comedy and the Ideology of Liberal Consensus,” in *Hollywood as Historian: American Film in a Cultural Context*, ed. Peter C. Rollins (Lexington, KY: The University of Kentucky Press, 1998), Ch. 10.

that will include Paul Rudd (as Nelson), Owen Wilson (as mortician Joseph Klockgether, Nelson's collaborator), the one-and-only Kristen Wiig (as Nelson's wife), and the legendary Christopher Walken (as Robert C.W. "Bob" Ettinger), *Freezing People is Easy* will very likely make for a good laugh. I suspect, however, that Helm and Morris's decision to portray Nelson as a naïve but otherwise good and loveable American everyman, who naively makes promises he can't keep and gets in way over his head, will evoke howls of protest from the contemporary cryonics fraternity, a minority but quite vocal faction of which regards Nelson as a conman who perpetrated unspeakable evil at Chatsworth and beyond, branding cryonics a "pseudoscientific" practice at best, a predatory funeral scam at worst.⁶⁰

Bob Nelson's culpability in the events at Chatsworth will remain open to debate; Morris and Helm have simply announced their intentions to make a film. It is already apparent, however, that their planned treatment of Nelson will likely have a discursive effect similar to that of the Ettinger origin narrative. Which is to say that in offering a cinematic rehabilitation of Nelson, even though satirical, *Freezing People is Easy* may end up concealing far more than it reveals about cryonic suspension, the events at Chatsworth, and Bob Nelson himself. This is not to say, of course, that the villainous Nelson of cryonics lore is somehow closer to the truth; that Morris and Helm's Nelson is somehow "wrong." No. The point, rather, and as well the real challenge, belongs to an entirely different order of argumentation: namely, not to pinpoint Bob Nelson as a saint or the devil incarnate, but to recognize as dubious any attempt to "explain" a complex sociohistorical event like Chatsworth by attributing its horrific outcome to a lone man's flawed moral character.⁶¹ While such an atrocity tale is freighted with the sort of cinematic

⁶⁰ See Darwin, "Dear Dr. Bedford"; Platt, "Robert Nelson and the Chatsworth Scandal."

⁶¹ The present remarks are significantly indebted to Hall, *Gone From the Promised Land*, Introduction and Ch. 12.

possibilities that tend to resonate so powerfully with the twin American cults of hyper-individualism and personal responsibility, it is also sociologically and historically anemic.

As with the Ettinger origin narrative's elision of the ties of cryonics to cybernetics, then, the Nelson atrocity tale has also long bracketed from consideration matters of context. One consequence of this is that significant aspects of cryonic suspension's complexity and sociohistorical significance have long remained hidden. To recover both context and complexity, therefore, I focus far less on Nelson and far more on the cryonic suspension patients who were lost at Chatsworth—and elsewhere. For the historical threads tying the Chatsworth patients to their common fate inevitably also lead to the (long-since defunct) Cryonics Society of New York (CSNY): East Coast rival of the CSC and breakaway group from Ev Cooper's Life Extension Society. Under principle direction from cryonics activists Curtis Henderson, an attorney, and Saul Kent, a student at Hunter College, six patients were frozen during the CSNY's years of operation from 1965-1974. None of the CSNY's patients remain in cryonic suspension today.

In Chapter 4, I consider the CSNY patients in tandem with those lost at Chatsworth. Who were they? When and under what circumstances did they learn of cryonic suspension? What ultimately happened to them? Attending to these questions brings into focus complex sets of relationships that existed between the CSC and the CSNY, as well as the chaotic circumstances under which early cryonic suspensions generally were carried out. These questions, however, also court narratives dealing in pain, loss, anguish and desperation—death. Often moving, at times disturbing, the narratives, whatever their shortcomings, nevertheless humanize the patients lost by the CSNY and thus as well the victims of Chatsworth. Most importantly in this vein of argument, the narratives offer a counter to the implicit charge that the

Chatsworth victims especially were mere “dupes.” As Nelson was found guilty of fraud, it necessarily follows that the victims and their families were found to have been defrauded. In no way does this diminish, however, the significance of the very real circumstances which prompted the victims and their families to pursue cryonic suspension. Nor does it diminish the meaning and significance that the practice had acquired for them. Nor, for that matter, do the matters of cryonic suspension’s scientific (il)legitimacy and technological (in)feasibility figure here in any significant way. Regardless of whether or not cryonic suspension one day “will” or even “can” prove efficacious; regardless of Bob Nelson’s acts and intentions, what matters is that a group of people were in the American 1960s *drawn* to the technique, *believed* in it, and were ultimately moved to *act*.

The nature of the circumstances under which the Chatsworth victims and the CSNY patients came to believe and act—indeed, the circumstances under which the practice of cryonic suspension acquired for them meaning and significance—these issues are introduced in Chapter 2 and taken up again in Chapter 4. These same circumstances, I maintain, motivated Ettinger and Cooper to write their respective manifestos, and furthermore prompted Nelson and Henderson to answer, in practice, their calls to “freeze-now.” These circumstances are also the familiar subject of a broad wealth of scholarship, the principle contributors to which, whatever their divergences otherwise may be, nevertheless converge on the point that death, under western modernity, has been and generally is handled “uniquely badly.”⁶²

Following Zygmunt Bauman’s interpretation, this at base is attributable to the position of “sovereignty” assumed by reason under western modernity. For over time reason undercuts, renders problematic, and ultimately places under suspicion those forms of intersubjective

⁶² Tony Walter, “Modern Death: Taboo or Not Taboo?” *Sociology* 25, no. 2 (1991):295.

meaning and ritual practice which have historically worked to make sense of and assuage the existential terror that death necessarily presents. Reason, however, left alone in the cultural-*cum*-epistemic lacunae its sovereignty ultimately carves out, is in no way up to the task it has created for itself, for death *does not yield to reason*. It is in this sense precisely, Bauman writes, that under modernity death is scandalous—death “loudly declares reason’s lie.” Death, consequently, is modernity’s “guilty secret.” As it is impotent in the face of death, then, reason, principally in its instrumental form as science and technology, is pressed into the service of *excluding* death, *concealing* it from modern life.⁶³

Bauman’s argument has powerful resonances with a broad institutional trend that Anthony Giddens has referred to as the “sequestration of experience.” Anticipating a return to these issues in Chapters 2 and 5, for now it will suffice to say that for Giddens, modern institutional arrangements are characterized by routinization, predictability, and the operational control of internally-referential technological systems. In order to emerge and maintain, however, modern institutional arrangements require the “sidelining,” the “sequestration” from the routines of everyday life, of a cluster of fundamental existential issues which raise profound moral and ethical dilemmas for human beings, among them criminality, madness, sickness, sexuality, nature, and chiefly, of course, for our purposes here, death.⁶⁴ As it pertains to death specifically, Giddens’ sequestration thesis connotes the familiar historical narrative by which death, dying, and the dead, under western modernity, are gradually removed from communal space and drawn into the institutional contexts of hospital, funeral home, nursing home, and later

⁶³ Bauman, *Mortality, Immortality, and Other Life Strategies*, 15, 133-134, 143.

⁶⁴ Anthony Giddens, *Modernity and Self-Identity: Self and Society in the Late Modern Age* (Stanford, CA: The Stanford University Press, 1991), 156.

hospice.⁶⁵ Sequestration as such hardly entails the “resolution” of death, but rather its removal and institutional concealment from everyday life; the individuation and “management” of death, the dead, and the dying by cadres of technical experts.⁶⁶ Insofar as death is ultimately unresolvable, however, uncontrollable, this means that its institutional sequestration will always fall short.⁶⁷

To this point sequestration, Giddens writes, is hardly a “once-and-for-all phenomenon,” and as such “does not represent a set of frictionless boundaries.” It is “internally complicated,” rather, and “throws up contradictions,” as the “frontiers” of sequestration are “full of tensions and poorly mastered forces.”⁶⁸ Sequestration is thus an ongoing process characterized by leakages, breakdowns, and failed containments; it is a “modernizing project” that will always come up short.⁶⁹ Just like everyone else, “we moderns” are in one way or another fated to encounter death. But because death has been more or less removed from the experiential routines of everyday life in the modern world, the ability to develop a shared normative

⁶⁵ The classic articulations of the basic narrative argument include Philippe Ariès, *Western Attitudes Toward Death: From the Middle Ages to the Present* (London: Marion Boyers, 1974), “The Reversal of Death: Changes in Attitudes Toward Death in Western Societies,” in *Death in America*, ed. David E. Stannard (Philadelphia: The University of Pennsylvania Press, 1974), and *The Hour of Our Death* (New York: Oxford University Press, 1981); Norbert Elias, *The Loneliness of the Dying* (New York: Continuum, 1985); Geoffrey Gorer, *Death, Grief, and Mourning in Contemporary Britain* (London: The Cresset Press, 1965); Ivan Illich, *Medical Nemesis: Expropriation of Health* (London: Calder and Boyers, 1976). See also Ernst Becker, *The Denial of Death* (New York: The Free Press, 1973); and Michel Vouelle, “Rediscovery of Death Since 1960,” *Annals of the American Academy of Political and Social Science* 447 (1980):89-99.

⁶⁶ Giddens, *Modernity and Self-Identity*; Chs. 5-6; see also William Ray Arney and Bernard J. Bergen, *Medicine and the Management of Living: Taming the Last Great Beast* (Chicago: The University of Chicago Press, 1984); Céline Lafontaine, “Regenerative Medicine’s Immortal Body: From the Fight against Aging to the Extension of Longevity,” *The Body and Society* 15, no. 4 (2009):53-71.

⁶⁷ Giddens, *Modernity and Self-Identity*. 167-168; see also John R. Hall, *Apocalypse: From Antiquity to the Empire of Modernity* (Cambridge, England: Polity, 2009), 125-128.

⁶⁸ Giddens, *Modernity and Self-Identity*, 167-168.

⁶⁹ Hall, *Apocalypse*, 125-128.

awareness of death has been considerably frustrated.⁷⁰ Moreover, following Bauman, the sovereign position assumed by reason has significantly diminished both the perceived legitimacy and thus the efficacy of those intersubjective forms of meaning and ritual practice which have historically made sense of death; reason has failed to replace with scientific certainties the religious and moral certainties it has placed under suspicion.⁷¹ Thus, people are in effect left to “their own resources when searching for meanings to cope with the limits of individual existence.”⁷² One profound consequence, then, of death’s sequestration, is that the onus of responsibility for devising meaningful strategies to cope with death ultimately falls to individuals who lack the requisite and experientially grounded psychic faculties and cultural resources to effectively confront, let alone cope with and assuage, the existential terror that death ultimately presents. Confusion, anxiety, shame, and terror prevail.⁷³

As I elaborate in Chapter 4, the American 1960s represent a low point in modernity’s “uniquely bad” handling of death and dying, evidencing a particularly pronounced moment of “failed containment” in the history of institutional sequestration. While the televised atrocities of the Vietnam War brought death to heightened levels of awareness—a key dimension of the cultural malaise of the 1960s broadly—American ways of death and dying were also during this

⁷⁰ This is so despite the proliferation of televised and cinematic imagery of death, which at best conspire in the production of a superficial and hardly existential awareness of human finitude. On this point see Giddens, *Modernity and Self-Identity*, 169; see also Margaret Gibson, “Death and Mourning in a Technologically Mediated Culture,” *Health Sociology Review* no. 16, 5 (December 2007):415-424; Richard Stivers, *Shades of Loneliness: Pathologies of a Technological Society* (Lanham, MD: Rowman and Littlefield, 2003), 60.

⁷¹ Philip J. Mellor and Chris Shilling, “Modernity, Self-Identity, and the Sequestration of Death,” *Sociology* 27, no. 3 (August 1993):413; see also Charles Taylor, *A Secular Age* (Cambridge, MA: The Harvard University Press), 142-144.

⁷² Philip J. Mellor and Chris Shilling, “Modernity, Self-Identity, and the Sequestration of Death,” *Sociology* 27, no. 3 (August 1993):425.

⁷³ Giddens, *Modernity and Self-Identity*, 153; see also Ariès, “The Reversal of Death”; Elias, *The Loneliness of the Dying*.

time “examined critically and found wanting.”⁷⁴ The hospice, death education, and death awareness movements emerged at this moment of widespread disaffection.⁷⁵ So did cryonic suspension.

Cold War Simulacra

It is at this point that links appear evident between the interpretive payoff that follows from moving beyond the Ettinger origin narrative—namely, cryonic suspension’s ties to cybernetics—and the preceding contextual complexities revealed by moving beyond the Nelson atrocity tale. Cryonic suspension, in other words, appears to be the product of a tension, or, better, an *affinity*, between the “failed containment” of and ensuing cultural malaise surrounding death and dying, and the circulation of cybernetic concepts and predictions throughout the broader culture of 1960s America.⁷⁶ Indeed, this affinity defines the circumstances under which the practice emerged and was pursued. For as we have seen, Norbert Wiener’s pronouncement regarding the coming of a “second industrial revolution” had the effect of producing a space of anticipation, of hope, into which Cooper and Ettinger were drawn. The true significance of their shared anticipation of the “robot surgeons of the future,” however, and their motivation to pen “freeze now” manifestos in light of this anticipation, can only be understood up against the broader context of modernity’s “uniquely bad” handling of death coming to a head in 1960s America. Wiener’s pronouncement of a second industrial revolution *created an expectation* for

⁷⁴ Stefan Timmermans, *Sudden Death and the Myth of CPR* (Philadelphia: The Temple University Press, 1999), 13.

⁷⁵ *Ibid*; see also Mellor and Shilling, “Modernity, Self-Identity, and the Sequestration of Death,” 413.

⁷⁶ I am using “affinity” loosely, in Max Weber’s sense of the term, to simply denote here a non-deterministic though significant cultural association and interaction. See Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Stephen Kalberg (Chicago: Roxbury, 2001).

the intelligent machines that would herald its arrival—an expectation manifest, in Ettinger and Cooper initially, and later those who would heed their call to “freeze now,” as a *wish* for immortality by way of robot surgeons. Cryonic suspension, then, and the work that Ettinger, Cooper and others carried out to propose and help put the technique into practice, emerged in this *gap* between the *wish* and its anticipated *fulfillment*—a gap both produced and enveloped by an affinity between Wiener’s pronouncement and the sad state of death and dying in the American 1960s.

In defining the conditions under which cryonics emerged, this affinity also points towards what kind of practice cryonic suspension “is.” There is a potential for enormous confusion here. For cryonics, as both a technique conceived and a practice ultimately carried out in anticipation of the arrival of “machines” capable of facilitating the repair, rejuvenation, and “reanimation” of the “deanimated,” is modeled in its *form* as Cold War technoscience. This technoscientific form, however, is entirely *exterior*. Cryonics, moreover, both in terms of the frozen bodies themselves but also the ideas set forth in Ettinger and Cooper’s manifestos, is a clear exaggeration of technoscience, to the point of blatant excess. This is hardly insignificant. For considered in light of the fact that both Ettinger and Cooper were non-scientists, i.e. uncredentialed laymen, who imagined and operated far outside the formal institutional contexts of Cold War technoscientific production, this exterior technoscientific excess is a clear indicator of cryonic suspension’s status as a *simulacrum*.

I am departing here from the more commonplace definition, typically associated with the work of Jean Baudrillard,⁷⁷ which posits the simulacrum as a “copy of a copy whose relation to

⁷⁷ Jean Baudrillard, *Symbolic Exchange and Death* (Sage: Thousand Oaks, CA: 1993), 50-86; see also

[its] model has become so attenuated that it can longer properly be said to be a copy.”⁷⁸ Instead, following Gilles Deleuze,⁷⁹ I regard the simulacrum, at least as it relates to cryonic suspension, as less a copy several times removed from its model and more a “phenomenon of a different nature altogether.”⁸⁰

If we say of the simulacrum that it is a copy of a copy, an infinitely degraded icon, an infinitely loose resemblance, we then miss the essential, that is, the difference in nature between simulacrum and copy, or the aspect by which they form two halves of the same division. The copy is an image endowed with resemblance, the simulacrum is an image without resemblance. [...] Without doubt, [the simulacrum] still produces an *effect* of resemblance; but this is an effect of the whole, completely external and produced by totally different means than those at work within the model.⁸¹

What this means is that there is a *severe internal discord* between cryonic suspension and its putative technoscientific model—it is *something other* than that the technoscience it simulates. This internal discord is masked, however, camouflaged, by cryonics’ external and excessive technoscientific *form*—thus the effect of resemblance to which Deleuze alludes. Masked internal differences such as these are at the root of the simulacrum’s calling card—it produces an effect of “uncanniness,” a sense that something is “off,” “strange,” “not quite right.”⁸² As I elaborate in Chapter 2, this is a quite common reaction to cryonic suspension, and is certainly the

Norman K. Denzin, “Postmodern Social Theory,” *Sociological Theory* 4, no.2 (1986):195-196.

⁷⁸ Cited in Brian Massumi, “Realer than Real: The Simulacrum According to Deleuze and Guattari,” *Copyright* no. 1 (1987):92.

⁷⁹ See Gilles Deleuze, “The Simulacrum and Ancient Philosophy,” in *The Logic of Sense*, ed. Mark Lester with Charles Stivale (New York: Columbia University Press, 1990), 253-279, to which I was led by way of Jack Z. Bratich, *Conspiracy Panics: Political Rationality and Popular Culture* (Albany, NY: The State University of New York Press, 2008). My thanks to James Hay for suggesting that I look into Bratich’s work.

⁸⁰ Massumi, “Realer than Real,” 92.

⁸¹ Deleuze, “The Simulacrum and Ancient Philosophy,” 257-258, his emphasis.

⁸² Massumi, “Realer than Real,” 92.

most formidable obstacle one will encounter in attempting to understand the practice. For any resemblances cryonics bears to its putative model—technoscience—are external, superficial, deceptive, and remarkably confusing. And as with simulacra more broadly, the uncanny affect, the lack of orientation produced by cryonic suspension’s masked internal differences, make the practice *remarkably resistant to narration*, for at base cryonics is at once both “removed from and proximate to its point of origin,”⁸³ its putative technoscientific model.

Just what kind of practice, then, “is” cryonic suspension? It is obviously a death practice, and this is certainly part of the internal discord its external technoscientific form masks. Two points merit consideration here, both of which will receive extended treatment in Chapter 3. First, while Ettinger and Cooper operated outside the contexts of formal technoscientific production, they did so at a time when cybernetics was becoming a “cult topic,” circulating broadly throughout the culture of the American 1960s, its concepts and attendant rhetorical strategies of legitimacy exchange and the discontinuous transmission of ideas being made available for new and unanticipated forms of use⁸⁴—“downstream,” as it were, by amateurs like Ettinger and Cooper.⁸⁵ This is the source of cryonic suspension’s external and excessive technoscientific *form*. Second, this was preceded by cybernetics having rapidly fallen out of favor in intellectual circles, losing virtually all scientific credibility in the United States and Britain.⁸⁶ This, coupled with the fact that Ettinger and Cooper were credentialed neither as scientists, engineers, nor medical doctors, conspired in barring them from participation in and

⁸³ Scott Durham, *Phantom Communities: The Simulacrum and the Limits of Postmodernism* (Stanford, CA: The Stanford University Press, 1998), 4.

⁸⁴ See Turner, *From Counterculture to Cyberculture*, 24-28; see also Bowker, “How to Be Universal”; Kline, “Beyond the Closed World.”

⁸⁵ Epstein, “Culture and Science/Technology,” 166.

⁸⁶ Kline, “Where are the Cyborgs in Cybernetics?”

being taken seriously by the technoscientific mainstream. Mortuary and cemetery operations were the only viable institutional spaces through which to pursue the “freeze and wait idea.” This is where the technique of cryonics, as proposed in Ettinger’s *Prospect* especially, gained traction and was most vigorously pursued. The CSC, under the direction of Robert Nelson, partnered with mortician Joseph Klockgether. The CSNY, under the direction of Curtis Henderson and Saul Kent, partnered with mortician Fred Horn. The freezings, as I chronicle in Chapter 4, the actual cryonic suspensions carried out by these base partnerships of lay, non-, or amateur scientific actors, thus rendered concrete a very strange set of articulations between Cold War technoscience and mortuary techniques.

Thus cryonics is certainly a death practice, but this only gets at part of the confusion deriving from its status as a simulacrum. To get at the true source of the internal discord that its external and excessive technoscientific form masks, it must be asked: What *kind* of death practice is cryonics? If we accept, as sketched above, that cryonics emerged in a gap between a wish for immortality and its anticipated fulfillment by robot surgeons of the future; a gap produced, moreover, and enveloped, by an affinity between Wiener’s famed pronouncement and the sad state of death and dying in the American 1960s; if all this is accepted, then we need not venture too far to find an answer, for this at base is how Marcel Mauss defines magic: “Between a wish and its fulfillment there is, in magic, no gap.”⁸⁷ Magic arises, in other words, in the “hiatus between the wish and its fulfillment.”⁸⁸ Thus cryonics’ status as a simulacrum—it is a magical practice masquerading as the technoscience it simulates.⁸⁹

⁸⁷ Marcel Mauss, *A General Theory of Magic*, trans. Robert Brain (London: Routledge, 1972), 78.

⁸⁸ Richard Stivers, *Technology as Magic: The Triumph of the Irrational* (New York: Continuum, 2000), 2.

⁸⁹ *Ibid.*, Introduction.

Throughout the remaining chapters, this interpretation of cryonic suspension as a magical practice is further developed and contextualized in a number of ways. In Chapter 2, I provide an overview of the source materials, methodology, and theoretical commitments which have together led me to this interpretation. To this lattermost point, I offer a two-pronged theoretical discussion. First, I discuss cryonics as a *simulacrum* and ultimately a *magical* practice in relation to two additional concepts: the *uncanny* and *abundant phenomena*. I offer discussions of these concepts to the reader as something of a cognitive map, and I do so for several reasons. On the one hand, I want to relate the nature of the unease and confusion I that have permeated my efforts get a handle on the “something strange” about cryonics, thereby situating myself in relation to my research topic; acknowledging the discomfort and confusion it has caused me; how these concepts helped me sort through it; and ultimately how they enabled me to clear a space in which to conceptualize and carry out the present study. On the other hand, my aim is simultaneously to minimize, at the outset, the potential for such discomfort and confusion as I experienced to consume the reader, by offering a set of guiding concepts with which to productively engage and think about cryonic suspension.

The second prong of theoretical discussion draws considerably from the work of Zygmunt Bauman, who has argued that reason, in its instrumental form as science and technology, has come to operate as a powerful channeling agent for the very sorts of magical practices, expectations, and forms of association that theorists of secularization, for instance, expected modernity to displace.⁹⁰ I consider Bauman’s theorization up against Anthony Giddens’ sequestration of death thesis, and ultimately move to advance the argument, drawing

⁹⁰ Bauman, *Mortality, Immortality, and Other Life Strategies*.

principally from Bauman, that modernity's "uniquely bad" handling of death has eventuated, paradoxically, in a modern recourse to magic.⁹¹

Chapters 3, 4 and 5, in different ways, position cryonics as a case through which to elaborate this argument. In Chapter 3, I focus on the historical emergence of cryonic suspension, and in so doing explicate the ties of the practice to the postwar science of cybernetics, thereby lending evidence to Ronald Kline's disunity of cybernetics thesis. This chapter will also elaborate Kline's thesis by arguing that the style of "social *work*" performed by Ettinger and Cooper, that is to say, their use of the rhetorical strategies of legitimacy exchange and the discontinuous transmission of ideas, evidences a form of bricolage—*magic*—a means through which they constructed their freeze now manifestoes; piecemeal arguments that fail in terms of legitimating technoscientific criteria, but which serve to render death knowable and thus manageable.⁹² In this sense, I argue, cryonics belongs to an emergent class of (magical) practices that Bauman has termed *survival strategies*.⁹³ At the same time, however, cryonics is a *simulacrum* of Cold War technoscience. I develop this claim and sharpen cryonics' intelligibility by comparing it to two other kinds of cybernetic entities, both of which emerged in the same sociohistorical context, and which, like cryonic suspension, harbor considerable uncanny potential—"cybernetic monsters" (Andrew Pickering's apt phrase⁹⁴), and the iconic figure of the cyborg. All of this, finally, is set within a broader discussion of Norbert Wiener's famed

⁹¹ Ibid., 16.

⁹² Christopher Lehrich, *The Occult Mind: Magic in Theory and Practice* (Ithaca, NY: The Cornell University Press, 2012).

⁹³ Bauman, *Mortality, Immortality, and Other Life Strategies*, Introduction.

⁹⁴ Andrew Pickering, "A Gallery of Monsters: Cybernetics and Self-Organization, 1940-1970," in *Mechanical Bodies, Computational Minds: Artificial Intelligence from Automata to Cyborgs*, ed. Stefano Franchi and Guven Guzeldere (Cambridge, MA: The MIT Press, 2005), 231.

pronouncement that systems of computerized control—“thinking machines”—would herald the coming of a second industrial revolution; how these pronouncements circulated broadly throughout American culture; produced spaces of hope and anticipation, such as that into which Ettinger, Cooper, and their followers were drawn; and which furthermore created anxiety for fear of dehumanizing automation, which ultimately led Wiener himself to reflect upon what he saw as cybernetics’ parallels with sorcery and black magic, most notably pronounced in the figure of the Golem—the artificial man of Jewish legend.⁹⁵

Chapter 4 then moves to trace the grim adventures of those who took up the call of Ettinger and Cooper to “freeze now”—Bob Nelson and his associate, mortician Joseph Klockgether, and Curtis Henderson, Saul Kent and mortician Fred Horn—and thus as well the lives of those who were frozen and ultimately lost. The payoff of this chapter is fourfold. First, I offer answers to the questions about the cryonics patients set forth above: Who were they? When and under what circumstances did they learn of cryonic suspension? What ultimately happened to them? Second, in proceeding as such, I show how the manifestos produced by Ettinger and Cooper circulated and brought together various families and individuals into shared spaces of anticipation, under the auspices of the CSC and the CSNY, thereby rendering their hopes and fears intelligible, humanizing them, and furthermore demonstrating the material instantiation of cryonic suspension as an emergent survival strategy. Third, in so doing I demonstrate the catastrophic events at Chatsworth “in the making.”⁹⁶ All of this, lastly, is set within a broader consideration of the particularly pronounced moment of “failed containment” in

⁹⁵ Ibid; Norbert Wiener, *God and Golem, Inc.: A Comment on Certain Points Where Cybernetics Impinges on Religion* (Cambridge, MA: The MIT Press, 1964).

⁹⁶ See Bruno Latour, *Science in Action* (Cambridge, MA: The Harvard University Press, 1987), 4.

the history of attempts to institutionally sequester death, dying and the dead under western modernity.

Chapter 5, finally, following a recapitulation of the study overall, returns to the Ettinger origin story and the Nelson atrocity tale, in a bid to throw into sharp relief what these narratives have conspired in concealing, namely, those conditions of American culture that gave rise to cryonic suspension in the first place. By offering an interpretation of cryonic suspension as a (magical) survival strategy, the emergence of which is tied to the shortcomings of modernity's institutional sequestration of death, I make good on the claim, adapted from Jonathan Z. Smith and Viktor Shklovsky, set forth at the outset of this chapter—that “extraordinary cognitive power” comes with rendering the seemingly strange familiar, part of the ordinary every day. For what such an interpretation ultimately reveals, I maintain, is that cryonics reflects a desperate turn to technoscience in an effort to escape the world technoscience has created; a turn to technoscience to overcome the very issue that reveals its outer limit—death. Cryonics' marginality, in this sense, the seemingly “bizarre” nature of the practice, is thus inseparable from one of modernity's key constitutive features—the institutional sequestration of death, dying, and the dead from everyday life. The broader payoff of the study, following from this, is that it demonstrates the necessity of (re)positioning death at the *center* of social theory and analysis broadly, lest this institutional sequestration be replicated and reinforced at the level of disciplinary knowledge generated about modern social *life*.

Chapter 2: Materials and Method

The previous chapter, in addition to offering an outline of the overall architecture of the present study, set forth a preliminary interpretation of cryonic suspension as a *simulacrum* of Cold War technoscience—it is ultimately a *magical* practice masquerading as the technoscience it simulates. In no small measure, my ability to arrive at this interpretation follows from my having been granted access to a veritable wealth of previously unutilized historical materials. Taking these materials as a common point of reference, my aim in this chapter is threefold. First, I begin with an overview of the source materials and provide an account of how I came to access them. I then move to offer a discussion of two absolutely crucial concepts: *abundant phenomena* and the *uncanny*. In the course of my research on cryonics, it was only when I discovered the language afforded by these concepts that I was able to really begin making sense of the narratives my source materials disclosed; to relate these narratives to broader theoretical concerns; and to present cryonics intelligibly and without embarrassment to other people. The entire study, in other words, hinges quite considerably upon these two concepts. I offer discussions of them in this chapter, then, for two principle reasons: first, to relate the extreme confusion and frustration that haunted my research in their absence, and second, to provide something of a cognitive map; to minimize the potential for such confusion and frustration as I experienced to overwhelm the reader. The chapter concludes, finally, with a discussion of the methodological strategy I relied upon in arriving at the architecture of the overall study, anticipating the interpretive claims I develop in Chapters 3 and 4.

Materials

This interpretation of cryonic suspension draws from a veritable wealth of primary materials, which range across four basic types: (1) original documents of the early cryonics organizations, their founders, members and dissenters: newsletters, correspondences, personal notes, public relations material, mortuary records, technical manuals and reports; (2) films and photographs; (3) legal documents; (4) news and popular press coverage from the early 1960s to the 1980s. These materials are quite obscure; all but a small fraction are inaccessible to those operating outside the cryonics community. Indeed, the overwhelming majority of these materials have neither before been systematically archived by an historian or librarian nor utilized as sources for the purpose of conducting sociohistorical research.

My access to these materials came through contacts I established with two of the cryonics community's veteran activists: Mike Darwin (aka Michael Federowitz) and R. Michael Perry. Darwin, a dialysis technician by trade, is former President of the Alcor Life Extension Foundation in Scottsdale, Arizona (previously Riverside, California) where during his tenure (1982-1988) he carried out research and assisted in the performance of several cryonic suspensions. Perry, who holds a Ph.D. in computer science, is presently the care service manager at Alcor; he monitors and helps maintain Alcor's 122 cryonic suspension patients in liquid nitrogen. In addition to having actively and consistently moved in the innermost circles of the practice since the late 1960s, both Darwin and Perry are deeply committed to preserving and interpreting the history of cryonic suspension. Perry, to this end, also serves as Alcor's principle archivist and historian. In fact, since 1981, he has authored a column devoted to recalling key moments and figures in the history of cryonics, "For the Record," which appears regularly in

Alcor's quarterly (previously monthly) magazine, *Cryonics*.⁹⁷ It was through Perry's column that I was first awakened to the dizzying expanse of truly rare and fascinating historical materials he has amassed over the years at Alcor. Unable to independently locate even a fraction of the primary materials noted in Perry's citations—despite having at my disposal the resources of the world-class research library at the University of Illinois—in the fall of 2009 I wrote to Perry, explained my interest in the history of cryonic suspension, and simply asked if he would be willing to share materials with a fellow historian. He kindly obliged, providing me with digital copies of several cryonics newsletters, most notably among them *Freeze-Wait-Reanimate* (1964-1969), the very first cryonics newsletter, published and circulated monthly by the first cryonics organization, Evan Cooper's Washington D.C.-based Life Extension Society (1963-1969), and *The Outlook* (1970-1976), the monthly newsletter of the Cryonics Society of Michigan (now the Cryonics Institute), an organization founded by Robert C. W. Ettinger. Upon several subsequent requests for additional materials, Perry ultimately went so far as to obtain permission from Alcor's current CEO, Max More, to provide me with digital copies of highly sensitive photographs, mortuary records, and droves of legal documents pertaining to Robert Nelson, the Cryonics Society of California (CSC [1966-1976]), and the several cryonics patients who were lost at Chatsworth (of which more below).

I first encountered Mike Darwin's name quite early in my research; however, it was only when I discovered his cryonics blog, *Chronopause: A Revolution in Time*, that I was prompted to initiate contact with him. In a July 2011 post titled "Casual Conversation: A Remembrance of

⁹⁷ All issues of *Cryonics* magazine from 1981-2013 are freely accessible via the Alcor Life Extension Foundation's website: <http://alcor.org/CryonicsMagazine/index.html>.

Things Past,”⁹⁸ Darwin, who has been active in cryonics since his early teens, made it known that for several years he had been at work digitizing his personal collection of cryonics materials: literally thousands of rare photographs and documents (approximately sixteen cubic feet of historical material). Moreover, as he was the protégé of Curtis Henderson (1926-2009), cryonics pioneer and Cryonics Society of New York (CSNY [1965-1974]) cofounder, Darwin inherited sizable portions of the long-since defunct CSNY’s core archival holdings.

As with many things in the world of cryonics, “Casual Conversation” has an air of urgency about it. I was quite shocked to read Darwin’s lamentations about the cryonics community’s pervasive disinterest in the history of the practice, and the attendant indifference to the fate of the historical materials he had been laboring so diligently to preserve. “Apparently,” Darwin wrote, “with the exception of Dr. Mike Perry, no one else gives damn whether these resources survive or perish.”⁹⁹ Darwin went on to explain that he was motivated in part to digitize and make available these materials in the hope that academic historians would one day find them to be of interest. With this I promptly wrote to Darwin, explained, as I had done with Mike Perry, my interest in the early history of cryonic suspension, and simply asked if he would be willing to share certain materials with me. He happily agreed, granting me full access to his personal collection of cryonics materials, most notably the CSNY archives, which contain organizational records, correspondences, and complete runs of *Cryonics Reports* (1966-1970) and *Immortality* (1969-1971), the monthly newsletters published and circulated by the CSNY.

⁹⁸ Mike Darwin, “Casual Conversation: A Remembrance of Things Past,” *Chronopause: A Revolution in Time* (blog), July 4, 2011, <http://chronopause.com/chronopause.com/index.php/2011/07/04/casual-conversation-a-remembrance-of-things-past/index.html> (accessed on 17 May 2012).

⁹⁹ Ibid.

Imagining the future of cryonics, it would seem, at least for the majority of those invested, is indeed by far more important than reflecting upon and learning from the practice's history; Darwin and Perry are in this respect quite anomalous. I learned through correspondence with Darwin, for instance, that Evan Cooper (1926-1982/83[?]), who in 1969 walked away from cryonic suspension due to "over-load, burn-out, and a general sense that it was not going to be a viable option in his lifetime," in May of 1982 collected his personal papers and correspondences and "deep-sixed" them, i.e. disposed of them at sea. Not long thereafter, in December of 1982, Cooper, an avid sailor, disappeared in his sailboat, "Pelican," off the New England coast, never to be seen or heard from again.¹⁰⁰ Robert Ettinger (1918-2011), moreover, so-called "father" of cryonic suspension, several years ago, and for undisclosed reasons, burned his own and most of the CSM's [Cryonic Society of Michigan's] correspondence, photos," and so forth.¹⁰¹ Ettinger's legacy of disregard (contempt?) for the past lives on at the Michigan-based Cryonics Institute (CI), a latter-day incarnation of the CSM. When I attempted to establish a line of correspondence at CI regarding potential access to historical sources, a CI staff member replied that all the information I could possibly need is accessible via the CI website (<http://cryonics.org>). Alas, the remarkably dated and unnavigable CI website is precisely what prompted me to initiate correspondence in the first place!¹⁰²

¹⁰⁰ Ibid; Mike Darwin, "Evan Cooper: 1926-1983," *Cryonics* 32 (March 1983):8.

¹⁰¹ The Cryonic Society of Michigan was founded by Ettinger in 1966, and in 1976 split into the Cryonics Institute and the Immortalist Society, with the latter operating as the educational wing of the former. This arrangement presently endures. Mike Darwin, email message to the author, 21 August 2012. Interestingly, historian Jill Lepore drew out Ettinger's contempt for the past, and those for whom it is a matter of concern, in the course of an interview conducted for her somewhat snarky essay, "The Iceman," *The New Yorker*, January 25, 2010, 24-30.

¹⁰² Andy Zawicki, email message to the author, 21 June 2011. All of the source materials I have managed to access regarding the CSM and the CI have come from Darwin and Perry. Parts of the CI website have since been updated, but its layout reflects a concerted effort to control interpretations of Ettinger's legacy and cryonics' history, as evidenced by the dearth of available resources. It is still, furthermore, very difficult to navigate.

My efforts to establish correspondence with representatives of the other active cryonics organizations have met with similar outcomes. With Mike Perry vouching for me, I was able to open a brief line of communication with Jim Yount, Chief Operations Officer of the American Cryonics Society (ACS), formerly the Bay Area Cryonics Society (BACS). Founded in 1969, the ACS is the oldest cryonics organization presently in operation. The ACS is also highly secretive.¹⁰³ Yount was initially receptive to my plans to extend a conference trip to the Bay Area into a research opportunity to both interview him and go through ACS/BACS archives. He simply asked to know a bit more about me and my intentions, a request to which I happily replied with a CV and an extended description of my overall interest in cryonics' history.¹⁰⁴ He never replied. Subsequent emails went unanswered. My attempts to establish correspondence with Art Quaife, moreover, mathematician, BACS veteran, and former President of Trans Time, Inc., partner organization of the ACS, were, in the course of planning a subsequent conference trip to the Bay Area, similarly unsuccessful.

Much more recently, in the course of working through the wealth of source materials gathered from Perry and Darwin, I came across a brief essay, "And Now, for the Rest of the Story," authored by a man named Kenneth Bly.¹⁰⁵ It offered what struck me as an amateurish, warped, and very one-sided account of Robert Nelson's involvement in the CSC and the events at Chatsworth. Further investigation revealed Bly to be closely acquainted with Nelson. After having been found guilty of fraud in California Civil Court in 1981, Nelson returned fulltime to

¹⁰³ For instance, the ACS does not disclose membership statistics. Among other and somewhat thornier issues, ACS President Edgar Swank has ties to the San Francisco-based Church of Satan. While a fascinating connection, tracing these historical threads leads well beyond the scope of the present study. See "Memories of the Church of Satan," <http://edgars.byethost13.com/satan/cos.htm> (accessed on 21 July 2012).

¹⁰⁴ Jim Yount, email message to the author, 24 February 2013.

¹⁰⁵ Kenneth Bly, "And Now, for the Rest of the Story," *The Immortalist* 37, nos. 11-12 (2005):13-16.

his television repair business; Bly was initially one of his employees, with no ties to cryonics previously. In the course of his employment, however, Bly seemingly became Nelson's confidant regarding the latter's involvement in cryonics during the 1960s and 70s. Indeed, according to Bly, Nelson granted him "unimpeded access" to a "large chest he kept stored in his garage," which contained "court documents from the trial in '81, correspondences, newsletters, etc."¹⁰⁶ In an online post to a defunct cryonics forum from 2004, Bly furthermore announced plans for a website that would showcase a range of Nelson's materials, as well as photographs and digitized films of early cryonic suspensions.¹⁰⁷ I wrote to Bly at the email address indicated in his essay, inquiring about the website and access to Nelson's materials more broadly. He replied surprisingly fast, addressing both the failed launch of the website and the contents of Nelson's storage chest. He furthermore made it a point to mention that he was helping Nelson write a cryonics memoir, *Freezing People is (not) Easy*, the release of which is slated to coincide (of course) with Morris and Helm's upcoming film, discussed in the previous chapter, *Freezing People is Easy*. Bly seemed quite willing to discuss and even share materials, asking only that I give him a sense of what I was looking for. I responded with a three page letter, outlining in some detail my interests in cryonics' history and the CSC, and how this translated into a need to see certain kinds of materials, e.g. the CSC's newsletter, *Cryonics Review*. A month went by. No response. I followed up with another email, to which Bly replied, "I like the idea of talking to you before I send anything."¹⁰⁸ I called the number he provided. The ensuing conversation was brief, strained, and strange. He seemed confused, and I soon came to doubt that he bothered

¹⁰⁶ Ibid., 14.

¹⁰⁷ Ken, "Cryonics History Website," *Cryonet*, November 18, 2004, <http://www.cryonet.org/cgi-bin/dsp.cgi?msg=25082> (accessed on 17 January 2014).

¹⁰⁸ Kenneth Bly, email message to the author, 20 February 2014.

to read the letter I had sent. He asked me over and over again what I would like to see from Nelson's collection, as if I somehow knew what it contained. The first few times he asked I tried to stress, historically speaking, that I would like to see anything and everything he would be willing to show me; that ideally I would be granted "unimpeded access" to these materials, much as Nelson had granted him; much as Darwin and Perry granted me to their collections. This got me nowhere, so I finally resorted to asking, specifically, for any and all photographs, films, and legal documentation pertaining to the patients lost at Chatsworth and the ensuing civil trial. He replied, defensively, "but that's just all the bad stuff!"¹⁰⁹ And with that I moved to end the conversation swiftly and gracefully, for at this point it became clear to me that Bly's comfort zone regarding Nelson's involvement with cryonics was quite narrow, extending neither beyond nor into potential criticism of the narrative version of events he had constructed in "And Now, for the Rest of the Story." I suggested that we simply arrange to talk again after I had a chance to read the book he and Nelson were writing, so I could ask questions that were more to his liking.

As a final note, it should be known that early in my dealings with Mike Darwin I offered to search out research institutions that might have an interest in completing the costly digitization process he had begun and ultimately take stewardship over his personal collection of cryonics materials. He happily agreed to let me search out institutions and serve as a liaison on his behalf. I first presented his collection to the University of Illinois Archives at Urbana-Champaign. While there was serious interest in acquiring the collection, as evidenced by a series of meetings between myself, a University Archivist, and the Director of University Collections, the University of Illinois ultimately passed, citing what struck me as needlessly conservative worries

¹⁰⁹ Kenneth Bly, phone interview by the author, 20 February 2014.

over copyright issues. With this I moved to offer the collection to the Director of the Science and Technology Special Collections Library at Stanford University. Interest was expressed, to the extent that samples of the collection were requested and sent. Little more than this took shape, however, and upon subsequent unanswered email follow-ups I decided to next offer the collection to New York University (NYU). I did so principally because the collection contains a very rich record of the CSNY, and because the first person frozen by the CSNY, Steven J. Mandell, was at the time of his death an undergraduate student at NYU. As with my previous two efforts, this one came up short as well—but for a very different and quite tragic reason.

On October 10, 2014, Mike Darwin’s house in Northern Arizona burned to the ground. He and his partner escaped with their lives and their two dogs. It was a total loss otherwise. His personal collection of cryonics material—sixteen cubic feet of historical documents and photographs—is gone. While Darwin provided Mike Perry and myself with copies of everything he had managed to digitize over the years, all else is now lost. This tragic event consequently bestowed upon me the dubious honor of possessing what is now in all likelihood the third (possibly the second) largest cryonics archive in the world. Finding myself in this position has led me to find new and quite tragic meaning in John R. Hall’s recent and otherwise humorous transposition of Donald Rumsfeld—that historians go to war with the archives they have, not the archives they would like.¹¹⁰ Being in this position has also led me to understand, sadly and anew, the urgency and truth contained in one of the first and best pieces of advice that Mike Darwin ever gave me:

¹¹⁰ The original passage reads as such: “Many people laughed at former Secretary of Defense Donald Rumsfeld when he noted that nation-states go to war with the army they have, not the army they would like. But historical researchers are in much the same position with data.” John R. Hall, “Methodologies, the Lifeworld, and Institutions in Cultural Sociology,” *Qualitative Sociology* 37, no. 2 (2014):244.

Some things I learned about cryonics early and well are that it is a tremendously dynamic and unstable thing—and not in a good way. I learned to grab onto to information and opportunities quickly, because they so often disappeared—more often forever, than not.¹¹¹

Unsafe Categories

Abundant Phenomena

Access to a wealth of primary source materials notwithstanding, cryonic suspension is a baffling practice; it is maddeningly difficult to pin down. My research into cryonics has led me to attribute this affective quality of the practice to the fact that it seems to be located within the register of cultural and historical experience which is home to phenomena that historian Robert Orsi calls “abundant events,” among which he includes:

relationships (among living persons, between generations, between humans and saints, and so on), objects (such as the Host or a corpse), sense perceptions (the smell of sanctity, for example, or the feel of blood), special beings (ghosts, demons, ancestors, imagined-desired-feared persons), the body-in-culture (among the sick and those in pain, for instance, the “crippled,” “children,” the “insane” and all other such marked categories) and memory.¹¹²

Abundant events are those “uncanny things” residing “beyond the narratives that frame our understandings of the world and constitute authorized knowledge.” In other words, those aspects of “human imagination” at play in abundant events far exceed the “authorized limits” of what can be taken as worthy of inquiry; spoken of and written about as actual.¹¹³

Hauntings, possessions, exorcisms, UFO sightings, divine apparitions and interventions; faith healings, prophecies, communication with deities, saints, or the dead; magic—Orsi’s

¹¹¹ Mike Darwin, email message to the author, 6 June 2013.

¹¹² Robert A. Orsi, “2+2 = Five, Or the Quest for an Abundant Empiricism,” *Spiritus* 6, no. 1 (2006):113-121.

¹¹³ Monica Black, “The Supernatural and the Poetics of History,” *The Hedgehog Review* 13, no. 2 (Fall 2011):73.

characterization of such events and practices as “abundant” is remarkably apt, for it is precisely this experiential surplus, this something “more” at play in abundant phenomena, which consistently eludes the rationalist underpinnings of the modern intellectual cultures of the humanities and especially the positivist social sciences. Abundant events are often simply ignored, “passed over in silence.”¹¹⁴ In those instances in which they are acknowledged, abundant events tend overwhelmingly to be derided, dismissed as delusions—“Children are susceptible to scary stories; desperate people do whatever they need to do to get comfort or relief.”¹¹⁵ At best, Orsi writes, abundant events are accounted for as “distorted refractions of the *real* circumstances of life,” which those of us laboring in the social sciences are authorized to know, represent and speak about as social, political, and economic. Make no mistake, Orsi is denying neither the reality of these forms of power nor that they decisively shape and are threaded through the practices, works of imagination, and kinds of experience that characterize abundant events. He is objecting, rather, to the tendency of modern forms of analysis to *transpose* abundant events and reified categories of social power—Orsi calls them “safe categories”¹¹⁶—by which the former come to be read in terms of and are often reduced to the latter. Transposition thus understood *erases* the existence of abundant events, and in so doing denies the significance of those myriad practices, labors of imagination, and forms of experience in which people search out meaning and direction, and through which they offer accounts of their lives, the world, and other people.¹¹⁷ Orsi, therefore, has called for an “abundant history,” which

¹¹⁴ Norman K. Denzin, *Interpretive Interactionism* (Thousand Oaks, CA: Sage, 2001), 44.

¹¹⁵ Robert A. Orsi, “When 2+2 = 5: Can We Begin to Think about Unexplained Religious Experiences in Ways the Acknowledge Their Existence?” *The America Scholar* (Spring 2007):6.

¹¹⁶ Robert A. Orsi, “Abundant History: Marian Apparitions as Alternative Modernity,” *Historically Speaking* 9, no. 7 (September/October 2008):15.

foregoes the work of transposition; which incorporates yet moves several steps beyond the ethnographic aim of empathetic understanding; which aspires to a hermeneutics of respect attuned to the cultural and historical conditions in and through which abundant phenomena emerge, take shape and “happen;” which allows abundant phenomena the requisite room in our analyses to exist and breathe; which ultimately treats abundant phenomena as *real*.¹¹⁸

From the “freeze now” manifestos penned by Robert Ettinger and Evan Cooper to the catastrophic events at Chatsworth that played out under Bob Nelson’s watch, cryonic suspension is a practice that is *freighted* with abundance—it evidences a lived reality that strains the conceptual comfort zones, the “safe categories,” of modernist epistemology and historiography.¹¹⁹ To take cryonics seriously; to endeavor to understand what cryonics is, how it emerged, and why it matters, requires not a wholesale abandonment of, say, academic sociology *as such*, but rather an insistence that sociology be pushed beyond its conceptual comfort zones and forced to contend with and reorient relative to those “unsafe” categories required to understand and speak about the lived realities it would otherwise mute and “pass over in silence.”¹²⁰ In the case of cryonics, what is of course called for is a reorientation of inquiry around the most unsafe category of all—death.

Keeping here with Orsi, academic sociology is so tightly and inextricably bound up with the “project of modernity” that the modern institutional sequestration of death is *replicated* in sociological theory and practice. As Zygmunt Bauman, Chris Shilling, and Philip Mellor have pointed out, this is nowhere more plainly apparent than with the presence of a well-defined

¹¹⁷ Orsi, “When 2+2=5,” 6.

¹¹⁸ Orsi, “Abundant History;” “When 2+2=Five;” Black, “The Supernatural and the Poetics of History.”

¹¹⁹ Orsi, “Abundant History,” 15.

¹²⁰ Denzin, *Interpretive Interactionism*, 44.

subfield devoted to the sociological study of death, dying, and bereavement.¹²¹ For the presence of such a subfield both reflects and reinforces the tendency of academic sociologists, whatever their stripes and leanings, to regard death as being only marginally important to the study of the modern social, when in fact the sequestration of death is one of—in Bauman’s parlance *the*—principle constitutive element *of* the “apparently more familiar topics of social and cultural life”¹²²—the “real” realities—upon which sociologists proper, guided by “safe categories,” tend to train their analytical focus. One of the principle wagers of this study is that cryonic suspension is a baffling practice, one which is maddeningly difficult to pin down, only to the extent that it is read in epistemic terms that safely accord with modernity’s sequestration of death. To the extent that the modern sequestration of death is thrown into question, however, and death (re)located to the center of social inquiry writ large, cryonic suspension’s intelligibility increases accordingly. This will become most evident in Chapters 3 and 4. For in these chapters especially, instead of transposing cryonic suspension’s abundance, I use the abundant lived reality of cryonics to throw into question those authorized ways of knowing that would otherwise variously deride cryonics as a “cult,” a funerary “scam,” “pseudoscience,” or simply pass over the practice in silence. Those ways of knowing, in other words, that safely accord with modernity’s sequestration of death.

¹²¹ Zygmunt Bauman, *Mortality, Immortality, and Other Life Strategies* (Stanford, CA: The Stanford University Press, 1992), 10; Phillip A. Mellor and Chris Shilling, “Modernity, Self-Identity, and the Sequestration of Death,” *Sociology* 27, no. 3 (August 1993):411-431; Phillip A. Mellor, “Death in High Modernity: The Contemporary Presence and Absence of Death,” *The Sociological Review* 40, no. 1 (May 1992):11-30.

¹²² Bauman, *Mortality*, 10.

The Uncanny

As a practice freighted with abundance, cryonic suspension tends to produce an unusual and discomfiting affect; it taps into that register of cultural and historical experience known as the *uncanny*. (My own experiences with cryonics *as such* are what ultimately led me to locate the practice amid Orsi's abundant phenomena, as I discuss below.) Following the German psychiatrist Ernst Jentsch, the uncanny (*das unheimlich*) refers to an order of experience: being "ill at ease," or "not quite at home," which is at base affected by the "lack of orientation" produced by an uncanny object or incident. Jentsch wisely avoids offering an "essential" definition of the uncanny, recognizing that considerable variance exists among people in terms of experiential sensitivity; indescribability, moreover, is in his view a key source of the cognitive distress, the terror of the uncanny.¹²³ And yet to this Jentsch is quick to add the following:

Among all the psychical uncertainties that can become a cause for the uncanny feeling to arise, there is one in particular that is able to develop a fairly regular, powerful and very general effect: namely, doubt as to whether an apparently living being is inanimate and, conversely, doubt as to whether a lifeless object may not in fact become animate—and more precisely, when this doubt only makes itself felt obscurely in one's consciousness.¹²⁴

Waxwork figures, dolls, puppets and automatons: these are among the entities Jentsch considered to be key sources of the kind of doubt that gives way to the experience of the uncanny. Following Jentsch, Sigmund Freud argued subsequently that most people experience the feeling of the uncanny "in the highest degree in relation to death and dead bodies, the return of the dead, and to spirits and ghosts."¹²⁵ Much more recently, researchers have drawn from both Jentsch and Freud to account for the confused sense of revulsion that tends to be elicited by

¹²³ Ernst Jentsch, "On the Psychology of the Uncanny," trans. Roy Sellars, *Angelaki* 2, no. 1 (1995):7-16.

¹²⁴ Jentsch, "On the Psychology of the Uncanny," 8.

¹²⁵ Sigmund Freud, *The Uncanny*, trans. David McClintock (London: Penguin Books, 2003), 148.

cyborgs and humanoid robots, lifelike CGI, and zombies.¹²⁶ Following from this, given that the practice ultimately involves the material instantiation of liminal entities, i.e. entities *seemingly* neither alive nor dead, cryonic suspension is perhaps something of an *exemplar* of the uncanny.¹²⁷ For here is a *death* practice that entails the management of corpses over the long-term, *as if* they were potentially *alive*; the effect is a kind of frozen undecidability, doubt as to what cryonics and its patients “are,” which furthermore carry a strangely disconcerting affect.

This flirtation with psychoanalysis is fitting beyond what it offers in the way of an interpretive guide to cryonic suspension: my early efforts to come to grips with cryonics, *absent* the conceptual language of the uncanny, drove me close to madness.¹²⁸ Now this is not to say that the uncanny somehow “explains” cryonic suspension, but rather that the concept, paired with Orsi’s abundant phenomena, lends a much needed measure of interpretive leverage in getting a handle on the nature of the practice. What I now regard as the uncanny affect at play in my first encounters with cryonics, the undeniable sense of “weirdness” about it, is initially what prompted me to commit to studying it. In retrospect, I can also now say with a good deal of certainty that I believed, if only tacitly, that part of my task in pursuing a properly sociological study of cryonics was to *explain away* this sense of weirdness, which I had set out to achieve by accessing as much archival material as possible, as if that alone would allow me to determine just what cryonics is a “case” of. Moving through droves of primary materials in tandem with a range of academic literatures, I stubbornly pursued this misguided task: from the sociology of

¹²⁶ Joanna Zylinska, *On Spiders, Cyborgs, and Being Scared: The Feminine and the Sublime* (Manchester and New York: The Manchester University Press, 2001).

¹²⁷ On liminal entities see Trevor Pinch, “Technology and Institutions: Living in the Material World,” *Theory and Society* 37 (2008):478.

¹²⁸ I arrived at the uncanny by way of Sharon Ghamari-Tabrizi, *The Worlds of Herman Kahn: The Intuitive Science of Thermonuclear War* (Cambridge, MA: The Harvard University Press, 2005), 85.

death and dying to social studies of science, technology and pseudoscience; from critical whiteness studies to the history and sociology of (bio)medicine; from histories and sociologies of new religious movements to accounts of the American counterculture and cold war science and technological innovation. My moves from literature, to literature, to literature, to literature were accompanied by exhausting cycles of emotional extremes: “Aha, that’s it!” moments, were followed, *ad nauseam*, by manic fits of writing, lengthy spells of doubt, and then disappointment, panic, and writer’s block, before moving on yet again: “Aha, finally, *that’s* it!” I learned as I went, certainly, but that “something weird” about cryonics that kept confronting me in my archival research—that something about it that just didn’t seem right—I couldn’t explain it away; I couldn’t figure out what, exactly, cryonics is a “case” of.

Only much later in my research did I come to the realization that what I was attempting to suppress by way of explanation, I should have been embracing and foregrounding as the principle route to achieving a more nuanced understanding of cryonic suspension, and the sociohistorical milieu in which the practice emerged—the tumultuous American 1960s. This realization was preceded by a number of strange and uncomfortable situations, which over the past few years have arisen with great frequency in discussions of cryonics with friends and family, in the course of presenting segments of my research and early cryonics imagery to students in the *Technology and Society* seminar I taught at the University of Illinois, and to colleagues at a range of professional meetings. “I don’t understand,” my mother gasped, “why on earth are you studying *that*.” A distinguished sociologist, whose pleasant company I briefly shared while standing in line for coffee outside a conference venue, echoed my mother’s lament, with a hearty chuckle: “Well, there’s really not much of a demand for research on stuff like *that*?” Yet another distinguished sociologist, with whom I was discussing my research en route

to a departmental luncheon, was considerably less restrained in her remarks: “Why, it’s simply hedonism! Pure hedonism!” In one quite memorable instance, the expressed sentiments shared by my mother and distinguished colleagues was taken to their logical conclusion when one of my undergraduate students abruptly packed her things and exited the classroom midway through a lecture on cryonic suspension. She later apologized, explaining that she simply found the topic to be “profoundly disturbing.” (The same has happened at professional conferences, though notably without the courtesy of apologies after the fact.)

Most disturbing of all, perhaps, is the remarkable frequency with which public presentations of my research on cryonics have occasioned my audiences, students and professionals alike, to erupt in laughter—howling, unrestrained, uncomfortable laughter. While the comedic has been neither my adopted style nor intended aim, it is in retrospect hardly surprising that I have so frequently, yet unintentionally and quite embarrassingly, managed to elicit laughter in the course of presenting my research on cryonic suspension. For as we know from Freud and others, laughter is often conjured by anxiety. Indeed, it could even be said that the existential anxiety provoked by death is “the first cause of laughter.”¹²⁹

Though the evidence is at best anecdotal, and the argument at best conjectural,¹³⁰ I attribute these all too frequent outcomes, in very large part, to the fact that in presenting my work on cryonics I have succeeded far less in clarifying the practice than in simply subjecting captive and unsuspecting audiences to refined doses of the uncanny, and thus as well to the very

¹²⁹ Neil J. Elgee, “Laughing at Death,” in *The Psychology of Death in Fantasy and History*, ed. Jerry S. Piven (Westport, CT: Praeger, 2004), 291.

¹³⁰ Here I take recourse to the historian Richard Hofstadter, who in contesting the tendency of academic historians to fetishize facts once claimed that an erroneous conjecture is worth a thousand facts, an accurate conjecture worth ten thousand facts. Richard Hofstadter Papers, Box 36, Rare Books and Manuscripts Division, Butler Library, Columbia University, cited in Lepore, *The Mansion of Happiness: A History of Life and Death* (New York: Vintage, 2012), 156.

cognitive discomfort that any given presentation of mine has meant to explain. In other words, I have regrettably though quite unknowingly made people uncomfortable, without warning, and without offering anything in the way of an effective cognitive map with which to contextualize and make sense of the disturbing affective mood that my topic of study and its attendant imagery has tended to conjure.

This is not to say, however, that I am somehow locating the source of this affective mood in cryonic suspension alone. Indeed, it would be quite mistaken to do so; it would attribute to cryonics an “essentially” uncanny nature, outside of time and space, which it otherwise does not possess. As I discussed in the introductory chapter, and as I note time and again throughout the following chapters, the conditions under which cryonics emerged were defined by an affinity

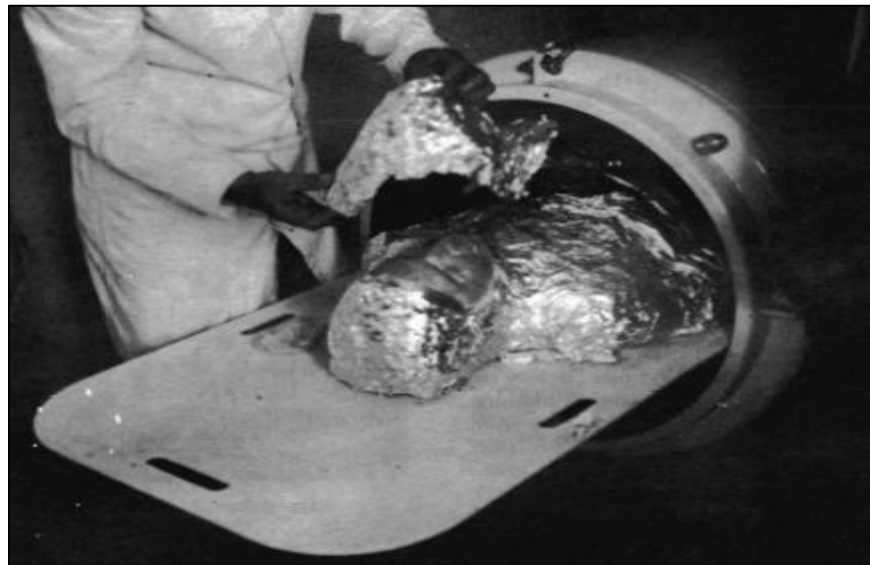


Figure 2. Uncanny Imagery. Mrs. Ann Deblasio, frozen and wrapped in aluminum foil, being placed in her “forever flask,” soon to be filled with liquid nitrogen and sealed by personnel of the Cryonics Society of New York, ca. 1969.

Source: Curtis Henderson, “The Cryonic Suspension of Ann DeBlasio,” *Cryonics Reports* 9, nos. 9-10 (1969):10, PAMD.

between the failed sequestration of and ensuing cultural malaise surrounding death and dying, and the circulation of cybernetic concepts and predictions throughout the broader culture of 1960s America, ultimately resulting in cryonics' emergent status as a simulacrum of Cold War technoscience; a (magical) death practice masquerading as the technoscience it simulates. An effect of uncanniness is one of the calling cards of simulacra broadly,¹³¹ and in this sense cryonics' status as a simulacrum is arguably the practice's principle source of the uncanny. Additional confusion, however, stems from the fact that the sequestration of death, the chief conspirator in producing the conditions in which cryonics emerged, has also conspired in the production of epistemic norms and practices of inquiry, as noted above, with which it is "safely" in accord. Thus the epistemic blind spot vis-à-vis cryonics' abundance; thus the confusion and frustration I have encountered in the course of my research; thus the anxious and personally embarrassing laughter of my audiences—death brought to awareness, by way of a simulacrum, under sociohistorical conditions in which death has been institutionally sequestered. Cryonic suspension is in this sense less a "case" of something than it is an abundant phenomenon.

In sum, then, *abundant phenomena* and the *uncanny* have afforded me a language through which to achieve considerable interpretive leverage on cryonic suspension. Indeed, they at base are what led to me to an understanding of cryonics as a simulacrum; to advance an interpretation of cryonics as a magical practice; and ultimately to the realization that cryonics' intelligibility requires a (re)orientation of inquiry into the modern social around the "unsafe" category of death. I return to and develop these matters momentarily, following a discussion of

¹³¹ Brian Massumi, "Realer than Real: The Simulacrum According to Deleuze and Guattari," *Copyright* no. 1 (1987):92.

method, with the overall aim of highlighting their formative bearing upon the theoretical commitments and thus the architecture of the present study.

Method

In conceptualizing, periodizing, and ultimately carrying out this study of cryonic suspension, I have relied principally upon an interpretive “practice of inquiry” that John R. Hall terms “specific history.”¹³² A latter-day iteration of Max Weber’s project of *verstehende soziologie*, specific history “aligns” with cryonic suspension in that the latter is an “*intrinsically* constituted sociohistorical object.” That is to say, cryonics was *meaningful* to the historical actors who pursued and participated in it *prior* to the practice having become meaningful as an object of inquiry. Its coherence, in other words, is not the result of forced colligation based on the imposition of some abstract analytical criteria (as would be with an *extrinsically* constituted sociohistorical object), but rather follows from how cryonics was actually conceived, constructed, and carried out by social actors in the real historical time of practice.¹³³ In light of this, the methodological prescriptions of specific history include the following: attention to the temporality and context of events and characters, with the overriding aim of teasing out and (thickly) describing and interpreting (intrinsically linked) narrative plots; attention to cultural elements, i.e. meanings, metaphors, tools, techniques and their sources, travels and linkages to plot; and finally, dialogue with social theory.¹³⁴

¹³² John R. Hall, *Cultures of Inquiry: From Epistemology to Discourse in Sociohistorical Research* (Cambridge: The Cambridge University Press, 1999), 210-216.

¹³³ *Ibid.*, 210-211.

¹³⁴ *Ibid.* 210-216; on thick description-interpretation, see Denzin, *Interpretive Interactionism*, 98-118.

Dialogue with theory is in this study at play in two principle ways. First, as evidenced in the course of the preceding several pages of the present chapter, I have leaned considerably upon social theory—especially the concepts of *simulacrum*, the *uncanny*, and *abundant phenomena*—in an effort to achieve some semblance of leverage on cryonic suspension, ultimately eventuating in a (preliminary) interpretation of cryonics as a *magical* (death) practice masquerading as the technoscience it simulates. At the same time, however, following Bauman and others, this interpretation of cryonics is predicated upon and thus evidences the need for a (re)orientation of social theory and inquiry writ large around the unsafe category of death. In this sense, to offer an account of the historical emergence of cryonic suspension, such as this study sets out to do, is to perform at the same time a theoretical intervention, one which is in keeping both with Bauman’s call for a move away from sociologies *of* death and Orsi’s call for histories of abundant phenomena.

The following two chapters proceed along these lines, and in so doing take recourse to specific history’s core methodological strategy of emplotment. Attention to historical plot simply requires one to attend to the very basic questions: “What happened and how?”¹³⁵ In terms of the historical emergence of cryonic suspension in 1962 and its catastrophic failure by 1979, sketches of the present study’s responses to these questions, which derive principally from interrogations of the Ettinger origin narrative and the Nelson atrocity tale, were introduced in Chapter 1. So also was the base contention that cryonic suspension is the product of an affinity between the “failed containment” of and ensuing cultural malaise surrounding death and dying, and the circulation of cybernetic concepts and predictions throughout the broader culture of the American 1960s. In the course of developing in the following two chapters the manifold

¹³⁵ Hall, *Cultures of Inquiry*, 212.

historical plots of historical emergence, material instantiation, and catastrophic failure, I attempt to render cryonic suspension intelligible as a *simulacrum*, a (magical) practice masquerading as the technoscience it simulates.

In Chapter 5, I then move to use these historical plots and the interpretation of cryonics they facilitate in order to reassert the theoretical intervention I am attempting to make following Orsi, Bauman, and others, namely the importance of reorienting social theory and research around the unsafe category of death, lest modernity's institutional sequestration of death be replicated at the level of disciplinary knowledge and practice.

Chapter 3: Cybernetic Sorcery: The Emergence of Cryonic Suspension

In the preceding two chapters I have focused principally on developing interpretive claims regarding what kind of practice cryonic suspension “is.” In proceeding as such, I have brought several (“unsafe”) concepts to bear upon cryonic suspension—the *uncanny*, *abundant phenomena*, *magic*, and *simulacra*. Using the collective interpretive leverage of these concepts to render cryonics intelligible, ultimately relating the practice to Anthony Giddens’ and especially Zygmunt Bauman’s broader theoretical claims about the modern sequestration of death, I have furthermore developed a (preliminary) interpretation of cryonic suspension as a magical practice. The present and remaining two chapters draw from and continue to develop these claims, while moving the study into a different register of interpretation—from a concern with what cryonics “is” to a concern with how and under what conditions cryonics emerged, was carried out in practice, and ultimately met with catastrophic failure.

My consideration of these issues is organized with reference to the contention that cryonic suspension is the product of an historically contingent affinity between the “failed containment” of, and the ensuing cultural malaise surrounding, death and dying, and the circulation and appropriation of cybernetic concepts and predictions throughout the broader culture of 1960s America. As I discussed at some length in Chapter 1, this affinity broadly defines the circumstances under which cryonics emerged and was pursued, undergirding cryonics’ emergent status as a simulacrum of Cold War technoscience; magical practice masquerading as the technoscience it simulates. The present chapter treats the *cybernetic* side of this affinity, attending, that is to say, to how the postwar science of cybernetics figured quite prominently in facilitating the construction and historical emergence of cryonic suspension as a

(magical) *survival strategy*—an attempt to “keep death at bay through a strategic maneuvering between various life options.”¹³⁶ Chapter 4 will treat the *death* side of this affinity, attending to how and with what effects cryonic suspension, largely through the “freeze now” manifestos written by Evan Cooper and Robert Ettinger, circulated as a (then) emergent survival strategy, was taken up, realized in practice, and ultimately met with catastrophic failure. Chapter 5, finally, will bring my treatments of each side of this affinity together; develop my overall interpretation of cryonic suspension as an abundant phenomenon, and conclude the present study as an exercise in and contribution to Zygmunt Bauman’s call for a move away from sociologies of death, and thus as well Robert Orsi’s call for histories of abundant phenomena.

As for the cybernetic side of this affinity, then, explicating cryonics’ previously unexamined ties to cybernetics locates the practice in the milieu of Cold War technoscience, thereby rendering it intelligible. At the same time, in proceeding as such cryonics is positioned as a case through which to arrive at contributions to social studies of science and technology more broadly. To this lattermost point, the present chapter should be taken as evidence in support of Ronald Kline’s disunity of cybernetics thesis¹³⁷; it furthermore presents the historical emergence of cryonics as a quite striking illustration of how science and technology can acquire unintended meanings and give rise to otherwise unanticipated projects, as they are variously consumed, appropriated, and repurposed “downstream,” as it were, by “non-” scientific actors.¹³⁸

¹³⁶ Chris Shilling, *The Body and Social Theory* (Thousand Oaks, CA: Sage, 2003), 166.

¹³⁷ On Kline’s disunity thesis see Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende’s Chile* (Cambridge, MA: The MIT Press, 2011), 9; see also Ronald Kline, “Beyond the Closed World,” *History and Technology* 28, no. 4 (2012):408; Ronald Kline, “Where are the Cyborgs in Cybernetics?” *Social Studies of Science* 39, no. 3 (2009):331-362.

¹³⁸ See Steven Epstein, “Culture and Science/Technology: Rethinking Knowledge, Power, Materiality, and Nature,” *The ANNALS of the American Academy of Political and Social Science* 619 (September 2008):165-182.

In the case of cryonic suspension's historical emergence, the principle non-scientific actors in question are Evan Cooper and Robert C. W. Ettinger, the two key progenitors of cryonics who each penned a "freeze now" manifesto in the early 1960s: respectively, *Immortality: Physically, Scientifically, Now* and *The Prospect of Immortality*. Offering interpretations of these texts in relation to the broader sociohistorical contexts in which Ettinger and Cooper imagined, wrote, and operated; demonstrating, that is to say, how they constructed their texts, I develop two distinct though deeply interrelated sets of claims about the relationship between cryonics and cybernetics. First, I demonstrate that the cybernetic language of organism-machine equivalence was a key cultural source and the root ontological-metaphorical basis upon which cryonics was constructed by Ettinger and Cooper.¹³⁹ Relatedly, I demonstrate that both Ettinger and Cooper issued their respective calls to "freeze now" in light of expectations produced by Norbert Wiener's famed proclamation that systems of computerized control would soon usher in a "second industrial revolution"¹⁴⁰—a cybernetic "new age" in which machines would outstrip human intelligence and capabilities. In terms of *construction*, I argue that *Prospect* and *Immortality* clearly evidence a form of bricolage—*magic*—piecemeal, unpredictable argumentation that fails in terms of legitimating technoscientific criteria, but which nevertheless serves to render death knowable and thus manageable. In terms of *expectation*, likewise, I argue that magical thinking is evidenced by Cooper and Ettinger's tendency to *enlarge* upon the virtues of certain objects, specifically "thinking machines," i.e. computers, in

¹³⁹ On ontological metaphors see George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago, IL: The University of Chicago Press, 1980), Ch. 6.

¹⁴⁰ Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York: John Wiley, 1948), 36-37.

the perceived ability of the latter to eventually be capable of reversing any given “cause” of death.¹⁴¹

Thus, if in the previous chapter I argued that cryonics “is” a magical practice, in terms of both construction and expectation I move now in the present chapter to demonstrate *how* cryonics emerged *as such*. The same holds for my identification of cryonics as a *simulacrum* of Cold War technoscience. This then is the second claim I develop below. Identifying cryonics as a magical practice locates the otherwise *masked internal discord* between cryonics and the technoscientific proposals, predictions, and entities it masquerades as—*external* simulation, which is an illusory effect produced by the cybernetic language of human-machine equivalence; the computational metaphor up through which the practice emerged. This furthermore identifies the principle source of the uncanny affect that is the chief calling card of simulacra broadly, a point I develop by comparing cryonics with two other forms of cybernetic entity, both of which emerged in the same sociohistorical context, and which, like cryonic suspension, harbor considerable uncanny potential—cybernetic “monsters” (Andrew Pickering’s apt phrase¹⁴²), and the iconic figure of the cyborg.

Of Cyborg Astronauts and Terrestrial “Cryonauts”

On August 5, 2005, at the Life Extension Conference in Atlanta, Georgia, representatives of the Immortality Institute, an international, not-for-profit organization (US 501-3-c) the

¹⁴¹ Here I am borrowing from Marcel Mauss, *A General Theory of Magic*, trans. Robert Brain (London: Routledge, 1972), 175, who writes, “The art of the magician involves suggesting means, enlarging on the virtues of objects, anticipating effects, and by these methods fully satisfying the desires and expectations which have been fostered by entire generations in common.”

¹⁴² Andrew Pickering, “A Gallery of Monsters: Cybernetics and Self-Organization, 1940-1970,” in *Mechanical Bodies, Computational Minds: Artificial Intelligence from Automata to Cyborgs*, ed. Stefano Franchi and Guven Guzeldere (Cambridge, MA: The MIT Press, 2005), 231.

expressed mission of which is to “conquer the blight of involuntary death,”¹⁴³ unveiled an “Open Letter” signed by more than sixty scientists, physicians, and philosophers endorsing the scientific credibility of cryonic suspension, the highly contested practice of freezing the recently deceased in the hope that medical technology capable of “reanimating” the “deanimated” will at some future point be achieved.

To whom it may concern,

Cryonics is a legitimate science-based endeavor that seeks to preserve human beings, especially the human brain, by the best technology available. Future technologies for resuscitation can be envisioned that involve molecular repair by nanomedicine, highly advanced computation, detailed control of cell growth, and tissue regeneration.

With a view toward these developments, there is a credible possibility that cryonics performed under the best conditions achievable today can preserve sufficient neurological information to permit eventual restoration of a person to full health.

The rights of people who choose cryonics are important, and should be respected.¹⁴⁴

This letter is but a recent installment in an ongoing, decades-long rehabilitation effort; as discussed in the introductory chapter, cryonics has suffered significant setbacks since its emergence in the tumultuous American 1960s, culminating in the so-called “Chatsworth Scandal” of the 1970s, which is arguably the most disastrous and damaging event in the practice’s history. The details of this rehabilitation effort are not my concern here, however. Rather, I call attention to the preceding letter because one of the signatures it bears gestures towards a complex set of significant though curiously unexplored sociohistorical relationships.

¹⁴³ “About,” Immortality Institute: Advocacy and Research for Unlimited Life Spans, <http://www.imminst.org/about> (accessed on 18 March 2010).

¹⁴⁴ Bruce Klein, ed., “Open Letter.” *Cryonics* 27, 1 (Winter 2006): Front matter.

The signature in question is that of Manfred E. Clynes—pianist, neuroscientist, inventor—the man who coined the term “cyborg.”¹⁴⁵

Is it surprising to find that Clynes lent his name to a letter endorsing the scientific credibility of cryonic suspension? Given the history of the cyborg, I submit that it is not. Unlike the history of cryonics, of course, the cyborg’s history is quite well known, having been recounted by a range of scholars for a variety of ends.¹⁴⁶ Yet the elevation of the cyborg to iconic status, coupled with the advent and popularity of so-called “cyborg studies” in the 1980s,¹⁴⁷ has tended to elide the fact that that cyborg was in fact initially set forth as a hypothetical solution to a set of colossal engineering problems facing NASA in the wake of *Sputnik*—facilitating an American moon landing and, ultimately, interplanetary human spaceflight.¹⁴⁸

With the Cold War operating as an impetus to “think the unthinkable,” Clynes and his collaborator, Nathan S. Kline, then laboring as research scientists at the Rockland State Mental

¹⁴⁵ Nathan S. Kline and Manfred E. Clynes, “Drugs, Space, and Cybernetics: Evolution to Cyborgs,” in *Psychophysiological Aspects of Space Flight*, ed. Bernard G. Flaherty (New York: The Columbia University Press, 1961), 348.

¹⁴⁶ See Finn Bowring, *Science, Seeds and Cyborgs: Biotechnology and the Appropriation of Life* (London, Verso, 2003); Chris Hables Gray, Steven Mentor, and Heidi J. Figueroa-Sarriera, “Cyborgology: Constructing the Knowledge of Cybernetic Organisms,” in *The Cyborg Handbook*, ed. Chris Hables Gray (London: Routledge, 1995), 1-14; Ian Hacking, “Canguilhem Amid the Cyborgs,” *Economy and Society* 27, 2-3 (1998):202-216; Donna Haraway, *Modest_Witness@Second_Millennium.FemaleMan_Meets_OncoMouse™: Feminism and Technoscience* (London: Routledge, 1997); Ronald Kline, “Where are the Cyborgs in Cybernetics?” *Social Studies of Science* 39, no. 3 (2009):331-362; Philip Mirowski, *Machine Dreams: Economics Becomes a Cyborg Science* (Cambridge: The Cambridge University Press, 2002); Nicholas de Monchaux, *Spacesuit: Fashioning Apollo* (Cambridge, MA: The MIT Press, 2011); Alison Muri, *Enlightenment Cyborg: A History of Communications and Control in the Man Machine* (Toronto: The University of Toronto Press, 2007); Jackie Orr, *Panic Diaries: A Genealogy of Panic Disorder* (Durham: The Duke University Press, 2007); Jackie Orr, “Biopsychiatry and the Informatics of Diagnosis,” in *Biomedicalization: Technoscience, Health, and Illness in the US*, ed. Adele Clarke et al. (Durham: The Duke University Press, 2010), 353-379.

¹⁴⁷ See Kline, “Where are the Cyborgs in Cybernetics?”

¹⁴⁸ Monchaux, *Spacesuit*, 67-78.

Hospital in New York, on May 26 and 27, 1960 attended an interdisciplinary symposium, “Psychophysiological Aspects of Space Flight,” at the US Air Force School of Aviation Medicine at Brooks Air Force Base, Texas. The symposium was organized with the aim of strengthening what General Thomas D. White, then US Air Force Chief of Staff, described as the “weakest link” in the chain of American aerospace development: the “sea-level, low-speed, one-g, 12-hour animal” called “man.”¹⁴⁹ The symposium’s participants were to this end invited to offer surveys of present knowledge and recommendations for research that would expedite the arrival of technologies capable of resolving the “psychophysiological impasse” presented by the human organism.¹⁵⁰

The paper that Kline and Clynnes prepared, “Drugs, Space, and Cybernetics: Evolution to Cyborgs,” departed from the symposium’s much more conventional engineering fare of proposing earthlike environments to carry American astronauts through outer space.¹⁵¹ When the proceedings of the symposium were published by Columbia University Press in 1961, their offering was placed near the end of the volume under the aptly-titled heading, “Special Techniques of Control.” Their paper called for the direct incorporation of exogenous material technologies into astronauts’ bodies, thereby adapting them to hostile extraterrestrial environments under the guise of cybernetic “enhancement”—the creation of “self-regulating man-machine systems,” or “*cybernetic organisms*,” for which Clynnes coined the term *cyborg*.¹⁵² The manner in which Kline and Clynnes invoked cybernetics accorded with the definition given

¹⁴⁹ Bernard E. Flaherty, “Introduction,” in *Psychophysiological Aspects of Space Flight*, ed. Bernard E. Flaherty (New York: The Columbia University Press, 1961), 4.

¹⁵⁰ Otis O. Benson, Jr., “Preface,” in *Psychophysiological Aspects of Space Flight*, ed. Bernard E. Flaherty (New York: The Columbia University Press, 1961), v.

¹⁵¹ Kline, “Where are the Cyborgs in Cybernetics?,” 340

¹⁵² Kline and Clynnes, “Drugs, Space, and Cybernetics,” 348.

by Norbert Wiener, i.e. as adjectively denoting the “entire field of control and communication theory, whether in the machine or the animal.”¹⁵³ All organisms are in some sense “cybernetic”: homeostasis is regulated by feedback deriving from an organism’s interactions with its environment, keeping entropy at bay.¹⁵⁴ Cybernetic organisms, however, *cyborgs* as proposed by Kline and Clynnes, are to be differentiated from living organisms *as such* in that cyborgs are characterized by *artificial* homeostasis—they are organisms the capacities of which are *extended* by way of cybernetic technologies, thus enabling adaptation to, operation in, and exploration of environments for which human life has otherwise not been evolutionarily prepared.¹⁵⁵

The “cybernetic aids for space life” Kline and Clynnes proposed included artificial lungs and organs, and prosthetic devices to modify and/or do away with cardiovascular and gastrointestinal functioning; prophylactic drugs to mitigate deadly radiation; and psychopharmaceuticals to heighten awareness and assuage anxieties. Most importantly for our purposes here, however, Kline and Clynnes also presented *hypothermic control* as a means by which to reduce astronauts’ metabolic processes during especially long spaceflights, placing them in a state of *suspended animation*.¹⁵⁶ In “Cyborgs and Space,” a subsequent article based upon their symposium paper, Kline and Clynnes elaborated their position on this technique:

During a flight of a year or longer, assuming that the vehicle was operating satisfactorily, there would be little or no reason for the astronaut to be awake for long periods unless some emergency arose. Hypothermia (reduction of body temperature) would appear to be a desirable state in such long voyage in order to reduce metabolism, and thus human “fuel” consumption. The use of external

¹⁵³ Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York: John Wiley, 1948), 19.

¹⁵⁴ Andrew Pickering, *The Cybernetic Brain: Sketches of Another Future* (Chicago, IL: The University of Chicago Press, 2010).

¹⁵⁵ Kline, “Where are the Cyborgs in Cybernetics?” 332.

¹⁵⁶ Kline and Clynnes, “Drugs, Space, and Cybernetics,” 347-369.

cooling, reduction of the temperature of the blood in an arterial-venous shunt, and hibernation (through pituitary control), alone or in combination with pharmaceuticals, all seem to offer possibilities in attempting to obtain and maintain such a state.¹⁵⁷

In light of the preceding especially, is it surprising to find that Clynes, nearly fifty years later, would lend his name to a letter endorsing the scientific credibility of cryonic suspension? To push the matter further, consider that Clynes felt it appropriate to append the 2005 letter in question, extending his endorsement of cryonics thusly:

Cryonics holds promise because controlled freezing can preserve, and controlled unfreezing can restore life. Lobsters that are frozen apparently return to life at times and experiments with small animals have also confirmed similar results. The difficulty lies in the human size. Today's technology is not adequate for the job. However sectional freezing, and unfreezing may be extended into the future so that in effect a human becomes as large as several small animals, as far as the freezing is concerned, and other technologic advances are likely in the various techniques that now prevent the process from being harmless. The preservation of an individual in cold has been successfully carried out by nature through its hibernation solution, which works. Also some species of frogs bury themselves in hot sand for several years until rains come again in central Australia.

So a solution for prolonging life span through temperature control is not unnatural, and it is likely that a good way will be found to do it, supplementing nature by conscious intelligent design, as has been done in so many other areas, such as spectacles, and bicycles already for centuries.¹⁵⁸

To push the matter even further yet, Clynes has intimated that he himself intends to be placed in cryonic suspension.¹⁵⁹ Thus Clynes's involvement with cryonics is not at issue here.

What *is* at issue is the fact that no existing treatment of cryonic suspension has noted, let alone

¹⁵⁷ Nathan S. Kline and Manfred Clynes, "Cyborgs and Space," *Astronautics* (September 1960):74.

¹⁵⁸ Manfred E. Clynes, "Appendix to the 'Scientists' Open Letter on Cryonics," www.imminst.org/cryonics_letter/appdx.htm (accessed on 22 April 2010).

¹⁵⁹ Chris Hables Gray, "Interview with Manfred Clynes," in *The Cyborg Handbook*, 43-53.

seriously attended to, what Clynes's involvement with cryonics gestures towards—namely, a complex set of sociohistorical relationships between cybernetics, cyborg spaceflight, and the emergence of cryonic suspension in the American 1960s.

On the one hand, then, suspended animation, a highly speculative technique proposed by Manfred Clynes and Nathan Kline as a means by which to facilitate “time travel” by cyborg *astronauts* to distant moons and planets; on the other hand cryonic suspension, a highly speculative technique endorsed by Manfred Clynes as a means by which to facilitate “time travel” by terrestrial *cryonauts* to the medical technologies, the “robot surgeons” of the future. The similarities between these techniques are quite striking, especially considering Clynes's involvement with both. But what is the *nature* of these similarities? Indeed, *how* are the two techniques related? Given the iconic status of the cyborg, moreover, and the heightened interest among science and technology studies researchers (since the 1990s) in the history of cybernetics,¹⁶⁰ how is it that so striking a similarity as that between suspended animation and cryonic suspension, between cyborg astronauts and terrestrial cryonauts, has for so long stood unacknowledged?

As to this lattermost question, I set out in Chapter 1 to demonstrate in broad terms the effects wrought by the Ettinger origin narrative in bracketing from consideration matters of cultural and historical context, an overriding consequence of which has been the discursive elision of cryonic suspension's complexity and historical significance, chiefly, by way of Evan Cooper, the relationship of the practice to the postwar science of cybernetics, and now, we can add, by way of Clynes and suspended animation, its relationship to the figure of the cyborg.

¹⁶⁰ Ronald Kline, “History and Technology Forum: Beyond the Closed World.” *Technology and Culture* 28, no. 4 (December 2012):407-413.

Speaking to the preceding questions, however, attempting to arrive at an understanding of the *nature* of the similarities between suspended animation and cryonics; an understanding of *how* the two techniques are related and with what consequence, first requires attending to the emergence of the computational metaphor, its theoretical formalization under the auspices of cybernetics, and ultimately its undisciplined circulation throughout the broader (popular) culture of the American 1960s.

Cybernetics: Emergence, Circulation, and Appropriation

The science of cybernetics took shape during the crucible of World War II and publicly emerged, via Norbert Wiener's *Cybernetics*, in its immediate aftermath. *Cybernetics*, as is well known, carried Wiener's prophetic announcement that systems of computerized control would soon usher in a "second" industrial revolution:

Perhaps I may clarify the background of the present situation if I say that the first industrial revolution, the revolution of the 'dark satanic mills,' was the devaluation of the human arm by the competition of machinery [...] the modern industrial revolution [i.e. the computer revolution] is similarly bound to devalue the human brain.¹⁶¹

Cybernetics also set forth a theoretical elaboration and formalization of what would become the defining metaphor of the Cold War—the *computational* metaphor.¹⁶² Paul Edwards, perhaps most notably, has argued that Cold War America was definitively shaped by the computer, understood as both *machine* and *metaphor*. Indeed, in Edwards' account, computers enabled the practical construction of complex, large-scale, "real-time military control systems," while at the same facilitating "the metaphorical understanding of world politics as a sort of [informational]

¹⁶¹ Wiener, *Cybernetics*, 36-37.

¹⁶² Edwards, *The Closed World*, 147-173; Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago: The University of Chicago Press, 2006), 11-39.

system subject to technological management.”¹⁶³ The result was a defensive “dome of global technological oversight,”¹⁶⁴ both real and metaphorical, what Edwards aptly terms the “closed world.” The science of cybernetics, according to Edwards, figured in the closed world as a “grand theory” of information. Specifically, by effecting an instrumental (re)articulation of human minds as information processing entities, i.e. computers, Edwards casts cybernetics as a somewhat monolithic science of control,¹⁶⁵ the principle aim of which was to enable and facilitate the integration of humans into the complex technological systems of the closed world.¹⁶⁶

Fred Turner, while generally in agreement that the computational metaphor operated as a key discursive support for the closed world, departs from Edwards’ account of cybernetics and how it emerged and operated (and to what ends) in the context of Cold War America. Turner locates the emergence of the computational metaphor, later formalized as cybernetics, amid the radical transformations wrought by WWII on the institutional structure and practice of American science. The urgent demand for technologies to support the allied war effort saw researchers from any range of disciplines being drawn together for purposes of project-based collaboration. For instance, at places like MIT, Caltech, Los Alamos, and the Oak Ridge National Laboratory, “theoretical physicists, experimentalists, and electrical and mechanical engineers began to work together on a daily basis toward common [ends] for the first time.”¹⁶⁷ While the technologies

¹⁶³ Edwards, *The Closed World*, 7

¹⁶⁴ *Ibid.*, 1, 90, 299.

¹⁶⁵ See Alasdair McMillan, “Cybernetics as Apparatus and Assemblage,” paper presented at the annual meeting of the Society for Social Studies of Science, Cleveland, OH, November 2, 2011.

¹⁶⁶ Edwards, *The Closed World*, 1-2; see also Kline, “Beyond the Closed World.”

¹⁶⁷ Turner, *From Counterculture to Cyberculture*, 18.

they produced, Turner notes—e.g., radar, digital computers, the atomic bomb—like the military, industrial, and academic institutions that housed and funded them, tended to be “large, complex, and under centralized command” (and thus in accord with Edwards’ closed world vision), the laboratories, the sites where the actual labor of research and development played out, “witnessed a flourishing of nonhierarchical, interdisciplinary collaboration.”¹⁶⁸ Following Peter Galison’s account of the Radiation Laboratory (Rad Lab) at MIT, Turner demonstrates that this collaborative style of “work,” which received its impetus from the war effort, was facilitated by local “contact languages,” which researchers had developed as practical tools through which to communicate and exchange ideas and techniques, across often rigid disciplinary boundaries. The computational metaphor, later formalized as cybernetics, emerged in precisely this context, a forgotten space of “openness” in an otherwise “closed world.”¹⁶⁹

As is well known, the term cybernetics itself, deriving from the Greek root *kybernētēs*, meaning “steersman” or “governor,” was coined by the mathematician and physicist Norbert Wiener.¹⁷⁰ The title of Wiener’s first full-length and foundational book on the topic, *Cybernetics: or Control and Communication in the Animal and the Machine*, expresses the principle aim of the science: the development of a theory of communication and control that would apply equally to animals, organisms, and machines.¹⁷¹ Historians of postwar science and technological innovation generally agree that Wiener’s formulation of cybernetics was an outgrowth of his efforts at the MIT Rad Lab to develop, along with engineer Julian Bigelow, an

¹⁶⁸ Ibid.

¹⁶⁹ Ibid.

¹⁷⁰ Wiener, *Cybernetics*, 11-12.

¹⁷¹ N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: The University of Chicago Press, 1999), 7.

effective anti-aircraft weapons system for the Allied forces, efforts which ultimately eventuated in the construction of the “anti-aircraft (AA) predictor,” a “remarkably ambitious [...] calculating device [...] designed to characterize an enemy pilot’s zigzagging flight, anticipate his future position, and launch an anti-aircraft shell to down his plane.”¹⁷² As Peter Galison has demonstrated,¹⁷³ and as Fred Turner, N. Katherine Hayles, and Andrew Pickering have subsequently elaborated,¹⁷⁴ the AA predictor conspired in constructing a characterization of the “Enemy Other” that in significant ways departed from the otherwise highly racialized and dehumanizing renderings of the enemy as portrayed in war propaganda and technical reports. Rather than conjuring the enemy as a subhuman Other necessitating eradication (as when characterized as lice, ants, or vermin, for instance), Wiener and Bigelow’s rendering of the Enemy as Other was thoroughly *mechanistic*. As Galison to this point observes, the real-time operational logic of the AA predictor, coupled with the notion of negative feedback, for Wiener and Bigelow came to serve as an operational prototype, a *model of* the operation of the Axis pilot’s mind, and eventually a *model of* the operation of the mind of the Allied anti-aircraft gunner as well: mechanical, calculating, and through observation and feedback, capable of learning and self-regulation.¹⁷⁵ In modeling the operation of human minds as such, then, Wiener and Bigelow effectively collapsed any hard and fast ontological distinction between humans and machines, thereby (re)articulating humans as information processing entities.¹⁷⁶

¹⁷² Peter Galison, “The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision,” *Critical Inquiry* 21, no. 1(1994):229.

¹⁷³ Ibid.

¹⁷⁴ Turner, *From Counterculture to Cyberculture*, 19-23; Hayles, *How We Became Posthuman*, 106-107; Pickering, “A Gallery of Monsters.”

¹⁷⁵ Galison, “The Ontology of the Enemy,” 229-230.

“Behavior, Purpose, and Teleology,” the oft-cited 1943 paper coauthored with physiologist Arturo Rosenblueth, took Wiener and Bigelow’s Rad Lab models as points of departure, and proposed that the kinds of behavior in biological systems took shape in accordance with the same dynamics of feedback at play in mechanical systems.¹⁷⁷ With this move, they in effect expanded the category of the machine to take in biological (and social) systems, thereby doing away with the boundaries between organisms and machines. Following from this, as Jackie Orr has pointed out, this paper’s principle move “staged” the “cybernetic perception of the human nervous system as an electrical machine, and of the computing machine as a network of interacting neurons.”¹⁷⁸ The resulting behavioral/material “equivalences” are ultimately what set the path for Wiener’s vision of cybernetics as a universal science.¹⁷⁹

The sense of excitement surrounding cybernetics in postwar America was tied to hopes bound up with then emerging computers—“electronic brains,” “machines that can think”—and thus ought not to be underscored too lightly.¹⁸⁰ Between 1946 and 1953, for instance, at a series of conferences funded by the Josiah Macy Jr. Foundation, the so-called “Macy Conferences,” cybernetics was developed and refined, and to various degrees and ends appropriated, implemented, and advocated, by North American and European representatives of those laboring at the forefront of the natural and social sciences, among them Norbert Wiener himself, John von Neumann, Claude Shannon, Heinz von Foerster, W. Ross Ashby, Gregory Bateson, and Talcott

¹⁷⁶ Turner, *From Counterculture to Cyberculture*, 21.

¹⁷⁷ *Ibid.*, 22; Edwards, *The Closed World*, 181.

¹⁷⁸ Orr, *Panic Diaries*, 108.

¹⁷⁹ *Ibid.*; Geoff Bowker, “How to be Universal: Some Cybernetic Strategies, 1943-1970,” *Social Studies of Science* 23, no. 1(1993):107-127.

¹⁸⁰ See Kline, “Beyond the Closed World,” 407-408.

Parsons.¹⁸¹ As scores of historians have documented, the Macy Conferences operated as a key set of vectors through which cybernetics was dispersed, beyond the military-industrial-academic context in which it emerged, through the broader reaches of postwar American culture.¹⁸²

So much was this the case, Geof Bowker notes, that beginning with the publication of Wiener's *Cybernetics* in 1948, cybernetic concepts and claims overtime came to be increasingly abstracted from their contexts of emergence and ultimately subjected to (re)interpretation as they began to circulate throughout the broader culture, eventually becoming a "cult subject" for a much wider lay audience.¹⁸³ Ronald Kline has furthermore noted that the "extensive enthusiasm for cybernetics," in large measure resulting from the popularity of Wiener's writings on the subject, caused serious problems, ultimately "leading to a loss of scientific status in the 1960s."¹⁸⁴ Kline cites the noteworthy claims of several leading cyberneticians and philosophers on these developments, among them W. Grey Walter, Yehoshua Bar-Hillel, M.E. Maron, and Michael Apter, who by this time had variously observed (respectively) that a "peculiar gap between theory and practice" had become a "feature of cybernetics"¹⁸⁵; that cybernetics had in the United States especially been "usurped [...] by an overt or covert science fiction"¹⁸⁶; that "the vagueness of cybernetics had caused a 'pseudoscientific fringe' to make 'nonsensical claims

¹⁸¹ Steve J. Heims, *The Cybernetics Group* (Cambridge, MA: The MIT Press, 1991).

¹⁸² See *Ibid.*; Edwards, *The Closed World*, Ch. 6; Turner, *From Counterculture to Cyberculture*, 26-27; Hayles, *How We Became Posthuman*, Ch. 3; Bowker, "How to be Universal," 108; Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* (Cambridge, MA: The MIT Press, 2011), 9; Orr, *Panic Diaries*, 107.

¹⁸³ Bowker, "How to Be Universal," 108, emphasis added.

¹⁸⁴ Kline, "Where are the Cyborgs in Cybernetics?" 353.

¹⁸⁵ W. Grey Walter, "Neurocybernetics (Communication and Control in the Living Brain)," in *Survey of Cybernetics: A Tribute to Dr. Norbert Wiener*, ed. J. Rose (London: Iliffe, 1969), 94.

¹⁸⁶ Yehoshua Bar-Hillel, "Introduction," in *Language and Information: Selected Essays on Their Theory and Application*, ed. Yehoshua Bar-Hillel (Reading, MA: Addison Wesley, 1964), 11.

[...] under the banner of cybernetics”¹⁸⁷; and finally, that cybernetics “seemed to attract a lunatic fringe among scientists, particularly those with a penchant for the obscure and a facility for creating neologisms.”¹⁸⁸ Amid these developments, one observer went so far as to say that cybernetics was on the way to becoming “an up-to-date form of Black Magic, a sort of twentieth century phrenology.”¹⁸⁹

While one could certainly pursue these developments and their attendant epithets with an eye to the significance they hold for understanding the demise of cybernetics’ scientific legitimacy,¹⁹⁰ I am far more concerned here with attending to how they indicate that the *language* of cybernetics, its concepts and claims, were during this time opened up, made available as cultural sources for new ways of thinking and doing and with what effects, their overall scientific “legitimacy” notwithstanding. Indeed, such a concern is not without precedent. For as Fred Turner has demonstrated, the New Communalist thread of the American counterculture, at the very moment cybernetics was losing scientific credibility in the 1960s, nevertheless found in cybernetics’ informational flows and feedback loops a non-hierarchical ideological alternative to the rigidly hierarchical Cold War America, and thus as well a *holistic* alternative to the alienated and alienating modes of consciousness upon which it depended. Indeed, cybernetics was marialed by the New Communalists to justify at once a turn away from

¹⁸⁷ M.E. Maron, “Cybernetics,” in *International Encyclopedia of the Social Sciences* 2, vol.4 (1968):3-6.

¹⁸⁸ Michael Apter, “Cybernetics: A Case Study of a Scientific Subject-complex,” in *The Sociology of Science, Sociological Review Monograph 18* (University of Keele, 1972), 111.

¹⁸⁹ John F. Young, cited in Murray Eden, “Cybernetics,” in *The Study of Information: Interdisciplinary Messages*, ed. Fritz Machlup and Una Mansfield (New York: John Wiley and Sons, 1983), 417.

¹⁹⁰ An important trajectory of research, no doubt, which is nevertheless beyond the scope of the present study. See, however, Ronald Kline, “What is Information Theory a Theory Of? Boundary Work among Information Theorists and Information Scientists in the United States and Britain during the Cold War,” in *The History and Heritage of Scientific and Technical Information Systems : Proceedings of the 2002 Conference, Chemical Heritage Foundation*, ed. W. Boyd Rayward and Mary Ellen Bowden (Medford, N.J: 2004), 15-28.

the kind of agonistic movement politics pursued by the New Left and a move “back to the land,” ultimately in pursuit of a “politics of consciousness”; that is to say, a politics of changing the world by changing and expanding one’s mind, not least of which through the integration of LSD and Eastern religious traditions into a kind of “acid mysticism.”¹⁹¹

Mapping onto this, Andrew Pickering has called attention to a strong affinity, most evidently manifest in the 1960s counterculture, between cybernetics and New Age spirituality, which he attributes to the former’s ontological flattening of western modernity’s foundational dualisms, e.g. nature/culture, people/things, mind/body, spirit/matter.¹⁹² In *The Cybernetic Brain*, moreover, he details how this ontology variously fed and prompted interests in spirituality and spiritualism among prominent British cyberneticians; interests in “strange performances and altered states”; in clairvoyance, hypnotism, mediums, telekinesis, and out-of-body experiences.¹⁹³

In the United States, the affinity Pickering underscores between cybernetics and New Age spirituality is furthermore evidenced by Maxwell Maltz’s self-help classic *Psycho-Cybernetics* (1960),¹⁹⁴ a guide to personal development through positive self-image, and Katherine Cover Sabin’s *The Cybernetics E.S.P. Breakthrough: Can You Foresee Future Events?* (1967),¹⁹⁵ the subtitle of which says it all. Lastly, none other than L. Ron Hubbard premised his (in)famous Scientology on an information model of mind/brain derived from

¹⁹¹ Turner, *From Counterculture to Cyberculture*, 21-22, 73.

¹⁹² Pickering, *The Cybernetic Brain*, 182-183, 384-387; see also Pickering, “Cyborg Spirituality,” *Medical History* 55, no. 3 (2011):349-353.

¹⁹³ Pickering, *The Cybernetic Brain*, 112-113, 425-426n.19.

¹⁹⁴ Maxwell Maltz, *Psycho-Cybernetics* (New York: Prentice Hall, 1960).

¹⁹⁵ Katherine Cover Sabin, *The Cybernetics E.S.P. Breakthrough: Can You Foresee the Future?* (New York: Award Books, 1966).

cybernetics.¹⁹⁶ The influence is perhaps most evident in Hubbard’s term “*dianetics*,” which of course closely resembles *cybernetics*.¹⁹⁷ The influence is also apparent, however, in Scientology’s cybernetic-derived language of (mind) “command-and-control,” i.e. by way of the church’s esoteric devices and technologies of the self.¹⁹⁸ Indeed, Hubbard initially envisioned dianetics as belonging to “that class of sciences to which belong General Semantics and Cybernetics and, as a matter of fact, [forming] a bridge between the two.”¹⁹⁹

The travels of cybernetics noted in the preceding several developments are at one with what Andrew Pickering has underscored as the remarkably “undisciplined” tendency of cybernetics to “wander,” and in so wandering to give rise to otherwise unanticipated projects and developments, resulting from otherwise unintended appropriations and applications.²⁰⁰

Pickering’s characterization of cybernetics as such has strong resonances with Ronald Kline’s disunity of cybernetics thesis. In contrast to Paul Edwards’ claim that cybernetics operated as a monolithic science of control, a “grand theory” of information within the context of the closed world, Kline’s disunity thesis holds that, in practice, cybernetics assumed a range of forms and meanings, varying in accordance with the contexts and domains through which it circulated, and the ends to which it was put. Keeping here with Pickering and Kline, then, the preceding developments—empirical effects of cybernetics’ “wanderings,” evidence of its “disunity”—also evidence the “downstream” consumption and repurposing of cybernetic knowledge by decidedly

¹⁹⁶ L.Ron Hubbard, “Terra Incognita: The Mind,” *The Explorers Journal* XXVIII, no. 1 (1950):6-10.

¹⁹⁷ I was led to this connection by way of Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende’s Chile* (Cambridge, MA: The MIT Press, 2011), 12.

¹⁹⁸ Fred Phillips, “Technology and the Management Imagination,” in *Cognitive Technologies and the Pragmatics of Cognition*, ed. Itiel E. Dror (Amsterdam: John Benjamin, 2007), 92.

¹⁹⁹ Hubbard, “Terra Incognita,” 7.

²⁰⁰ Pickering, *The Cybernetic Brain*, 11.

“lay” or “non-” scientific actors; those operating at the fringes if not entirely outside of the scientific mainstream, appealing to cybernetics as a cultural source through which to produce new ways of knowing and doing.²⁰¹ Considering the spiritual if not religious nature of the preceding several developments, moreover, all of this squares with John R. Hall’s much broader observation, contra the expectations of secularization theorists, that the diffusion of technoscience has not, *per se*, “spelled the end” of collective synchronic forms of social organization; eventuated in disenchantment or the “waning of religion,” but has rather constituted conditions that have conspired in facilitating the emergence of new sacred communities of identity, practice and belief.²⁰² It is here especially that we can begin charting the emergence of cryonic suspension by way of cybernetics. For as noted in the introductory chapter, Evan Cooper most strikingly found in Wiener’s cybernetics a “message about immortality.”²⁰³ In light of this it would be a mistake, however, to read cryonics too broadly as “religious” or even “spiritual.” Rather, as I will demonstrate below, it is a *magical* idea, a *magical* practice.

Prospects of (Cybernetic) Immortality

The emergence of cryonic suspension thus evidences both the “wandering” and “disunity” of cybernetics; the downstream consumption and repurposing of cybernetic concepts and ideas by social actors located well outside the scientific mainstream; and ultimately an appeal to cybernetics as a key cultural source enrolled in the production of an outward *seemingly*

²⁰¹ See Epstein, “Culture and Science/Technology”; See also John R. Hall, *Cultures of Inquiry: From Epistemology to Sociohistorical Research* (Cambridge: The Cambridge University Press, 1999), 212.

²⁰² John R. Hall, *Apocalypse: From Antiquity to the Empire of Modernity* (Cambridge: Polity, 2009), 125-128.

²⁰³ Nathan Duhring, *Immortality: Physically, Scientifically, Now* (Washington, D.C.:20th Century Books, 1962), 1.

yet decidedly *non*-technoscientific practice—an emergent (*magical*) survival strategy, which as a recipe for action to maneuver vis-à-vis death received its definitive articulation in two “freeze now” manifestos: Evan “Ev” Cooper’s *Immortality: Physically, Scientifically, Now* (1962) and Robert C. W. Ettinger’s *The Prospect of Immortality* (1962/1964). Focusing primarily on these two texts, in the following sections I demonstrate how Ettinger and Cooper, in arriving at their respective calls to “freeze now,” took recourse to cybernetics in two principle ways. First, I show that both texts were written in a space of anticipation created by Norbert Wiener’s pronouncement, noted above, regarding the coming of a “second industrial revolution,” a cybernetic “new age” in which machines would outstrip human intelligence and capabilities. This *decenters* the actual freezing component of the practice, upon which existing interpretations of cryonic suspension have tended to fixate. I maintain that “freezing” is to be understood as a form of *anticipatory action* that was conceived, proposed, and ultimately pursued *in relation* to Wiener’s proclamation. Following from this, both “freeze now” manifestos evidence cybernetics having been at play *within* this space of anticipation created by Wiener’s pronouncement. In other words, while cybernetic predictions worked to organize freezing as a form of anticipatory action, cybernetics also figured prominently in Ettinger’s and Cooper’s respective argumentative efforts to *make the case* to “freeze now.”

With respect to this lattermost point especially, both Cooper’s *Immortality* and Ettinger’s *Prospect* should be read as products of an imaginative style of “social work,” quite uniquely enabled by cybernetics, and more broadly the pervasive computational metaphor, of which cybernetics is a theoretical formalization.²⁰⁴ The unique “style” of this form of work derives at base from the fact that cybernetics, recalling from above Fred Turner’s historical account of the

²⁰⁴ See Bowker, “How to Be Universal,” 116.

science, emerged as “contact language” among interdisciplinary wartime researchers. In formalizing the computational metaphor, cybernetics established equivalence in the informational constitution and behavior of organisms, humans, and machines alike; it effectively *collapsed* otherwise conventional *disciplinary* and thus as well *ontological* boundaries, the trespassing of which it enabled. Bound to this context, as a “contact language,” cybernetics served a set of practical functions, principally facilitating collaboration.

Removed from this context, however, as it embarked upon its characteristic “wanderings” throughout the broader culture of the American 1960s; as it became subject to remarkably undisciplined (re)interpretation, appropriation, and repurposing, the metaphorical potential of cybernetics became especially pronounced in two somewhat unwieldy rhetorical strategies, which Geof Bowker has termed *legitimacy exchange* and the *discontinuous transmission of ideas*.²⁰⁵ Legitimacy exchange refers to a process by which an expert or worker, laboring in a given domain, borrows or simply references concepts and terminology from a different domain, in a wager to both increase legitimacy and thus justify activity. As Bowker puts it, (rhetorical) legitimacy could in this sense be marshaled for “an outlandish claim” in one domain, by simply pointing to support from another. Related to this is the discontinuous transmission of ideas. Cybernetics, Bowker explains, carved out a space in which “conceptual tools” could be “yanked out of one context (e.g. philosophy of mind) and plugged into another (e.g. automata theory), with the metaphorical translation into the language of cybernetics,” i.e. the language of organism-machine equivalence, “doing the work of glossing the discontinuity.”²⁰⁶ Set within the

²⁰⁵ Ibid.

²⁰⁶ Ibid.; Turner, *From Counterculture to Cyberculture*, 24-28; Slava Gerovitch, *From Newspeak to Cyberspeak: A History of Soviet Cybernetics* (Cambridge, MA: The MIT Press, 2006), 89-101.

space of anticipation created by Wiener's proclamation, both rhetorical strategies are evidenced in the writings of Cooper and Ettinger; how and to what extent, and how they constitute a form of bricolage—*magic*—are matters best arrived at through considerations of their actual texts, to which I now turn.

Evan "Ev" Cooper

As discussed in Chapter 1, Evan Cooper's "freeze now" manifesto, *Immortality: Physically, Scientifically, Now* (1962), was influenced by his participation in a Washington D.C.-based reading group, which formed in 1957 with the expressed aim of devising a program, *20th Century Books*, which was envisioned to be a supplement to the (then relatively new) *Great Books of the Western World Program*. As the group set out to render *Great Books* more "contemporary, scientific, and germane to the existence of modern man," under Cooper's guidance they considered a range of 20th century figures, among them Einstein, Freud, Frazer, Sherrington, Pavlov, and Russell.²⁰⁷ Working through selections from these figures over the course of three years, the group eventually made their way to the work of Norbert Wiener. It was in the context of the group's consideration of Wiener, Cooper writes, that he believed to have located in cybernetics a "message about immortality."²⁰⁸ From this "message" Cooper then proceeded to deduce that "immortality might eventually become a down-to-earth physical reality via science."²⁰⁹

As we will see in what follows, Cooper derived this "message" from the ontological equivalence between humans and machines posited by the language of cybernetics, through

²⁰⁷ Duhring, *Immortality*, 1.

²⁰⁸ *Ibid.*

²⁰⁹ *Ibid.*

which the mechanical and the organic, under the auspices of informational “pattern,” become undifferentiated from one another. Indeed, for in collapsing the distinctions between human and machine, organic and mechanical, cybernetics, the computational metaphor, necessarily collapses as well any hard and fast ontological distinction between *living* and *dead*.²¹⁰ In theory, Cooper conceived of and penned his “freeze now manifesto” *up through* this space of collapsed dichotomies; in practice, as demonstrated in the following chapter, cryonic suspension is to be understood in part as a material instantiation of this relative *absence* of distinction between living and dead.

Cooper opens *Immortality* with a barrage of direct quotations, passages taken (out of context) from Wiener’s 1950 follow up to his landmark *Cybernetics, The Human Use of Human Beings*, which he presents to the reader in block quote form. A sampling of these passages is in order here, both for substantive reasons and to impart a sense of the piecemeal nature of Cooper’s argument and appropriation of Wiener:

The metaphor to which I devote this chapter is one in which the organism is seen as message. Organism is opposed to chaos, to disintegration, to death, as message is to noise.²¹¹

We can continue to live in the very special environment which we carry forward only until we begin to decay more quickly than we reconstitute ourselves. Then we die.²¹²

A pattern is a message, and may be translated as a message.²¹³

To recapitulate: the individuality of the body is that of a flame rather than that of a

²¹⁰ See Pickering, “A Gallery of Monsters,” 231. I revisit this issue below.

²¹¹ Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society* (Boston: Da Capo, 1988), 95, cited in Duhring, *Immortality*, 7.

²¹² Wiener. *The Human Use of Human Beings*, 95-96, cited in Duhring, *Immortality*, 8.

²¹³ Wiener, *The Human Use of Human Beings*, 96, cited in Duhring, *Immortality*, 8.

stone, of form rather than of a bit of substance. This form can be transmitted or modified and duplicated, although at present we know only how to duplicate it over a short distance. It is a pattern maintained by this homeostasis, which is the touchstone of our personal identity. We are not the stuff that abides, but patterns that perpetuate themselves.²¹⁴

It is my thesis that the physical functioning of the living individual and the operation of some of the newer communication machines are precisely parallel in their analogous attempts to control entropy through feedback ... in other words, the all-over system will correspond to the complete animal with sense organs, effectors and proprioceptors, and not as in the ultra-rapid computing machines, to the isolated brain, dependent for its experiences and for its effectiveness on our intervention.²¹⁵

What is at issue here is not the (in)accuracy of Cooper's reading of Wiener, but rather that Wiener's text served as a cultural source for Cooper, who appropriated and used the preceding passages as key elements in constructing and issuing his call to "freeze now." Indeed, following his opening barrage of block quotes, Cooper in effect proceeds to repurpose Wiener's general thesis in *Human Use* as the general thesis of his *Immortality*: "that the physical functioning of the living individual and the operation of some of the new communication machines are precisely parallel in their attempts to control entropy through feedback."²¹⁶ Cooper is especially taken by Wiener's notion of human-machine "parallel" operation and, following from it, Wiener's notion of individuals (and machines) as "patterns" of varying complexity. Indeed, throughout *Human Use* Wiener writes of the individual as a "pattern maintained by [...] homeostasis," i.e., staving off entropy, maintaining equilibrium through

²¹⁴ Wiener, *The Human Use of Human Beings*, 102-103, cited in Duhring, *Immortality*, 8.

²¹⁵ Wiener, *The Human Use of Human Beings*, 26, cited in Duhring, *Immortality*, 8.

²¹⁶ Ibid.

feedback, as the “touchstone of personal identity.”²¹⁷ In an oft-cited passage in the academic literature on cybernetics, the lattermost sentence of which Cooper quotes time and again throughout *Immortality*, Wiener elaborates:

Our tissues change as we live: the food we eat and the air we breathe become flesh of our flesh and bone of our bone, and momentary elements of our flesh and bone pass out of our body everyday with our excreta. We are but whirlpools in a river of ever-flowing water. *We are not stuff that abides, but patterns that perpetuate themselves.*²¹⁸

As we will see momentarily, Cooper proposed a set of interrelated methods by which to achieve physical immortality, all of which derive from Wiener’s notion of human identity as a “pattern,” parallel to that of the machine, different only in degrees of patterned complexity. (To preserve the “pattern” is to preserve the “person.”) Proceeding to that end first requires understanding, however, that Cooper, not inconsequentially, pieced together these proposals in a space of anticipation, which itself derived from cybernetics.

Specifically, taking recourse again to Wiener, Cooper offers that “evolution is at work in the growth of machines as it is in every other part of the universe.”²¹⁹ In that cybernetics, as discussed above, enlarged the category of “machine” to take in the operation of biological and social systems, the resulting mechanization of all life inevitably gave rise to the notion that machines operate and “evolve” just as organisms do—as entities that “move toward survival via the repetition of equilibrium positions or homeostasis.”²²⁰ The notion of human-machine equivalence, animated by a set of evolutionary processes in which the patterned complexity of the latter would come to rival and ultimately outstrip the former—this is how Cooper interprets

²¹⁷ Wiener, *The Human Use of Human Beings*, 96.

²¹⁸ *Ibid.*, emphasis added.

²¹⁹ Duhring, *Immortality*, 55-56.

²²⁰ *Ibid.*, 57.

Wiener's famed pronouncement of a coming "second industrial revolution," i.e. to be heralded by intelligent machines.²²¹ Indeed, "with the coming of Wiener," Cooper writes, "the world enters the second industrial revolution." And with it, he continues, "mankind receives another striking blow to his ego."²²²

It wasn't enough that Einstein removed all absolutes from the world, especially that last hope: time. It wasn't enough that Freud shocked mankind into accepting that man's libidinal desires determine [*sic*] most behavior. But the crowning strike is the fact that if some of the newer communication machines are not already they increasingly will be smarter, keener, vastly more intelligent than men.²²³

Stressing, then, that "intelligence" will be the "forte of the newer communication machines,"²²⁴ *Immortality* is a document permeated with Cooper's enthusiastic anticipation of the arrival of "intelligent machines." Pointing to the growing use of "thinking machines," and the "vital functions" they have come to perform in "business, the military, in universities and governments"; their role in the space program—"they are orbiting in space right now, doing mental jobs no human alone could dream of doing"—Cooper offers that as this "spectral capacity" of machines becomes more and more "integrated," it will form the "basis of a higher intelligence," in relation to which human intelligence will come to pale.²²⁵ To this end Cooper speculates that "the 21st century may bring communication machines with very high IQs, machines that"—in keeping with the evolutionary theme noted above—"begin to form an

²²¹ Ibid., 56.

²²² Ibid.

²²³ Ibid.

²²⁴ Ibid., 28.

²²⁵ Ibid.

independent kingdom and independent behavior.”²²⁶ Despite this evolutionary momentum, however, Cooper is nevertheless confident that ways will be found to “press the machines into the service of solving or helping to solve our problems.”²²⁷ Finding “no theoretical reason why men should not be able to build a machine with an IQ up to a million or beyond,” Cooper sees in the expected mental capacity of such machines the “fulcrum of the second industrial revolution.”²²⁸ As for what the machines *as such* will deliver, Cooper anticipates that they will first be brought to bear upon problems in the domains of military and production, then “the more important social problems.” Eventually, Cooper holds that the intelligent machines will “be used in all types of research relevant to immortality.”²²⁹

Wiener’s intentions notwithstanding, then, his pronouncement of a “second industrial revolution,” to be heralded by the arrival of cybernetic “thinking machines,” had the effect of producing a space of anticipation, of hope, in which Cooper was moved to propose a set of interdependent methods by which physical immortality might become “a down-to-earth physical reality via science.”²³⁰ Furthermore, Cooper’s proposed methods, discussed below, take as their point of departure the aforementioned cybernetic notion of human identity as “pattern,” to be differentiated from machines only in terms of complexity. To these elements we can now add a third in piecing together the “message about immortality” that Cooper ultimately derived from cybernetics: Wiener’s fantastic speculations regarding the possibility of one day *scanning* and *transmitting* human beings—understood, again, as informational patterns.

²²⁶ Ibid., 59.

²²⁷ Ibid., 57.

²²⁸ Ibid., 31

²²⁹ Ibid., 57.

²³⁰ Ibid., 1

What Cooper ultimately tapped into in Wiener is the latter's contention that, at least in theory, there is no "fundamental absolute line between the types of transmission which we can use for sending a telegram [...] and the types of transmission [...] possible for a living organism such as a human being."²³¹ Indeed, "it is amusing as well as instructive," Wiener writes, driving home his thesis:

to consider what would happen if we were to transmit the whole pattern of the human body, of the human brain with its memories and cross connections, so that a hypothetical receiving instrument could re-embody these messages in appropriate matter, capable of continuing the processes already in the body and the mind, and of and of maintaining the integrity needed for this continuation by a process of homeostasis.²³²

Wiener goes on to write that the idea itself "is not intrinsically absurd," and indeed "quite plausible," though the difficulties in facilitating human "travel by telegraph" are themselves quite "enormous."²³³ He concludes on an optimistic note, however, maintaining that the inability to (presently) "telegraph the pattern of a man from one place to another" is exclusively due to technical difficulties, which in Cooper's interpretation of Wiener stand to be resolved by the "communication machines" that will mark the arrival of the "second industrial revolution."

Cooper writes:

[...] the ideas keep coming back, and back again: if men are a pattern, and so are machines similarly, and if communication machines can precisely parallel men, patterns may eventually be transmitted to machines then immortality may be eventually achieved for humans.²³⁴

²³¹ Wiener, *The Human Use of Human Beings*, 3.

²³² *Ibid.*, 96.

²³³ *Ibid.*

²³⁴ Duhring, *Immortality*, 27.

As the preceding passage indicates, the kind of “cybernetic immortality” Cooper envisions entails the transmission of a human pattern to an artificial being, an automaton. This, again, is appropriated from Wiener, who envisioned a hypothetical “scanning” apparatus, which would “probe” all parts of the human organism, destroying tissue as it scanned, “with the intention of re-creating it out of other material elsewhere.”²³⁵ Cooper elaborates what he calls the “human-to-automaton” technique of achieving “cybernetic immortality”:

The idea comes to mind quite readily that if the scanner can pick up the pattern and recreate a duplicate individual it might even be easier and more advantageous to reconstruct the equivalent pattern in the frame of a unitary semi-isolated mobile communication machine. This assumes there are advantages to plastic and metal contrasted with flesh and bone. Or, conceivably, there could be some combination of them. In short, the pattern of the human may more easily be taped into the communication machine with its numerous structural advantages.²³⁶

And yet this is only one of the methods by which Cooper envisions achieving immortality. Though he refers to human “transmission-recreation” itself as *the* “cybernetic method,” the other two methods he proposes, which he calls “regenerative” and “transplant,” are no less derived from cybernetics, in that he regards them as avenues by which to maintain over time the integrity of human identity, understood again as informational pattern. Cooper’s discussion of regeneration, for instance, takes in research on the regenerative capacities of crayfish, crabs, starfish, and flatworms, and the replacement, in humans, of skin, hair, and teeth. “Within the body we know that the body fluids, elements and cells are continuously being replaced,” thus reinforcing Wiener’s cybernetic maxim: “we are not stuff that abides, but patterns that perpetuate themselves.”²³⁷ As for regeneration, Cooper writes, “there is no logical

²³⁵ Wiener, *The Human Use of Human Beings*, 103.

²³⁶ Duhring, *Immortality*, 27-28.

²³⁷ *Ibid.*, 9.

reason why the forestalling of death could not be continuous if we knew enough about the processes.”²³⁸ Similarly with transplantation, a “method theoretically akin to the regeneration processes already spoken of,” Cooper envisions achieving immortality by way of successive exchanges of organs and tissues, both real and artificial—“spare parts”—such “that the original pattern, the individual, could indefinitely extend his existence.”²³⁹

The “message about immortality” that Cooper derives from Wiener, and thus as well his proposed “methods” for achieving immortality, all take shape within a space of anticipation. At base, three components define this anticipatory space. First, on the *near* side, is Wiener’s account of human-machine equivalence, established under the cybernetic auspices of “information pattern.” Second, directly following from this, are Cooper’s proposed “methods” by which physical immortality might be achieved: regeneration, transplantation, and “transmission-recreation.” Third, on the *far* side, is Wiener’s prediction about the arrival of “communication machines” that will eventually outstrip human capacities, i.e. the coming of the “second industrial revolution.”

Cooper takes the notion of the human as “pattern” as an ontological given. The “methods” are *imagined possibilities* that derive from the base ontological claim: “*if humans are a pattern, then it should be possible to...*” The methods are not *actual*; the procedures cannot (yet) be carried out. It is precisely the machines that, for Cooper, *will* be able to carry them out in the future. Indeed, Cooper writes that the machines will be able to “[solve] the problems of the transmission of human patterns into automatons,” and offer solutions to “any other

²³⁸ Ibid., 10.

²³⁹ Ibid., 24.

problem.”²⁴⁰ As such, he sees cybernetics as the “crucial field for breakthroughs,” noting that it has “already provided several in computing machinery and automation,” has “fertilized the rest of the sciences,” and furthermore has a potentially untouched “remaining capacity.” Cooper thus calls for investment in cybernetics, anticipating the arrival of “thinking machines that [will] provide the solution for any reasonable problem we can pose.”²⁴¹ However, this also gets at the root of Cooper’s dilemma: How to close the gap between imagined technological possibilities, on the one side, and their anticipated realization, with the coming of intelligent machines, the “second industrial revolution,” on the other?

Suppose you wish to be immortal but tomorrow you die from any one of a number of causes. Are you out of luck [...]?” “Are you out of luck because scientists and the communication machines haven’t figured out the practical methods of [...] transmission of human to re-created human? The answer is no. [...] Despite your recent and unexpected demise, all hope is not lost.”²⁴²

“If you die before the methods of [regeneration, transplantation, and transmission-recreation] are effectively achieved,” Cooper continues, “and if you wish immortality physically, your body must be preserved.” Indeed, for Cooper, the “most logical method of preserving the body,” and thus the “pattern,” upon death, is “low temperature preservation.”²⁴³ For in his view, freezing will ensure that one’s “identity,” one’s “original pattern,” will not “[deteriorate] to any significant degree,” thus ensuring a successful outcome “by the time resuscitation methods are practical and reliable.”²⁴⁴ Thus the expression, coined by Cooper himself, which captures the

²⁴⁰ Ibid., 31.

²⁴¹ Ibid., 34.

²⁴² Ibid., 12.

²⁴³ The source of this idea in Cooper is cryobiologist Audrey U. Smith. I take up her widely publicized experimental findings below, within the context of discussing Robert C. W. Ettinger.

temporal logic of freezing human corpses as an *anticipatory* practice, one conceived, proposed, (and ultimately pursued) in relation to Norbert Wiener’s heralding of a “second industrial revolution”—“*freeze-wait-reanimate*.”²⁴⁵

Robert C. W. “Bob” Ettinger

Robert Ettinger’s *The Prospect of Immortality* is a strangely playful text, and thus, given the subject matter, somewhat baffling if not disaffecting. Consider, for instance, that in 1964, on the heels of its commercial release, a reviewer for *Science* wrote that *Prospect* can “only be considered the work of an utterly confused optimist.” For “only a fervent and naïve believer in the immanence of ultimate good” would so completely underestimate “the inertia, complexity, and inconsistency of human thought and behavior, as well as the complications of biological structure.” “Only such a man,” the reviewer continues, noting that the bulk of Ettinger’s text is constructed through second-hand appeals to expert authorities and references to popular press writings, “could quote people so uncritically and so out of context.” The reviewer, indeed, comes up just short of dismissing *Prospect* as pseudoscience, settling instead for the more genteel epithet, “science fiction.”²⁴⁶

Ettinger’s *Prospect* is quite similar to Cooper’s *Immortality*, in that both texts operate in a register of anticipation, a gap between the perceived limitations of certain technoscientific fields of their day and the seemingly limitless futures they believe those same fields are fated to usher in, with the eventual arrival and aid of “thinking machines.” Both prescribe a course of action,

²⁴⁴ Ibid., 40.

²⁴⁵ R. Michael Perry, “Notes,” *Freeze-Wait-Reanimate Newsletter Collection*, ii, Alcor.

²⁴⁶ D. E. Goldman, “American Way of Life?” review of *The Prospect of Immortality*, by Robert C. W. Ettinger, *Science* 145, no. 3631 (1964): 475-476.

an interim measure to fill the proverbial gap—freezing the recently deceased. While no less fantastic, then, reading *Immortality* is nevertheless manageable in a way that reading *Prospect* is not, largely because Cooper’s argument is much more direct, taking shape around and in frequent reference to a collection of claims set forth by Norbert Wiener. This has the effect of *explicating* the computational metaphor in Cooper, i.e., individual as “pattern,” evidencing its prominence as the principle point through which legitimacy for the “freeze now” endeavor, vis-à-vis Wiener’s predictions, is claimed, and ideas from cybernetics and other fields (discontinuously) transmitted and appropriated. In Ettinger, there is nothing comparable in the way of a recurring point of reference explicated in the text itself. Taken at face value the result, as noted above by the reviewer for *Science*, is a kind of confused optimism, a pastiche of 1960s American (pop) technoscience. A closer, contextualized reading, however, evidences the computational metaphor at play in *Prospect*—Ettinger assumes and elaborates its ontology. This is easily elided, however, by his frenetic writing style.

In what follows I set out to recover and explicate Ettinger’s assumptions and elaborations, drawing out his reliance on the computational metaphor, principally by working across and between three key touchstones that ground his overall argument: *cryobiology*, *thinking machines*, and speculative *techniques of human enhancement*. I take each of these up in turn below. Before proceeding it is worth recalling, as with Cooper, that what is at issue here is neither the (in)accuracy of Ettinger’s readings nor the (in)appropriateness of his engagements with these fields, but rather that they served as a set of cultural sources, which Ettinger turned to and appropriated in constructing *Prospect*, his formal call to “freeze now.”

Having arrived, then, at Ettinger’s *Prospect*, we have arrived as well at a vantage from which to begin reconsidering the questions posed much earlier in the present chapter, i.e. those

regarding the manifest similarities between the *suspended animation* technique outlined in the cyborg spaceflight proposal offered by Manfred Clynes and Nathan Kline, and the “freeze now” technique, what would ultimately become *cryonic suspension*, as offered by Ettinger and Cooper. On the one hand, cyborg *astronauts*, shuttled to distant moons and planets; on the other hand, terrestrial *cryonauts*, shuttled to the medical technologies of the future. While the similarities are evident, what is their *source*? Indeed, beyond the fact that Manfred Clynes proposed the former and was decades later moved to endorse the former, just *how* are the two techniques related?

A major mid-twentieth century break-through in cryobiology formed the backdrop to both the suspended animation component of Clynes and Kline’s cyborg spaceflight proposal, and Cooper’s and Ettinger’s respective calls to “freeze now.” The breakthrough resulted from a serendipitous accident that transpired in autumn of 1948, at the National Institute for Medical Research Laboratory at Mill Hill, London. Assisted by Alan S. Parkes and Christopher Polge, Audrey U. Smith, following results obtained by other researchers,²⁴⁷ was experimenting with the “use of laevulose [fructose] solutions to protect fowl spermatozoa against the effects of freezing and thawing.”²⁴⁸ The aim was to develop protocols for the prolonged storage of living cells. After months of experimentation: nothing. Despite the presence of laevulose, the low temperatures still caused the water between cells to expand and crystalize, resulting in cellular freezing injuries. Consequently, less than 5% of the frozen fowl spermatozoa regained motility when thawed. And then one day: success. In the routinized course of experimentation, Smith and colleagues began to observe post-thaw motility rates exceeding 50% in fowl spermatozoa

²⁴⁷ Shaffner, C. S., E. W. Henderson, and C. G. Card. 1941. “Viability of Spermatazoa of the Chicken Under Various Environmental Conditions.” *Poultry Science* 20:259-265.

²⁴⁸ Parkes, Alan S. 1956. “Preservation of Living Cells and Tissues at Low Temperatures.” *Proceedings of the Third International Congress on Animal Reproduction and Artificial Insemination*, Cambridge. June 1956. Plenary Papers, 69.

frozen to -79°C (solid CO_2). The reason: two bottle labels had become detached while in storage in the lab refrigerator; when reapplied they were switched. In the successful experiment, Smith and her team unknowingly employed the chemical *glycerol*, not laevulose solution. The suspended animation of living cells had become a reality by way of accident, and Dr. Audrey U. Smith was hailed as the mother of modern cryobiology. Smith and colleagues soon found subsequent experimental successes with bull and human semen; mammalian embryos and ovaries; red blood cells and bone marrow cells before moving in the 1950s to develop successful protocols for the suspended animation and reanimation of small living mammals—most notably among them golden hamsters.²⁴⁹

Smith herself saw no immediate prospect of freezing larger mammals, let alone human beings, without in the process incurring catastrophic cellular and neurological damage. In her words: “I know of no scientific evidence to support the notion that human beings could presently survive prolonged periods with the entire body frozen.”²⁵⁰ Smith and colleagues’ experimental successes nevertheless opened up a space in which optimistic speculation was fostered about the possibility of achieving the suspended animation of human beings at extremely low temperatures.²⁵¹

Following from this, it is not insignificant that NASA received Clynes and Kline’s cyborg spaceflight proposal with general enthusiasm, so much so that by 1962 the space agency had agreed to allocate funding for an eight month study to determine the feasibility of realizing

²⁴⁹ Bronwyn Parry, “Technologies of Immortality: The Brain on Ice,” *Studies in History and Philosophy of Biological and Biomedical Sciences* 34 (2004): 405.

²⁵⁰ Cited in Robert W. Prehoda, *Suspended Animation* (Philadelphia: Chilton, 1969), 72.

²⁵¹ *Ibid.*; see also Parry, “Technologies of Immortality,” 404-405.

the cyborg techniques and entities that Clynes and Kline proposed.²⁵² By this time, moreover, the cyborg and its constitutive “cybernetic aids for space life” had made their entry into American popular culture, receiving coverage in media outlets such as *Life* and *The New York Times*.²⁵³ By 1964, however, NASA had all but abandoned the project, and had even dropped term cyborg itself, *officially* citing lack of feasibility given that the requisite kinds and levels of (bio)technology did not exist. (The official account of NASA’s departure from the cyborg is highly contested, a matter to which I return below.) What merits heavy underscoring presently is that the project’s final report, issued in May of 1963—*Engineering Man for Space: The Cyborg Study*—notably expressed optimism about controlled human hypothermia, i.e. suspended animation, predicting that the automated technologies required to facilitate extended space travel would likely be available within five to fifteen years.²⁵⁴

Well within this window of optimistic speculation; amid the popular media coverage aforementioned, Robert C.W. “Bob” Ettinger had written the following:

How strange that the many popular articles on suspended animation have mentioned chiefly its possible use by astronauts on long interstellar voyages! This aspect is trivial. Its importance lies not in travel to the stars, for the few, but in travel to the future, for the many.²⁵⁵

Taken from the opening pages of Ettinger’s *The Prospect of Immortality*, this passage has been passed over in absolute silence by existing interpretations of cryonic suspension. Significant an oversight though this is, it would nevertheless be a serious mistake to take this passage as evidence of Ettinger simply lifting the freezing technique from popularized aerospace proposals

²⁵² Kline, “Where are the Cyborgs in Cybernetics?” 342.

²⁵³ *Ibid.*, 340-342; Monchaux, *Spacesuit*, 67.

²⁵⁴ Robert W. Driscoll (ed.), “Engineering Man for Space: The Cyborg Study”: Final Report NASw-512, Corporate Systems Center (United Aircraft: Farmingham, C&, 1963), III-18.

²⁵⁵ Robert C. W. Ettinger, *The Prospect of Immortality*, 17.

and arguing for analogous application to the recently deceased. While this is what he seems to be doing; while this is what he seems to *believe* he is in fact doing, there is a something of a (false) rhetorical equivalency being perpetrated here, under the auspices of “suspended animation,” which elides, quite confusingly, the complexity of cryonic suspension, masking the fact that the practice is quite *different* from suspended animation.

How and to what extent this is so are matters best arrived at by way of considering a related set of issues, which existing treatments of cryonic suspension have likewise passed over in silence. In the course of outlining the contours of the Ettinger origin narrative in Chapter 1, I noted that Ettinger, in 1962, mailed draft versions of *The Prospect of Immortality* to several of those listed in *Who's Who in America*. Among those who endorsed his proposal, ultimately helping Ettinger secure a contract for commercial release and circulation with Doubleday & Co., were Isaac Asimov and Frederik Pohl. Subsequently, in 1963, Doubleday sent out pre-publication copies of Ettinger's manuscript for review. Among those who received copies were Robert W. Prehoda, chemist and aerospace industry consultant, and Dandridge M. Cole, futurist and aerospace engineer for General Electric. Prehoda and Cole were close friends, drawn together by an “intense interest in space exploration.”²⁵⁶ Prehoda and Cole, moreover, like Ettinger, believed that suspended animation for purposes of interstellar travel was a realizable possibility; they also believed that the technique would eventually have widespread medical applications. To these ends, both men furthermore wrote about suspended animation; indeed, speculations about the technique's development, applications, and potential benefits turn up in Cole's *Islands in Space: The Challenge of the Planetoids* (1964) and *Beyond Tomorrow: The*

²⁵⁶ Prehoda, *Suspended Animation*, 112.

Next 50 Years in Space, as well as Prehoda's *Designing the Future* (1967) and especially his *Suspended Animation* (1969),²⁵⁷ as the title evidences.

It was Cole, however, who was most notably taken by *Prospect*, Ettinger's proposal to subject the deceased to freezing techniques. Cole is known to have expressed his "desire to be frozen after death" to several friends, co-workers and relatives,²⁵⁸ believing that an effective means by which to achieve suspended animation in humans would be realized well within his lifetime. Indeed, Prehoda recalls having had with Cole a "long discussion on the subject," in the summer of 1965, approximately one year following the commercial release of Ettinger's text. Only a few months later, however, on October 30, 1965, Cole, at forty-four years of age, suffered a heart attack in his office and later, en route to the hospital, died of a coronary thrombosis. One of Cole's associates, aware of his desire to be frozen, contacted Ettinger in search of guidance. Despite the significant time lapse following Cole's death, Ettinger nevertheless counseled that Cole be frozen all the same. Because nothing resembling a cryonic suspension infrastructure was yet in place, however; because no formal arrangements had been made prior to his death, Cole's family in the end decided not to pursue freezing and had him buried.²⁵⁹

Prehoda later wrote of Cole that he would *not* have desired freezing, nor would he more broadly have advocated freezing, under such circumstances. This is so for two principle reasons. First, due to the cellular damage incurred in the significant lapse of time following his death: "I

²⁵⁷ Ibid.; Dandridge M. Cole and Donald W. Cox, *Islands in Space: The Challenge of the Planetoids* (Philadelphia: Chilton, 1964); Dandridge M. Cole, *Beyond Tomorrow: The Next 50 Years in Space* (Amherst: Amherst Press, 1965); Robert W. Prehoda, *Designing the Future: The Role of Technological Forecasting* (Philadelphia: Chilton, 1967).

²⁵⁸ Prehoda, *Suspended Animation*, 111-112; Robert C. W. Ettinger, "Letter to LES Members," *Freeze-Wait-Reanimate* 2, no. 18 (November 1965): 5-6.

²⁵⁹ See Anonymous, "Scientist Dies Who Desired Freezing, Family Decides Against It," *Freeze-Wait-Reanimate* 2, no. 18 (November 1965): 4.

distinctly recall [Cole] stating,” Prehoda wrote, that for this reason, “suspended animation would not be valid unless instigated before or at the point of death.” Second, Cole certainly wanted to be frozen, but only *after* suspended animation had been achieved with scientifically verifiable results. The techniques for freezing humans that prevailed in the 1960s caused irreversible cellular damage, such that “freezing now,” as Ettinger advocated in *Prospect*, destroyed the integrity of those who were to be preserved over the long term, thus as well precluding any realistic hope of eventual revival.

Though less enthusiastic than Cole, Prehoda nevertheless was initially receptive to Ettinger’s text, seeing it as a potential vehicle through which to incite serious discourse and public support for increased government expenditures on cryobiological research broadly, and medical applications of suspended animation specifically, but only—and here is the rub—“*if his [Ettinger’s] proposals were completely changed.*”²⁶⁰ In the course of extensive telephone and written correspondence, subsequent to having reviewed the prepublication copy of *Prospect* that he was sent, Prehoda pleaded with Ettinger to redirect the argumentative focus of the text to the importance of pursuing basic research, with the immediate aim of achieving non-damaging freezing techniques, thus placing Ettinger’s claims in accordance with the field of cryobiology. The actual freezing would have to come *later*. For to do otherwise, in the absence of such techniques; to “freeze now,” as Ettinger advocated, would place him significantly at odds with cryobiology’s research priorities. Indeed, to “freeze now,” Prehoda notes, would simply amount to nothing more than wasting vast sums of time, energy, and money on the “elaborate

²⁶⁰ Prehoda, *Suspended Animation*, 103.

preservation of cadavers,”²⁶¹ which ultimately have no hope of future revival—resources, in other words, that would be much better directed towards basic cryobiological research.

And yet “freezing now” is precisely what Ettinger advocated; none of the modifications Prehoda suggested Ettinger make to *Prospect* were carried through. This points to far more than a mere difference in opinion, for in proceeding as such Ettinger broke step with governing scientific conventions. And with this we begin to arrive at the real crux of the matter. For Ettinger’s call to “freeze now” was not staked upon criteria that could be tested or verified in accordance with traditional scientific measures. Rather it was based upon an *expectation* that future technologies would be capable of repairing the damage incurred by freezing, in the course of curing whatever “caused” the frozen to die in the first place. Indeed, here is Ettinger, sparring with critics of his call to “freeze now,” on the grounds that freezing would cause irreparable brain damage:

There seems a good chance that the supra-molecular circuitry [of the brain] can be read well enough after freezing. Hence it may well be that only a small percentage of the brain cells need escape with little damage; this may be enough for reasonably faithful reconstruction of the brain with freshly generated tissue. The robot surgeons of the future will have powers now only faintly foreshadowed, but beginnings have already been made...if brute-force methods are necessary, it is not inconceivable that huge surgeon-machines, working twenty-four hours a day for decades or even centuries, will tenderly restore the frozen brains, cell by cell, or even molecule by molecule in critical areas.²⁶²

This passage throws into relief two crucial issues. The first is the equivalence Ettinger’s speculation necessarily posits between the human brain and computational machinery—“...*the supramolecular ‘circuitry [of the brain]’*”—and thus as well the attendant assumption that the former is (in theory) somehow amenable to “rescue” and “repair” by the latter. I will return to

²⁶¹ Ibid., 108.

²⁶² Ettinger, *The Prospect of Immortality* (New York: Doubleday, 1964), 37.

this issue momentarily. The second issue, which I will take up presently, is Ettinger's appeal to the envisioned capabilities of technologically advanced "robot surgeons of the future," which is the principle angle through which he attempts to justify his call to "freeze now." Ettinger, in other words, appeals to the development of an expected future in the absence of actually effective, non-damaging freezing techniques—as if the eventual arrival of the former, in the future, effectively substitutes for the nonexistence of the latter, in the (then) now; as if the former render proscriptions against freezing deceased humans moot, and thus justify his call to "freeze now." The anticipatory logic is at one with that espoused by Evan Cooper in *Immortality*. The source of Ettinger's anticipation, moreover, is shared with Cooper. Ettinger writes:

Everyone who reads the papers or watches TV knows by now that, whereas the first industrial revolution involved the replacement of human and animal muscle by machines, the second industrial revolution will involve the replacement of brains by machines. The computers already have remarkable problem-solving capacities, and it really appears to be only a matter of time before they can really think.²⁶³

As in Cooper's *Immortality*, Ettinger's *Prospect* is permeated with predictions regarding the coming of "intelligent machines." The preceding passage, which appears under a chapter subheading titled, quite tellingly, "The Solid Gold Computer," is especially significant, in that it is a clear reference to, if not a paraphrase of, Norbert Wiener's prophetic announcement regarding the coming of the "second industrial revolution," originally set forth in his landmark *Cybernetics*.

Moreover, and as again in Cooper's *Immortality*, the predictions at play in Ettinger's *Prospect* necessarily presume equivalence between humans and machines. For example, Ettinger endorses, notably, British cybernetician W. Grey Walter's contention, which follows from Wiener's base cybernetic argument, that humans and machines are differentiated from one

²⁶³ Ibid., 94, 105.

another only in terms of complexity.²⁶⁴ The predictions and posited equivalences furthermore bleed into speculations about human enhancement by way of human-machine coupling or symbiosis. Most significant in this respect, Ettinger appropriates claims deriving from a cluster of research briefs appearing in the *Proceedings of the Institute of Radio Engineers* (IRE). Citing a report entitled “Biomedical Electronics-2012 A.D.,” for instance, prepared by IRE Fellow Lee B. Lusted, Ettinger offers that “within fifty years, it will be possible to replace nearly all of the body organs by compact artificial organs with built-in electronic control systems.”²⁶⁵ Poaching from a somewhat lengthier report entitled “Man-Machine Coupling-2012 A.D.,” prepared by IRE fellow R.M. Page, Ettinger predicts that “ultra-rapid communication between man and machine,” enabled by a “sort of electronic-mind reading,” will be realized by 2012. Ettinger goes on to write that “all the resources of a huge computer may someday be in the direct service of a man’s mind; it might even be said to be part of his mind, when hooked in on either a temporary or permanent basis.”²⁶⁶

The remaining three reports in the IRE cluster anticipate the realization of machine intelligence, broadly understood. Following Marvin Minsky’s “Steps Toward an Artificial Intelligence,” Ettinger writes that “we are on the threshold of an era that will be strongly influenced, and quite possibly dominated, by intelligent problem-solving machines.”²⁶⁷ Ettinger supplements his appropriation of Minsky with predictions lifted from Jerome B. Wiesner’s paper, “Electronics and Evolution,” which posits that “one should ultimately be able to create

²⁶⁴ See W. Grey Walter, “An Imitation of Life,” *Scientific American* (May 1950): 42-45, cited in *Ibid.*, 106.

²⁶⁵ Lee B. Lusted, “Bio-Medical Electronics—2012 A.D.,” *Proceedings of the IRE* 50, no. 5 (May 1962):636-637, cited in Ettinger, *The Prospect of Immortality*, 51.

²⁶⁶ R.M. Page, “Man-Machine Coupling—2012 A.D.,” *Proceedings of the IRE* 50, no. 5 (May 1962):613-614, cited in Ettinger, *The Prospect of Immortality*, 126.

²⁶⁷ Ettinger, *The Prospect of Immortality*, 95

‘thinking machines’ much brighter than the smartest human being.”²⁶⁸ Finally, Ettinger appeals to Marcel J.E. Golay’s “The Biomorph Development of Electronics,” which advances the argument that size, speed, and complexity will “play the main part in transforming the ‘stupid computers of today into thinking machines that will teach us new concepts’”²⁶⁹

Thus Ettinger’s call to “freeze now,” to *freeze anyway*, despite the damage incurred, is to be understood as having played out within a space of anticipation, a space given shape by predictions regarding the arrival of “thinking machines,” heralds of the “second industrial revolution” proclaimed by Norbert Wiener. Revealing the true extent of what he ultimately anticipates “the machines” being capable of, Ettinger writes:

The invention of thinking machines, of automata with genuine intelligence, will of course have an importance difficult to exaggerate [...] This invention will obviously be in one sense the most important ever made, since it is equivalent to the invention of a *magic lamp* from which will stem other wonders without limit.²⁷⁰

Ettinger, then, contrary to Prehoda’s insistence on research aimed at achieving viable freezing techniques, appeals instead to predictions, on the grounds that “the people who are dying right now cannot, and need not, wait for 100 per cent mastery” of the problems associated with existing freezing techniques. Despite the damage caused, Ettinger continues, these are problems that “can be left to the more distant future,” where they will be resolved by thinking machines, the “robot surgeons of the future.”²⁷¹

²⁶⁸ Jerome B. Wiesner, “Electronics and Evolution,” *Proceedings of the IRE* 50, no. 5 (May 1962):653-654, cited in Ettinger, *The Prospect of Immortality*, 95.

²⁶⁹ Marcel J. E. Golay, “The Biomorph Development of Electronics,” *The Proceedings of the IRE* 50, no. 5 (May 1962):628-631, cited in Ettinger, *The Prospect of Immortality*, 95.

²⁷⁰ Ettinger, *The Prospect of Immortality*, 105, emphasis added.

²⁷¹ *Ibid.*, 39.

Cybernetic Sorcery

Considered within the space of optimistic speculation opened up by Smith and colleagues' experimental successes, Ettinger's hopes for suspended animation techniques were in no significant way different from the hopes expressed and the ends imagined by Prehoda and Cole, Clynes and Kline and those at NASA more broadly. What sets Ettinger apart (and Cooper as well, as should be evident) is that where these likeminded others *noted* the limitations and quite damaging effects of existing freezing techniques, and thus called for further research, Ettinger issued a call to freeze anyway, to "freeze now," *despite* these limitations. In so doing, Ettinger set himself at odds with his would be allies, not to mention the entire field of cryobiology—he argued human resuscitation to be possible when reigning cryobiological consensus was that it was impossible. It is this basic transgression that in part differentiates suspended animation from what would ultimately become cryonic suspension. Despite their overt similarities, as noted above, Ettinger's proposal to "freeze now" *disregarded evidence and extant limitations* that equally enthusiastic, equally fantastic proposals for suspended animation nevertheless respected, which is why the latter never made it beyond the proposal stage.

Cryobiology is not the only instance in which Ettinger and Cooper operated and imagined within a field of relatively widespread and optimistic technoscientific speculation and expectation, only to then to proceed, uncritically, a few steps too far, too seemingly enthusiastically. In the case of cybernetics, as with cryobiology, the expectations to which they appealed regarding Wiener's anticipated arrival of "thinking machines" were during the early 1960s very widespread, as was enthusiasm for cybernetics generally. Following from this, as discussed much earlier above, Cooper and Ettinger were likewise hardly unique in appealing to and enrolling cybernetics, and more broadly the computational metaphor, the cybernetic

language of human-machine equivalence, as a cultural source through which to open up, imagine, and pursue new, often quite different ways of thinking and doing (scientific legitimacy and technical feasibility notwithstanding).

In fact, Cooper and Ettinger, in setting forth their respective proposals to “freeze now,” were in effect at one with Kline and Clynes’ cyborg spaceflight proposal—both the cyborg and “freeze now” proposals are to be interpreted as outcomes of bringing cybernetics to bear upon the human body in different domains, and in relation to different sets of (then) emergent problems. Each proposal, moreover, following from this, ultimately called for the creation of a new kind of (cybernetic) entity: on the one hand, the cyborg *astronaut*, on the other, the terrestrial *cryonaut*. In response to the problem of facilitating (interstellar) space travel, Clynes and Kline, as we have seen, called for the direct incorporation of exogenous material technologies into astronauts’ bodies, thereby adapting them to hostile extraterrestrial environments under the guise of cybernetic “enhancement”—the creation of “self-regulating man-machine systems,” or “*cybernetic organisms*,” for which Clynes coined the term *cyborg*. Kline and Clynes’ proposal to hybridize humans and machines—“cyborgs”—derived entirely from the root ontological equivalence, posited by cybernetics, between humans and machines. Controlled human hypothermia, or “suspended animation,” is in the context of their proposal simply one of many proposed entailments, i.e. one of many “cybernetic aids for space life;” one method of “artificial homeostasis” by which to control and optimize the bodily processes of cyborg astronauts.

Ettinger and Cooper arrived at arguably the same technique—freezing as a means by which to achieve artificial homeostasis in the form of *biostasis*—and it is here their proposals most evidently parallel if not intersect with Kline and Clynes’ cyborg. Cooper and Ettinger,

however, arrived at freezing as a consequence of mapping the computational metaphor onto the human body in a different domain; elaborating its ontology relative to a different problem—death. This is most evident in Cooper’s fixation on the cybernetic notion of the human as “pattern,” and its purported “parallel operation” to machines, which is of course the basis of the “message about immortality” he infers from Wiener. The metaphor is less explicit though equally at play in Ettinger, as evidenced above in his speculative discussion of enhancement by way of human-machine symbiosis, the equivalence he presumes to exist between the human brain and computational machinery, and especially in his contention that the damage incurred in the course of freezing, as with all other “causes” of death, are in theory problems of a sort amenable to technological solution—that is to say, they are cast as *technological* problems. Ettinger and Cooper alike, then, articulate the computational metaphor with themes from cryobiology, prospects of human enhancement and human-machine symbiosis, with Wiener’s prediction of a “second industrial revolution” to be heralded by the arrival of cybernetic “thinking machines,” each issuing a call to “freeze now.” The call, I maintain, evidences a *magical* impulse, *magical* thinking. For magic, as Richard Stivers reminds us, following Marcel Mauss, resides in the domain of wishful thinking; it is essentially about “wish fulfillment.”²⁷²

In both Ettinger and Cooper magical thinking is clearly at play in at least two registers, the first being *expectation*. Ettinger and Cooper exhibit a clear tendency to enlarge upon the virtues of certain objects, specifically “thinking machines,” especially in the anticipated ability of the latter to repair damage incurred in the course of freezing, and eventually to reverse any given “cause” of death. Indeed, as Mauss argues, “the art of the magician involves suggesting means, enlarging on the virtues of objects, anticipating effects, and by these methods fully satisfying the

²⁷² Richard Stivers, *Technology as Magic: The Triumph of the Irrational* (New York: Continuum, 2000), 2.

desires and expectations which have been fostered by entire generations in common.”²⁷³ Here, in this sense, “wishful thinking” creates the space of anticipation in which the call to “freeze now” is issued; in which Ettinger and Cooper penned their respective manifestos.

Within this space of anticipation—this is the second register in which magic is at play, taking shape in terms of *how* the manifestos are constructed; how Ettinger and Cooper attempt to legitimate their calls to “freeze now.” Both Ettinger’s *Prospect* and Cooper’s *Immortality* clearly evidence a form of *bricolage*. While Claude Lévi-Strauss employed the term to denote the process by which myths are culturally constructed, many latter day theorists see bricolage as referring more broadly to a “do-it-yourself job, a nonprofessional assembly of odd pieces into something new and unexpected.” Bricolage in this sense denotes “cutting and pasting,” a cementing together of “recognizable themes from a culture,” though the ultimate product of this process “emerges unpredictably because it does not follow established patterns.”²⁷⁴ Grounded in and elaborating the computational metaphor, the “freeze now” manifestos draw from and stitch together familiar themes from cryobiology, cybernetics, and prospects of human enhancement. The computational metaphor, in that it elides ontological distinctions between organism and machine, does the work of glossing discontinuities. As noted at the outset of this section, however, in drawing from and repurposing themes from these fields, Ettinger and Cooper regularly transgress governing scientific conventions and disregard extant limitations. In part, this is what makes their proposals so confusing, so difficult to pin down—both *Prospect* and *Immortality* are the products of a *magical impulse, magical thinking, coming up through, finding*

²⁷³ Mauss, *A General Theory of Magic*, 175.

²⁷⁴ Diana G. Tumminia, *When Prophecy Never Fails: Myth and Reality in a Flying-Saucer Group* (Oxford and New York: The Oxford University Press, 2005), 66

a medium of expression *in*, by way of the computational metaphor, what are at base technological fields of endeavor.

It is here, perhaps, that the internal discord between the “freeze now” manifestos and the forms of technoscience they draw from, by way of the computational metaphor, is thrown into sharpest relief. Ettinger and Cooper at base propose to carry out a form of material technological activity—freezing the recently deceased anticipating future revival. Now a given technology, in the strictest material sense, and while beliefs certainly play a role in its emergence, nevertheless works objectively (for want of a better term). Or rather, a given technology works regardless of whether or not I believe in it. Belief has nothing to do with the operation, say, of my microwave oven, my computer or car, despite the fact that these technologies are set within webs of cultural meaning and thus belief.²⁷⁵ An entirely different logic is at play with what Ettinger and Cooper propose, however. For cryonic suspension, while a material technique, ultimately represents a form of anticipatory material activity, proposed and carried out vis-a-vis predictions, belief in the arrival of a certain future, to be heralded by the arrival of intelligent machines. Insofar as the practice, as discussed above, causes catastrophic cellular damage, it cannot be said to “work” in the sense just noted. The fact that it does not “work,” however, is by Ettinger and Cooper believed to be inconsequential relative to the arrival of future technologies that will *undo* the damage incurred and *make* it work, retroactively. Thus, there is an undeniable presence of a strong element of belief in its (potential) efficacy, which differentiates the practice from technology in the material sense of the term. Externally, however, in terms of its form, its appearance, the practice is insinuated as an objectively operating material technology; it *simulates* material technology. And yet there is a different internal logic at play, which suggests

²⁷⁵ See Stivers, *Technology as Magic*, 9, 137.

that cryonics is a *magical* means masquerading as the technoscience it simulates. The external scientific *form*, which derives from the work of bricolage performed by Ettinger and Cooper, carried out through the computational metaphor, lends the appearance of, insinuates objective operation, to the point of excess, *masking*, quite confusingly—quite *uncannily*—the abrupt internal discord between the essentially magical technique and its putative technoscientific model. Recalling the engagement with Deleuze from the first chapter, *Prospect* and *Immortality* are *simulacra* of Cold War technoscientific proposals, cryonic suspension itself a *simulacrum* of Cold War technoscience.

This internal discord can be thrown into even sharper relief. While I noted above that Ettinger and Cooper, by way of the computational metaphor, arguably arrived at the same freezing technique as Clynes and Kline, it must be underscored that the cyborg proposal and the freeze now manifestos, while both elaborations of the computational metaphor, referred to different problems in different domains—interstellar travel and death, respectively—and were furthermore carried out in quite different institutional contexts. Ettinger and Cooper were uncredentialed amateurs, “lay” scientists at best. Unlike their “freeze now” manifestos, moreover, the cyborg spaceflight proposal was carried out by noted and credentialed professionals, within the formal structures of Cold War technoscientific production, solicited and backed by the institutional weight and legitimacy of NASA, and spurred by the cold war impetus, in the wake of *Sputnik*, to “think the unthinkable.”²⁷⁶

And yet while the cyborg itself, the cybernetic entity proposed, was never realized in the sense envisioned by Kline and Clynes, the “cryonaut,” the cybernetic entity harbored in Ettinger’s and Cooper’s “freeze now” manifestos, very much was. Because of Ettinger’s and

²⁷⁶ See Monchaux, *Spacesuit*, 67-78.

Cooper's marginal status as "lay" scientific actors, however, the only viable institutional spaces through which they could push and pursue the "freeze and wait idea" were mortuary and cemetery operations. The actual freezings, as I chronicle in the next chapter, the actual cryonic suspensions, ultimately rendered concrete a very strange set of articulations between Cold War technoscience and mortuary practices. The degree of internal discord that follows from such contextual considerations adds further weight to the interpretation of cryonics as a simulacrum, while at the same time underscoring the status of the practice, as I argue in Chapter 4, as a (magical) survival strategy—an attempt to "keep death at bay through a strategic maneuvering between various life options."²⁷⁷ The practice ultimately fails in terms of legitimating technoscientific criteria, but it provides nevertheless a recipe for action vis-a-vis death; a way of knowing death and acting, even though at base "wishful thinking," *magic*.

While all of this highlights the internal discord between the "freeze now" manifestos and Cold War technoscientific proposals; between cryonic suspension and Cold War technoscience, there remains an important element of kinship, which ought not to escape consideration, between the cyborg, the cryonaut, and what Andrew Pickering calls "cybernetic monsters." As a prelude to concluding the present chapter, and in an effort to more broadly situate cryonic suspension in the cultural milieu in which it emerged and was seemingly at home, I turn to this kinship now.

Uncanny Entities: Cryonauts, Cyborgs, and Other Cybernetic Monsters

The postwar science of cybernetics, and more broadly the computational metaphor, opened up a space through which cryonic suspension could emerge. In the broadest sense, cybernetics' relationship to cryonics, thus understood, has everything to do with how cybernetics

²⁷⁷ Shilling, *The Body and Social Theory*, 166.

brought about and formalized changes in the classification of matter, during and subsequent to WWII. Prior to WWII, the classification of matter had long proceeded in dichotomous fashion: it was either *alive* or it was *dead*. The study of living matter, correspondingly, fell to the biological sciences, just as the study of dead matter fell to the natural sciences.²⁷⁸ Cybernetics, by contrast, as has been demonstrated throughout the preceding several sections, brought organisms and machines into equivalence, thereby undermining this dichotomous scheme.

Crucially, during and subsequent to WWII, the cyberneticians perpetrated this undermining conceptually as well as *materially*, by creating a variety of “monsters”—Andrew Pickering’s apt term—which *performed* and thus *instantiated*, in the real time of material practice, the ontological flattening of organisms and machines that cybernetics otherwise established theoretically. Among the devices to be found in what Pickering describes as a veritable “gallery” of cybernetic monsters are Wiener and Bigelow’s anti-aircraft (AA) predictor, W. Ross Ashby’s homeostat, and W. Grey Walter’s cybernetic tortoises.²⁷⁹ Each monster operated as a “prototype of other sorts of systems and of cybernetic principles more generally.” For instance, Wiener and Bigelow’s AA predictor, as we have seen, modeled aircraft trajectories, as well as the probabilistic nature of all kinds of systems (i.e. natural, social, technological).²⁸⁰ Ashby’s homeostat, a “machine for staying the same,” modeled the ability of living organisms to self-regulate relative to fluctuating environmental conditions.²⁸¹ Walter’s cybernetic tortoises, lastly, modeled the brain as an “‘*acting* machine’ rather than a ‘*thinking* machine,’” thus

²⁷⁸ Pickering, “A Gallery of Monsters,” 231.

²⁷⁹ Pickering, “A Gallery of Monsters,” 231; Fred Turner, *From Counterculture to Cyberculture: Steward Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago, IL: The University of Chicago Press, 2006), 26.

²⁸⁰ Turner, *From Counterculture to Cyberculture*, 26; see also Peter Galison, “The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision,” *Critical Inquiry* 21 (1994):228-266.

²⁸¹ Pickering, “A Gallery of Monsters,” 237.

illuminating how the brain, as a “performative” organ, interacts with and adapts to unknown environments.²⁸²

Looking beyond the question of their efficacy as prototypes, Pickering regards these and other cybernetic monsters as “beautiful if horrible instances of *matter behaving badly*.” Indeed, he maintains that they produce a disconcerting affect precisely for this reason—“they are instances of inanimate matter acting as if it were alive.”²⁸³ Norbert Wiener himself was cognizant of this affect, and was furthermore quite troubled by it, as evidenced by his repeated references to witchcraft, sorcery, black magic, and the figure of the Golem—the artificial man of Jewish legend²⁸⁴—when discussing cybernetic automation and its implications.²⁸⁵ Wiener’s references to the occult are apt, for the cybernetic monsters’ strange performativity, in eliding any hard and fast distinction between organisms and machines, necessarily collapsed as well the distinction between the living and the dead.

Earlier in this chapter I noted that NASA, by 1964, had all but abandoned the cyborg spaceflight project, and had even dropped the term cyborg itself, officially citing lack of feasibility given that the requisite kinds and levels of (bio)technology did not exist. There is reason to suspect, however, that there is far more to the story. Quite tellingly, as Ronald Kline has documented, the cyborg in some ways proved far too drastic. One reader of *Life*, for instance, identifying only as a “technologist,” having read the magazine’s coverage of Kline and

²⁸² Pickering, *The Cybernetic Brain*, 48-49.

²⁸³ Pickering, “A Gallery of Monsters,” 231.

²⁸⁴ See Robert Geraci, *Apocalyptic AI: Visions of Heaven in Robotics, Artificial Intelligence, and Virtual Reality* (New York: The Oxford University Press, 2010), Appendix I.

²⁸⁵ Pickering, “A Gallery of Monsters,” 231.

Clynes' proposal, wrote to the editors that "he was 'profoundly shocked by the inhuman proposal [...] for the manufacture of 'Cyborgs,' artificially dehumanized, mechanized monsters.'" ²⁸⁶

To this point, Chris Hables Gray has suggested that NASA ultimately terminated the program for reasons not at all dissimilar to those expressed by the disaffected reader of *Life*.

A cyborg is potentially a post-human; a human modified beyond being human. I think this is why, without any conscious decision I can find record of, NASA refused the term cyborg so completely. Because at every level of the organization, from the astronauts who were being cyborged to the bureaucrats at the top who always had to worry about the public perception of the program, the idea of the cyborg was very threatening. ²⁸⁷

The threat posed by the cyborg, of course, in many ways analogous to the uncanny affect produced by Pickering's cybernetic monsters, derives principally from the fact that the entity merges human and machine, living and dead, and is thus a potential source of profound cognitive distress, which at base is attributable to the fact that the cyborg is an entailment of the computational metaphor.

It is this space of collapsed dichotomies, then, perpetrated in theory by the computational metaphor, and materially instantiated by the cyberneticians' monsters, which in no small measure fed and facilitated the emergence of both the cyborg and cryonic suspension. And like the cybernetic monsters and the figure of cyborg, cryonic suspension produces a strangely disconcerting affect because the performance of the practice ultimately eventuates in the material instantiation of liminal entities that are seemingly neither alive nor dead. ²⁸⁸ Cryonics is a *death*

²⁸⁶ Kline, "Where are the Cyborgs in Cybernetics?," 342.

²⁸⁷ Chris Hables Gray, "Human-Machine Systems in Space: The Construction of Progress," paper presented at the American Historical Association annual meeting, Washington, D.C., January 4, 1999, cited in Roger D. Launius and Howard E. McCurdy, *Robots in Space: Technology, Evolution, and Interplanetary Travel* (Baltimore, MD: The Johns Hopkins University Press, 2008), 201.

²⁸⁸ On liminal entities see Trevor Pinch, "Technology and Institutions: Living in the Material World," *Theory and Society* 37 (2008):478.

practice, but it is one that entails managing corpses over the long-term as if they were potentially *alive*—i.e. subject to technological repair and eventual rebirth. As will be recalled from Chapter 2, “doubt as to whether an apparently living being is inanimate and, conversely, doubt as to whether a lifeless object may not in fact become animate,” is a key source of the cognitive distress, the anxiety that Ernst Jentsch identified so closely with the experience of the uncanny—being “ill at ease,” not quite “at home.”²⁸⁹

Ettinger’s and Cooper’s “freeze now manifestos,” entailments and elaborations of the computational metaphor, emerged and circulated throughout the American 1960s as outlines of a (magical) survival strategy; an attempt to “keep death at bay through a strategic maneuvering between various life options.”²⁹⁰ In the next chapter, attending to the plights of those frozen, I demonstrate that the manifestos essentially operated as “how to” guides for the production of uncanny entities, seemingly neither alive nor dead—*cryonauts*. In so doing, I also move the cybernetic dimension of the argument developed in this chapter into dialogue with the death dimension taken up in the next. Just as I have attempted to demonstrate here the kinship of cryonic suspension with other cybernetic entities, in the next chapter I demonstrate that the practice both assumes and replicates the much more pervasive magical logic that Zygmunt Bauman sees at play under conditions of western modernity more broadly, namely the notion that every death has a “cause,” which is in theory surmountable by technoscience. I then move to recount the catastrophic failures of the early cryonic suspension efforts, failures which in no small created the necessity for a now decades-long rehabilitation effort, which in 2004 garnered the support of Manfred Clynes himself.

²⁸⁹ Ernst Jentsch, “On the Psychology of the Uncanny,” trans. Roy Sellars, *Angelaki* 2, no. 1 (1995):7-8.

²⁹⁰ Shilling, *The Body and Social Theory*, 166.

Chapter 4: Ghosts of Chatsworth

The preceding chapter set forth a series of interpretive claims with respect to how the postwar science of cybernetics figured quite prominently in the writings of Evan Cooper and Robert C. W. Ettinger, facilitating the emergence of cryonic suspension in the American 1960s. Thus, it attended to a key dimension of the conditions under which the call to “freeze now” was issued by Ettinger and Cooper, and ultimately codified in their respective manifestoes, *The Prospect of Immortality* and *Immortality: Physically, Scientifically, Now*. While the present chapter remains in the register of interpretation occupied by the preceding chapter, it moves to focus on a different yet intimately related set of concerns and characters—the grim adventures of those who subsequently answered the call to “freeze now,” and thus as well and primarily the lives of those who were frozen and ultimately lost between 1967 and 1979.

Just as I used Cooper in Chapter 3 to decenter Ettinger, thereby subverting the Ettinger “origin narrative” (outlined in Chapter 1), so as to then attend to the matters of historical context it has tended to elide, in the present chapter I focus principally on the early cryonics patients, in a similar effort to subvert the cryonics “atrocity tale,” which tends to attribute the horrors of the so-called “Chatsworth Scandal” (also outlined in Chapter 1) to the flawed character and misdeeds of Robert F. “Bob” Nelson. As the decentering of Ettinger ultimately led to an engagement with cybernetics, the decentering of Nelson ultimately calls for attending to the circumstances which prompted the patients (and their families) to pursue cryonic suspension; which prompted them to believe and act. This in turn requires attending to the fact that cryonic suspension, understood in the broadest possible sense—from those who issued to the call to “freeze now” to those who were frozen and those who froze them—itsself emerged, was realized

in practice, and ultimately met with catastrophic failure in a context shaped and defined by modernity's institutional sequestration of death.

This of course returns to the foreground the historically contingent affinity that, as I have argued throughout preceding chapters, defines the conditions under which cryonic suspension emerged—an affinity between, on the one side, the cultural malaise surrounding death and dying, and, on the other side, the circulation and appropriation of cybernetic concepts and predictions throughout the broader culture of the American 1960s. One of the principle takeaway points from the previous chapter offers a measure of interpretive leverage in getting ahold of this affinity, with respect to what can be termed cryonic suspension's "hybrid" status: While the "freeze now" manifestos penned by Cooper and Ettinger ultimately *fail* in terms of legitimating technoscientific criteria, they nevertheless offer recipes for action vis-a-vis death; a way of knowing death and acting, even though at base "wishful thinking," i.e. *magic*. It is in this sense precisely that cryonics is at once both a *simulacrum* of cold war technoscience and, as I argue below, a member of an emergent class of (magical) practices that Bauman has termed *survival strategies*. The patient centered narratives that I develop below are in the concluding chapter pressed into the service of (dialectically) mediating this affinity, and thus the hybrid status of cryonics; offering an interpretation of cryonics as an abundant phenomenon; ultimately tying the emergence of cryonics to the fact that modernity's institutional sequestration of death has and will continue to fall short. Before proceeding to the patient narratives, however, and in anticipation of these concluding interpretive claims, I first want to pick up threads of argumentation that I introduced in Chapter 2, specifically with respect to modernity's institutional sequestration of death and cryonics' status as a magical practice.

Modern Magic and the Sequestration of Death

I noted in Chapter 1 and again in Chapter 2 that the presence of a well-defined subfield devoted to the sociology of death, dying, and bereavement both reflects and reinforces the tendency of academic sociologists proper to regard death as being only marginally important to the study of the modern social world. This charge is worth exploring, for the division of academic labor to which it points is in fact difficult if not impossible to maintain if one takes seriously the prominence, indeed the centrality, of death in the “existential human condition.”²⁹¹ Perhaps no one has grasped the existential dilemma presented by death better than Søren Kierkegaard. Since those of us among the living are, for Kierkegaard “absolutely excluded from the possibility of approaching death in any sense whatever”—i.e. since we “cannot sacrifice [ourselves] upon the altar of [our] own experiment”—“[we] learn nothing from it.”²⁹² Thus a profound existential contradiction: we are finite creatures who are certain of death’s inevitability, though given the absolute nature of death we are barred from attaining certain knowledge of what death ultimately holds in store.²⁹³ Borrowing from many of Kierkegaard’s insights, Ernest Becker has most famously written of the existential terror produced by this contradiction, which he regards as “a mainspring of human activity—activity designed largely to avoid the fatality of death, to overcome it by denying in some way that it is the final destiny for man [*sic*].”²⁹⁴ Of course, the material and symbolic activities provoked by death vary quite radically, both within

²⁹¹ Zygmunt Bauman, *Mortality, Immortality and Other Life Strategies* (Stanford, CA: The Stanford University Press, 1992), 10.

²⁹² Søren Kierkegaard, *Concluding Unscientific Postscript* (Princeton, NJ: The Princeton University Press [1864] 1991), 147.

²⁹³ See also Bauman, *Mortality*; Anthony Giddens, *Modernity and Self-Identity: Self and Society in the Late Modern Age* (Stanford, CA: The Stanford University Press, 1991), 48-50; John Gray, *Strawdogs: Thoughts on Humans and Other Animals* (New York: Farrar, Straus, and Giroux, 2002).

²⁹⁴ Ernest Becker, *The Denial of Death* (New York: The Free Press, 1973), xvii.

and across cultures and historical periods. The point to be underscored here, however, is that death, a “biological fact,” is one of the few “universal parameters” in and through which social worlds and individual lives are constructed.²⁹⁵ Thus to attend to a “way of life”—the hopes and fears, the ways and wants of a people—is to attend simultaneously, if only indirectly, to a way of death, and vice versa.

Such an understanding of life and death is threaded through the highly influential theorizing of Peter Berger and Thomas Luckmann,²⁹⁶ whose existential-phenomenological sensibilities, shaped largely by the influence of Alfred Schutz, led them to characterize the “onslaught of nightmare” presented by death as a primary source of the material and symbolic activities through which humans work to construct, legitimate, and maintain social realities. Indeed, writing subsequently about the place of religion in legitimating “socially constructed” realities in *The Sacred Canopy*, Berger went so far as to claim that “every human order is a community in the face of death,”²⁹⁷ a “barrier against naked terror”²⁹⁸; “every society is, in the last resort, men [*sic*] banded together in the face of death.”²⁹⁹ As Mellor has pointed out, although his text is subtitled *Elements of a Sociological Theory of Religion*, Berger’s account of

²⁹⁵ Philip A. Mellor and Chris Shilling, “Modernity, Self-Identity and the Sequestration of Death,” *Sociology* no. 27, 3 (August 1993), 411.

²⁹⁶ Peter L. Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (New York: Doubleday, 1966), 101-102.

²⁹⁷ Peter L. Berger, *The Sacred Canopy: Elements of a Sociological Theory of Religion* (New York: Doubleday, 1967), 51.

²⁹⁸ Peter L. Berger, *A Rumor of Angels: Modern Society and the Rediscovery of the Supernatural* (New York: Doubleday, 1969), 93.

²⁹⁹ Berger, *The Sacred Canopy*, 80.

religion is entirely predicated upon a theory of the centrality of death in the constitution and maintenance of the social.³⁰⁰

These are startling claims. Sociologically, to regard death *as such* is uncomfortable yet somehow seemingly basic; disturbing yet undeniably crucial. These *are* startling claims, in large measure because they suggest a messy and mutually constitutive tension between life and death—an ambiguous intermingling of terms and spheres that modernity would have us place in unambiguous bifurcation. To hold death in abeyance relative to the “apparently familiar topics of social and cultural life,”³⁰¹ then, as sociologists proper are wont to do, is to conspire in the reproduction and maintenance of this bifurcation—and thus as well the distinctly modern modes of power whose operation it both reflects and enables.³⁰²

Zygmunt Bauman, as noted in Chapters 1 and 2, has to this end called for a departure from sociologies “of” death—i.e., with death conceived narrowly, in modernist terms, as an “end-of-life” event—in favor of sociologies that set out to apprehend major sociocultural processes as “*arising from* (triggered by) the prominence of death in the “existential human condition.”³⁰³ Bauman’s call is emphatic, and for good reason. While Bauman, like Kierkegaard, Becker, Berger and Luckmann, Shilling and Mellor, recognizes death as the absolute, the unimaginable “Other” of life, he is at great pains to stress that death is nevertheless “*the Other* of modern life.”³⁰⁴ Relative to modernity’s “drive to mastery,” writes Bauman, that

³⁰⁰ Philip A. Mellor, “Death in High Modernity,” *The Sociological Review* 40, no. 1 (1992), 14.

³⁰¹ Bauman, *Mortality*, 10.

³⁰² See Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley and Los Angeles, CA: The University of California Press, 2002), 10-12, 50-53.

³⁰³ Bauman, *Mortality*, 10.

³⁰⁴ *Ibid.*, 131 (original emphasis).

“mode of being shot through with hope, ambition, and confidence”; up against the modern impulse to declare all manner of constraint “illegitimate,” and all impediments to human omnipotence “unwarranted,” death—*mortality*—is the “major scandal,” the “ultimate offence.”³⁰⁵ Bauman regards the inevitability, the fatefulness of death, as the outright “denial” of modernity, above all its “arrogant promise of the indivisible sovereignty of reason.”³⁰⁶ The faculty of reason is exercised in the making of choices, “but death is not a matter of choice.”³⁰⁷ Under the sign of modernity, death is scandalous precisely because *it does not yield to reason*—death “loudly declares reason’s lie.”³⁰⁸ Death, consequently, is modernity’s “guilty secret.”³⁰⁹ Thus the concealment, the exclusion of death, is for Bauman *the* principle constitutive feature—*the Other*—of modern social *life*.

As I discussed at some length in Chapter 1, Bauman’s account of death as modernity’s excluded and disparaged Other has powerful resonances with the broad institutional trends that Anthony Giddens has referred to as the “sequestration of experience” and, more narrowly for our purposes, the sequestration of death.³¹⁰ I want to recapitulate in order to build upon these resonances here. First, Giddens’ sequestration of death thesis is important insofar as it marks a significant departure from sociological treatments *of* death and, in keeping with Bauman, identifies the *sequestration* of death as one of modernity’s principle constitutive features.

³⁰⁵ Ibid., 15, 133.

³⁰⁶ Ibid., 134.

³⁰⁷ Ibid., 15

³⁰⁸ Ibid.

³⁰⁹ Ibid., 134.

³¹⁰ Giddens, *Modernity and Self-Identity*, Ch. 5.

Second, both Giddens and Bauman clearly understand and articulate that the exclusion of death from conditions of life under western modernity is at once both a necessary and unrealizable project. For Bauman, it is a “necessary” project only from the sovereign vantage of reason; as noted above, death threatens to undermine reason’s sovereignty.³¹¹ For Giddens, sequestration is “necessary” because death poses profound existential questions which modernity’s internally referential systems of knowledge are incapable of answering.³¹² In this sense both Giddens and Bauman echo Michel Foucault in underscoring that death reveals the outer limits of reason; it is that which resides beyond rational control.³¹³ Following from this, both Bauman and Giddens see death’s sequestration as a “necessary” project which is at the same time ultimately unrealizable; it is a modernizing project that will always fall short.³¹⁴

Third, both Bauman and Giddens are attuned to the precarious situation this creates for the living. As discussed in the previous chapter, and as intimated again above, for Bauman especially reason renders problematic and ultimately places under suspicion those forms of intersubjective meaning and ritual practice which have historically worked to make sense of and assuage the existential terror that death necessarily presents. By virtue of reason’s sovereignty death becomes reason’s responsibility. Reason, however, standing alone in the cultural-*cum*-epistemic lacunae its sovereignty ultimately carves out, is in no way up to the task it has created for itself, for again, death does not yield to reason. Though ultimately unable to replace with scientific certainties the religious certainties it has placed on the defensive, Bauman finds not,

³¹¹ Bauman, *Mortality, Immortality, and Other Life Strategies*, 15, 133-134.

³¹² Giddens, *Modernity and Self Identity*, 37. Ch. 5.

³¹³ Michel Foucault, *The History of Sexuality: An Introduction: Volume I*, trans. Robert Hurley (New York: Vintage, 1990), 138.

³¹⁴ John R. Hall, *Apocalypse: From Antiquity to the Empire of Modernity* (Cambridge, England: Polity, 2009), 125-128.

per se, the retreat of reason in the face of death, but rather recourse taken, paradoxically, to decidedly *non-rational* measures that create and maintain the *illusion* of reason's capable handling of death (fostering reassurance among the living) and thus as well the *illusion* of reason's sovereignty (for the two illusions are ultimately at one). Bauman, in other words, charges that reason here ultimately fosters and gives way to *magic*.³¹⁵ Because death is ultimately unresolvable, moreover, this means that reason requires an ongoing magic show to maintain its sovereignty. The ongoing nature of the magic show thus parallels the ongoing nature of modernity's institutional sequestration of death. The former perpetrates the illusion of control at those moments and in those spaces where the latter, an ongoing and ultimately unrealizable project, inevitably comes up short.

The extent and nature of the modern magic show vis-à-vis death are best arrived at through a consideration of what Bauman terms *survival strategies*, that is to say, "attempts to keep death at bay through a strategic maneuvering between various life options."³¹⁶ Survival strategies are for Bauman *magical* in that they produce and maintain the illusion of reason's control over death, thus preserving the illusion of reason's sovereignty under modern conditions of institutional sequestration. What Bauman regards as the most apparent survival strategy, the modern medicalization and deconstruction of death, is to be understood as magical in precisely this sense; it perpetrates a sleight of hand. For as Bauman stresses, under modernity people no longer officially "die" of death. Rather, he discerns, "they die only of individual *causes*, they die *because there was an individual cause*."³¹⁷ If death is ultimately unavoidable, assigning causes

³¹⁵ Bauman, *Mortality*, 16, 143.

³¹⁶ *Ibid.*; Chris Shilling, *The Body and Social Theory* (Thousand Oaks, CA: Sage, 2003), 166.

³¹⁷ Bauman, *Mortality*, 138, emphasis original.

to each and every individual death renders said deaths *explainable*, and thus as well said causes, if only in theory, *surmountable*. Each and every newly discerned “cause” of mortality furthermore operates as an impetus to mobilize (medical) technoscience for the purpose of preventing death and extending life.³¹⁸ Indeed, as Bauman puts it, the “whole of life” comes to “serve the purpose of war against ‘causes of death’; ‘fighting the causes of dying turns into the meaning of life.’”³¹⁹

Without going so far as to endorse some or another variant of the secularization thesis, Bauman underscores that once hegemonic religious survival strategies, traditionally understood, are nevertheless giving way to what he terms a policy of “self-care.”³²⁰ As a survival strategy, self-care is both bound up with and extends throughout modern life more broadly the individuating logic and magic of death’s biomedical deconstruction. At base, self-care works to elide the *ultimate* limit of the human body, that is to say *death*, by way of “breaking, successively, its *currently* encountered *specific* limitations.”³²¹ In other words, as Shilling elaborates, the policy of self-care plays a crucial role in the maintenance of death’s institutional sequestration by steering people to “engross themselves in projects geared towards their own survival, which are increasingly focused upon maintaining the health of their bodies.”³²² The inroads of self-care with consumerism are here glaringly apparent. Indeed, by way of self-care,

³¹⁸ Celine LaFontaine, “The Postmortal Condition: From the Biomedical Deconstruction of Death to the Extension of Longevity,” *Science as Culture* 18, no. 3 (2009), 299.

³¹⁹ Bauman, *Mortality*, 140.

³²⁰ A more accurate position, in my estimation, is that religious survival strategies, while in one sense on the wane, are at the same time coming to be articulated *with* what Bauman refers to as a policy of self-care. Developing this position, however, is beyond the remit of the present study, and as such will be taken up at a later time. On articulation see Hall, *Apocalypse*, Ch. 5.

³²¹ Mellor and Shilling, “Modernity, Self-Identity and the Sequestration of Death,” 425, emphasis original.

³²² Shilling, *The Body and Social Theory*, 166.

Shilling has tied the emergence of myriad fitness, dietary, and body-building regimes, as well as cosmetic surgery, to the sequestration of death.³²³ Céline Lafontaine has in a very similar vein called attention to the concomitant medicalization and denigration of aging and the elderly that the sequestration and medical deconstruction of death have engendered, pointing to an “entire arsenal of professions and products,” the expressed aim of which is the attenuation (and implied eradication) of aging: “...anti-wrinkle creams, vitamins, ... drugs such as Viagra or growth hormones.”³²⁴ Mike Featherstone’s work, following from this, suggests that the (dialectical) underside of consumer culture’s celebration of youth, self-preservation, and beautiful bodies—envisioned outcomes of Bauman’s policy of self-care—is in fact death; the uniquely modern terror of death and dying shapes self-caring consumers of magical objects in the here and now; consumption as self-care, as survival strategy.³²⁵

What follows from all of this is that the root magical impulse I explicated in Chapter 3, in the writings of Ettinger and Cooper, is decidedly (though paradoxically) modern and thus quite pervasive, *and as such is hardly unique to the practice of cryonic suspension*. Indeed, magic *links* cryonic suspension to what Bauman regards as the principle constitutive feature of modern social life. Ettinger and Cooper not only presumed these magical logics, however, but in their writings *replicated* and *compounded* them at a second-order level. Cryonic suspension is thus related to the preceding survival strategies, but it represents a different act in the modern magic show that Bauman has discerned. Just as reason, in Bauman’s interpretation, ultimately gives

³²³ Ibid.

³²⁴ Céline Lafontaine, “The Postmortal Condition: From the Biomedical Deconstruction of Death to the Extension of Longevity,” *Science as Culture* 18, no. 3 (September 2009):308.

³²⁵ See Mike Featherstone, *Undoing Culture: Globalization, Postmodernism, and Identity* (Thousand Oaks, CA: Sage, 1995); see also Richard Stivers, *Technology as Magic: The Triumph of the Irrational* (New York: Continuum, 2000).

way to magic at those moments and in those spaces where the institutional sequestration of death inevitably comes up short, cryonic suspension, I maintain, while tied to the survival strategies of self-care and death's medicalized deconstruction, takes shape precisely where these survival strategies, in turn, inevitably come up short—it is a policy of self-care that entails anticipating, in the here and now, the emergence and success of *future* survival strategies. Cryonic suspension is thus a *second-order* survival strategy. In accord with the magical logic of death's medicalized deconstruction, cryonic suspension is undertaken on the premise that whatever *causes* one to “deanimate” is *in theory* surmountable. Thus the practice at base is a strategy by which to *defer* recognition of technology's inevitable shortcomings vis-à-vis any given “cause” of death, in any given present, on the grounds that these shortcomings will in time be overcome. Indeed, consider here Robert Ettinger himself, on what he regards to be the “essence of the main argument” for the pursuit of cryonic suspension:

... we need only arrange to have our bodies, *after we die*, stored in suitable freezers [until] the time when science may be able to help us. No matter what kills us, whether old age or disease, and even if freezing techniques are still crude when we die, *sooner or later* our friends of the future should be equal to the task of reviving and curing us.³²⁶

Technology, Bauman writes, “promises ... what it cannot deliver.”³²⁷ The expectations at play in Ettinger's argument coupled with his focus on *causes* of death—“*no matter what kills us...*”—together translate what technology *cannot deliver* into what technology “cannot deliver *today*,” “has not *yet* delivered,” or “one day *will* deliver.” The fulfillment of technology's otherwise unfillable promises is thus perpetually deferred to the future. As detailed at length in the previous chapter, the mechanism that both makes possible and legitimates this deferral; indeed,

³²⁶ Robert C. W. Ettinger, *The Prospect of Immortality* (New York: Doubleday, 1964), 11, emphasis his.

³²⁷ Bauman, *Mortality, Immortality, and Other Life Strategies*, 143.

the mechanism which produces the cognitive orientation by which Ettinger and thus as well Cooper come to expect technology to deliver upon the promises it has made, is the computer—or more precisely, Norbert Wiener’s famed prediction of a “second industrial revolution” to be heralded by the arrival of cybernetic “thinking machines.” Indeed, through their work of articulating the pervasive, base magical logics of medicalized “causality” and “self-care” with the temporal orientation of Wiener’s prediction, Ettinger and Cooper produced cryonic suspension as a *second-order* survival strategy. While on the one hand the practice is a *simulacrum*, which approximates but ultimately fails in terms of legitimating technoscientific criteria, as a second-order survival strategy it nevertheless has a practical import in that it offers a recipe for action vis-a-vis death; a way of knowing death and acting, even though at base “wishful thinking,” *magic*.

While this throws into relief the status of cryonics as a survival strategy of the second order, the *timing* of the practice’s emergence, i.e. the moment in which the work of articulation, manifest in Ettinger’s and Cooper’s manifestos, was carried out, merits consideration here to round out the context. For the American 1960s mark a moment in which the sequestration of death broadly and its attendant strategies of biomedical deconstruction and combative technoscience came up especially short. As Stephan Timmermans has observed, there was during this time an “emerging recognition that something had gone profoundly wrong with the way people died.” Indeed, American ways of death and dying during the 1960s, Timmermans writes, were “examined critically and found wanting.”³²⁸ Echoing Timmermans, Jill Lepore offers a distillation of what became increasingly apparent in the American 1960s:

³²⁸ Stefan Timmermans, *Sudden Death and the Myth of CPR* (Philadelphia: The Temple University Press, 1999), 11, 13.

When death moved to the hospital, it got scarier: so far from home; so many machines; so many strangers; instruments that poke and prod; bright lights; sleepless nights. The more successfully medicine staved off death, the less well anyone, including and maybe especially doctors and scientists, has accepted dying.³²⁹

In accord here with Lepore, medical technology, Timmermans notes, and to a somewhat lesser degree the institution of the hospital itself, have long been singled out as the “sources of distortion” for the experiences of death and dying that came to a head in the 1960s.³³⁰ Following David Wendell Moller, Timmermans writes of modern medicine’s decidedly technoscientific approach to death and the dying, and its eventuation in “‘aggressive,’ ‘dehumanizing,’ and ‘depersonalized treatment’”³³¹ of the terminally ill.

Coupled with the void produced by modernity’s systematic undermining of those shared normative practices that once guided the living through matters of death, medical technoscience had by the 1960s eventuated in the isolation, the alienation, what Norbert Elias has called the “loneliness of the dying” in modern societies, and thus as well pervasive confusion and anxiety with respect to how the living should relate the dying and the dead.³³² It is in response to this context that the hospice movement, initiated by Cicely Saunders, and Elizabeth Kubler-Ross’s attention to the plight of the dying, largely took shape, as well as bereavement care and grief counseling for the terminally ill and the bereaved alike.³³³ Many have hailed these developments as effective protests against and alternatives to the dehumanizing orientation, the power of

³²⁹ Jill Lepore, *Mansion of Happiness: A Story of Life and Death* (New York: Vintage, 2012), 165.

³³⁰ Timmermans, *Sudden Death*, 26.

³³¹ Ibid.

³³² Elias, *The Loneliness of the Dying*, 27-28. .

³³³ See Timmermans, *Sudden Death*, 14-15; see also Arnason and Sigurjon Baldur Hafsteinsson, “The Revival of Death: Expression, Expertise, and Governmentality,” *British Journal of Sociology* 54, no. 1 (March 2005), 43-62.

medical technoscience. It is far more likely, however, especially given their overwhelmingly therapeutic-*cum*-managerial focus on the dying and the bereaved, that they represent instead simply another layer of medical power in modernity's ongoing sequestration of death, a set of therapeutic policy of self-care which compliments medicine's objectification of the patient's body with the integration of psychotherapeutic appeals to and management of the patient's subjective experiences.³³⁴

While an in-depth consideration of these developments gestures in a direction that would take us beyond the remit of the present work, it should nevertheless be noted here that cryonic suspension emerged in tandem with these techniques of self-care, in tension with same sociohistorical context. Whereas the preceding developments evidence therapeutic policies of the self that have long since come to *supplement* medical technoscience in its ongoing sequestration and biomedical deconstruction of death, facilitating the management of death as an "end of life event,"³³⁵ cryonic suspension evidences something related but slightly different. As a second order (magical) survival strategy, the practice not only presumes the logic of "cause" and the policy of "self-care," but by virtue of its articulation of these with cybernetic concepts and predictions, *replicates* and thus *compounds* them at a second-order level. Here, taking recourse to a future that, as discussed in the previous chapter, cannot be tested or verified in accordance with the scientific measure to which biomedicine defers, the issue is not the construal and therapeutic management of death as an end of life event, but rather the management of the dead over the long-term as if they were potentially *alive*, amenable to rescue by the technoscience of an envisioned though thoroughly unverifiable future. We have seen that

³³⁴ On these points, see especially William Ray Arney and Bernard J. Bergen, *Medicine and the Management of Living* (Chicago, IL: The University of Chicago Press, 1984), Ch. 5.

³³⁵ *Ibid.*; see also Giddens, *Modernity and Self-Identity*, Ch. 5.

while the “freeze now” manifestos penned by scientific laymen Cooper and Ettinger ultimately *fail* in terms of legitimating technoscientific criteria, in their transgressive appeal to a future they nevertheless offered a recipe for action, vis-à-vis death, at an especially low point in modernity’s ongoing process of institutional sequestration—the manifestos took shape in a space *produced* by the shortcomings of modernity’s sequestration of death. In what follows, then, the focus is shifted from those who issued the call to “freeze now,” understood as such, to those who answered the call in practice, and thus evidenced their hope in the eventual arrival of the cybernetic future conjured by Ettinger and Cooper by way of Wiener—those who froze and thus as well and primarily those who were frozen and ultimately lost between 1967 and 1979, the first cryonics patients.

The Patients

My decision to foreground and narrate here the lives and shared fate of the first cryonic suspension patients in part takes root in the recognition that the early history of cryonics tends overwhelmingly to be read anachronistically, that is to say, *back through* the outcomes of subsequent events, specifically those that transpired at Chatsworth. The so-called “Chatsworth scandal,” as will be recalled from discussion in Chapter 1, refers to the discovery, in 1979, of nine abandoned, thawed, and decomposed cryonics patients, who were interned at the (long-since defunct) Cryonic Society of California’s (CSC) underground crypt at the Oakwood Memorial Park Cemetery in Chatsworth, California. Foregrounding the patient narratives facilitates a departure from the narrative conventions established by the Nelson “atrocious tale.” In a manner analogous to the Ettinger “origin story,” it will be recalled, with its attendant canonization of Robert C. W. Ettinger as the “father” and sole originator of cryonic suspension,

the “atrocious tale” pins the lion’s share of responsibility for the events at Chatsworth on the misdeeds of Robert F. “Bob” Nelson, cryonics pioneer and (then) President of the CSC. As with the Ettinger origin story, with respect to Evan Cooper, moving beyond the Nelson “atrocious tale,” with an eye to the early cryonics patients, facilitates the recovery of context, which in turn lends itself to constructing a more nuanced and substantive set of narratives about cryonic suspension, several facets of which I will briefly mention here.

The patient narratives set forth below take shape in response to the following questions: Who were they? When and under what circumstances did they or their families come to learn of cryonic suspension? How did the patients come to fall under the watch of Bob Nelson and the CSC? What ultimately happened to them? Constructing the patient narratives in response to these questions serves several ends. First and foremost, shifting the focus from Nelson to the reasons the patients and their families acted has the effect of humanizing them. To be sure, as will become especially evident in what follows, Nelson’s conduct was nothing if not shady. As will be recalled from Chapter 1, a California civil court found Bob Nelson guilty of “fraud and intentional infliction of emotional distress,”³³⁶ and ultimately ordered him to pay upwards of one million dollars in damages to those who brought the suit against him—the adult children of the CSC patients who under his watch were left to thaw and decompose at Chatsworth. In no way, however, does this legal verdict obviate the fact that the patients and their families espoused and acted upon a hope that was to them and others quite real, and understandably so given the nature of the historical moment in question, as discussed above, with respect to death and dying in the American 1960s. It is this hope, then, that I aim to recover in humanizing the patients, in

³³⁶ Los Angeles Superior Court Case C-161229, Appellant Robert F. Nelson’s Settled Statement of Appeal in Lieu of Reporter’s Transcript, July 19, 1982, Alcor.

constructing the patient narratives below. And it is precisely the recovery of this hope that is in keeping with the present study's opting for a sociology *centered about* death's sequestration, an *abundant sociological history*. For however false a hope it may be, its root (magical) logic nevertheless pervades the modern world, evidenced most apparently in modernity's impulse to sequester death. To read cryonic suspension in terms of the conventions set by the Nelson atrocity tale, as an anomalous scam perpetrated by a conman, is to miss this link. Thus the recovery of the hopes espoused and acted upon ties the plight of the patients to what Zygmunt Bauman regards as *the* principle constitutive feature of modern life—the sequestration of death.

Constructing the patient narratives as such carries with it several additional insights and contributions. For one, it shows how the “freeze–now” manifestos circulated and brought the patients and their families into a shared space of anticipation, of hope, ultimately *showing* the material instantiation, the *performance* of cryonic suspension, as a second-order (magical) survival strategy. It also brings into focus the ties that existed between Nelson's CSC and the other cryonics organizations that actually carried out suspensions, during the period in question: the Cryonics Society of New York (CSNY), headed by (one-time) attorney Curtis Henderson and Hunter College student Saul Kent, and the Cryo-Care Equipment Corporation (Cryo-Care) of Phoenix, AZ, headed by Edward Francis “Ed” Hope. These men are the principle actors who answered Ettinger and Cooper's call to “freeze now.” And like Ettinger and Cooper, they were all of them “lay” scientific actors, aspiring amateurs at best. This point is significant in that it both further contextualizes Nelson's questionable conduct while at the same time broadening responsibility for the events at Chatsworth. Just as Ettinger and Cooper were shunned by and excluded from participating in the medical-technoscientific mainstream from which they drew their ideas and inspiration, so also were those who answered the call to “freeze now.”

Consequently, mortuary and cemetery operations were the only viable institutional spaces through which to “answer,” in practice, the call the “freeze now,” and to store the frozen over the long-term. The CSC partnered with mortician Joseph Klockgether, the CSNY with mortician Fred Horn. (Though Hope performed several freezings, Cryo-Care was principally a supply-side equipment endeavor, thus he never formally partnered with a mortuary operation.³³⁷) These partnerships had the effect of rendering concrete a very strange set of articulations between a *seemingly* yet decidedly *non-technoscientific-cum-medical* practice, one modeled on the speculative technoscience of the Cold War, with existing mortuary practices, techniques, and cemetery spaces. A principle point that I aim to highlight in what follows, however, specifically with respect to Nelson, is that the relatively lax surveillance of mortuaries and cemeteries, compared, for instance, to that of hospitals, in no small measure enabled Nelson’s conduct, thus facilitating the horrific events at Chatsworth.

To sum up before proceeding, the overriding aim of developing the patient narratives below is to move beyond the conventions of the Nelson “atrocious tale,” ultimately with an eye to recovering the hope that cryonic suspension held for the patients and their families, regardless of Nelson’s intentions and misdeeds. While the patient narratives have the effect of showing the events at Chatsworth “in the making,” offering an “explanation” of the scandal is not my aim here.³³⁸ Rather, the patient narratives are ultimately what make it possible to bring together my interpretation of cryonic suspension as a second-order (magical) survival strategy with the broader trend and, indeed, the shortcomings of modernity’s ongoing process of sequestering

³³⁷ R. Michael Perry, “The First Cryonics Operation,” *Cryonics* 14, nos. 7-8 (July/August 1993):7-10.

³³⁸ This is one important distinction between the narratives I develop below, and other narrative accounts of Chatsworth that I draw from in so doing, chiefly among them Charles Platt, “Robert Nelson and the Chatsworth Scandal,” *The Outlook* 37, no. 11-12 (November-December 2005), 10-13; R. Michael Perry, “Suspension Failures: The Dark Side of Cryonics History,” *Cryonics* 13, no. 2 (February 1992):5-8; R. Michael Perry, “Death at the Edge of Forever: The Story of a Child,” *Cryonics* (First Quarter, 1998):36-39.

death. The narratives in this sense most effectively tie cryonic suspension to what Bauman regards as *the* principle constitutive feature of modern *life*—the sequestration of death.

Demonstrating, to this end, that processes of institutional sequestration produced the conditions in which cryonic suspension emerged, was instantiated, and ultimately failed catastrophically, is to offer as well an account of cryonics that moves beyond those sociologies “of” death that replicate sequestration in theory and research practice. In this sense, it is also to develop and offer an *abundant* sociological account of cryonic suspension. I return to these matters in the concluding chapter.

Genevieve

On January 25, 1972, at 6:50 am, a little girl died at Los Angeles Children’s Hospital. Her name was Genevieve Marie Ann de la Poterie, and she was eight years old. Six months earlier, the physicians treating Genevieve at St. Justine’s Hospital in Montreal informed her parents, Guy and Pierrette de la Poterie, that there was no chance of saving their daughter from the cancer that was decimating her bowels and kidneys. The grim prognosis prompted the de la Poteries to move Genevieve to California, not to seek alternative medical treatment but rather to achieve proximity to the unique services offered by the Cryonics Society of California. The de la Poteries, that is to say, made arrangements to have Genevieve chemically perfused and frozen upon the pronouncement of her death, in the hope that she might one day be revived and rejuvenated, if and when the medical scientists of the future discover a cure for cancer.³³⁹ “I felt

³³⁹ The present account of Genevieve de la Poterie has been constructed with principle guidance taken from the following sources: Anonymous, “Death to Life, Montreal to L.A.,” *The Outlook* 2, no. 5 (August 1970): 1-2; Anonymous, “Genevieve Better, Going Home,” *The Outlook* 2, no. 9 (September 1971):1; Anonymous, “Genevieve de la Poterie Suspended,” *The Outlook* 3, no. 2 (February 1972):1; Anonymous, “Review and Directory,” *The Outlook* 4, no. 1 (January 1973):4, 8-9; Anonymous, “Guy de la Poterie,” *The Outlook* 5, no. 7 (July 1974):1; A Michael Aron, “The New Ice Age: Gone Today, Here Tomorrow?” *L.A. Times West Magazine*, June 11, 1972,

if there was even the slightest chance for her to come back some day and complete her life,” Genevieve’s father later recalled, “then it must be taken.” “If I found out ten years from now they had found a cure for cancer and could revive frozen people who died of cancer, then I would want to kill myself if I had not had her suspended.”³⁴⁰

Guy de la Poterie, like many others during the (North) American 1960s and 70s, first encountered cryonic suspension in the pages of the popular press; he later viewed a television special about the practice. Upon receiving the news of his daughter’s condition, de la Poterie recalled imagery of an emergency vehicle with “Cryonics Society of Michigan” (CSM) painted on the side, which initially led him to contact the Detroit-based Robert C. W. “Bob” Ettinger, CSM President, community college physics instructor, and author of *The Prospect of Immortality* (1964), the popular science text credited with sparking the so-called “cryonics movement.” Ettinger steered de la Porterie west, to Robert F. “Bob” Nelson, then President of the Cryonics Society of California (CSC), one of the three organizations offering cryonic suspension services at the time.³⁴¹

Nelson, a television repairman by trade and former prizefighter, had risen to prominence in cryonics circles years earlier, in January of 1967, when he coordinated the first cryonic suspension to be carried out under “controlled conditions,” that of Dr. James H. Bedford, UCLA Professor of Psychology Emeritus, the details of which Nelson later recounted in his

18pgs; R. Michael Perry, “Table of Cryonic Suspension Patients,” *Cryonics* 11, no. 10 (October 1990): 4-5; Perry, “Suspension Failures”; Perry, “Death at the Edge of Forever.”

³⁴⁰ Guy de la Poterie interviewed in Peggy Curran, “‘Deep-freeze’ girl’s family wants to forget,” *The Montreal Gazette*, May 7, 1980, 5.

³⁴¹ Curran, “Deep Freeze Girl’s Family,” 5; Robert C.W. Ettinger, *The Prospect of Immortality* (New York: Doubleday, 1964); Perry, “Death at the Edge of Forever,” 36. Aside from the CSC, the Cryonics Society of New York and the Cryo-Care Corporation, both of which are taken up below, were at this time the only other cryonics service providers.

questionable 1968 memoir, *We Froze the First Man*.³⁴² Bedford's suspension was anomalous among the first cryonic suspensions, for several reasons. First, his suspension was backed by a sizable estate. Second, soon after he was frozen, Bedford was removed from Nelson's care. Third, and most significantly, in addition to being the first person to be placed in cryonic suspension under "controlled conditions," of all those frozen before 1974, Bedford is the only cryonics "patient" who remains in suspension today.³⁴³ Genevieve de la Poterie would be the first child and the fifteenth person to be placed in cryonic suspension, marking the sixth case to be handled by Bob Nelson under the auspices of the CSC and its partner corporation, Cryonic Internment.³⁴⁴

While it was doubtful that little Genevieve would even survive the flight from Montreal to Los Angeles, she did. With the aid of Nelson and others affiliated with the CSC, Genevieve's parents soon had her admitted to the Los Angeles Children's Hospital.³⁴⁵ There, physicians quite unexpectedly disputed the prognosis of their Montreal colleagues. They removed Genevieve's second kidney, placed her on dialysis, and administered alternating treatments of chemotherapy and radiotherapy to subdue the cancer. Genevieve lost all her hair, half her body weight, and suffered temporary blindness. By September of 1971, however, though her long-term survival would require continued dialysis and, ultimately, a kidney transplant, Genevieve's cancer had been subdued. When she was well enough, before returning to Montreal with her parents,

³⁴² Robert F. Nelson with Sandra Stanley, *We Froze the First Man: The Startling True Story of the First Great Step Toward Human Immortality* (New York: Dell, 1968); Anonymous, "Chill Strikes the Cryonics Business," *Newsweek*, July 7, 1980, 9.

³⁴³ Bedford is presently in the care of the Alcor Life Extension Foundation in Scottsdale, AZ.

³⁴⁴ Anonymous, "Genevieve de la Poterie Suspended," 1; Perry, "Table of Cryonic Suspension Patients," 4 5; Bob Nelson and Saul Kent, "Bob Nelson Speaks Out," an Interview with Bob Nelson, *Cryonics Reports* 4, no. 4 (April-May 1969):25.

³⁴⁵ Perry, "Death at the Edge of Forever," 36.

Genevieve was treated to a day at Disneyland, courtesy of Bob Nelson.³⁴⁶ Nelson recalled years later, “I never saw [Genevieve] smile till we took her to Disneyland [...] I told her mother I was going to speak French to [her] to make her smile, and that was the only time I saw her smile. Heartbreaking.”³⁴⁷



Figure 3. Guy de la Poterie and Susan Buccelli (Robert Nelson’s daughter) with Genevieve at Los Angeles Children’s Hospital, ca. 1971.

Source: Alcor

Genevieve’s cancer returned months later, and again the de la Poteries made the trek to Los Angeles with their ailing daughter. At 5:43 am, on January 25, 1972, at the Los Angeles Children’s Hospital, Genevieve experienced sharp pains and was administered morphine. At 6:48 am, the de la Poteries were joined by a priest. It is said that Guy de la Poterie had

³⁴⁶ Ibid; Anonymous, “Genevieve Better, Going Home”; Anonymous, “Review and Directory,” 4; Aron, “The New Ice Age,” 11.

³⁴⁷ Platt, “Robert Nelson and the Chatsworth Scandal,” 11.

previously explained to his daughter that being in cryonic suspension is like being asleep for a very long time, only to be awakened years later. He explained to Genevieve that Walt Disney himself had been interested in cryonic suspension, but was unable make arrangements before he died. “Many times in those final days she would say how sad she was for poor Walt.”³⁴⁸ At 6:50 am, Genevieve died. Her small body was immediately placed in a plastic bag, surrounded with ice, and injected with the anticoagulant heparin. She was carried to an ambulance, equipped with a heart-lung machine, which maintained the circulation of oxygenated blood through her system as she was rushed to the Buena Park funeral home of Bob Nelson’s assistant, mortician Joseph Klockgether. There, they drained her blood and perfused her body with dimethyl sulfoxide (DMSO), a substance known to protect the integrity of biological tissue at low temperatures by inhibiting the formation of ice crystals. As the perfusion proceeded, Genevieve was packed in ice, and then eventually dry ice, as she was cooled gradually, over the course of twenty-seven hours, to -140°F (-60°C).³⁴⁹

Steven

Years before Genevieve’s freezing, early on the morning of July 28, 1968, a young man died of enteritis and adrenal failure at Columbia Presbyterian Hospital in Manhattan. His name was Steven J. Mandell, and he was twenty-four years old.³⁵⁰ Steven was a photographer, a

³⁴⁸ Aron, “The New Ice Age,” 10-11.

³⁴⁹ Aron, “The New Ice Age,” 11.

³⁵⁰ The present account of Steven J. Mandell has been constructed with principle guidance taken from the following sources: Anonymous, “Cryonics News,” *Cryonics Reports* 3, no. 9 (September 1968):161-166; Anonymous, “Cryonics News,” *Cryonics Reports* 3, no. 10 (October 1968):182-189; Anonymous, “New York: Soul on Ice,” *Newsweek*, August 12, 1968, 29; Article, Harvey Aronson, “The Fine Art of Living Forever,” 1978, pg. 2, original source unknown, Alcor.

guitarist, and a student of aeronautical engineering at New York University (NYU). Steven was also an aspiring poet:

*Shimmering sky peeks in,
 Shatters dark, eats through
 Soul
 Body
 Heart
 Only love leaves hope.
 Shadows cover only life and dreams;
 But 'twinkle-gong' of night destroys
 Men's minds,
 Brings bitterness:*

*need:
 hate*

*Cold eyes burn, hurt-
 No help in life.
 Perhaps beyond-
 Perhaps.*

*Not now, none left.
 Sad thoughts, foolish quests.
 We succumb like fools.
 We die alone.³⁵¹*

Steven discovered cryonics in the pages of a science fiction magazine that happened to contain information about the Cryonics Society of New York (CSNY). The CSNY began to take shape in 1965, when Curtis Henderson, an attorney then working as an insurance claims adjuster, read a favorable review of Robert C. W. Ettinger's *The Prospect of Immortality* in the *New York Times Book Review*.³⁵² Intrigued by what at first was variously called the "freezer program," the

³⁵¹ Steven J. Mandell, "The Essence," *Cryonics Reports* 3, no. 10 (October 1968):196.

³⁵² Mike Perry, "Interview with Curtis Henderson: May 24, 1987," *Cryonics* 30, no. 3 (Third Quarter 2009):8.

“freeze-and-wait idea,” or “freeze-wait-rejuvenate,” Henderson wrote to Ettinger, who directed him to other interested New Yorkers who had likewise initiated correspondence. On July 13, 1965, the CSNY was incorporated as a non-profit service organization.³⁵³ Among the founding members were Hunter College student Saul Kent and future Scientologist Karl Werner, the man who is widely believed to have coined the term “cryonics” (from the Greek *kryos*, “cold”). The CSNY was the first organization to use the term in its name.³⁵⁴

On November 20, 1967, less than a year before he died, Steven applied to the CSNY for student membership. Steven’s mother, Pauline Mandell, recalled “being very annoyed” when CSNY materials would arrive in the mail for her son. “After a while he got me to read some of [it]. But I really didn’t want to discuss it with him, because when a person is ill, you don’t want to go into anything that deals with death—you don’t even want to believe it.”³⁵⁵ “Mom,” Steven attempted to persuade her, “wouldn’t you want even the least tiny bit of a chance if you could have it? Isn’t it better than being put under the earth and knowing there is nothing left?”³⁵⁶ Though she “felt it was morbid [...] something he shouldn’t be thinking about,” Mrs. Mandell “didn’t fight” Steven’s interest in cryonics, recognizing that the practice provided her son with “peace of mind.”³⁵⁷ This is not to say, however, that Steven anticipated an optimal outcome. He recognized, for instance, that the freezing process would very likely cause brain damage, so he prepared an audiotape recording of “the little things he wanted to remember about his life, the

³⁵³ Mike Perry, “Impressions of Curtis Henderson,” *Cryonics* 30, no. 3 (Third Quarter 2009): 6.

³⁵⁴ Werner parted ways with the CSNY on August 21, 1968, on the grounds that cryonics and Scientology have opposing goals. See Anonymous, “Cryonics News,” *Cryonics Reports* 3, no. 9 (September 1968):161.

³⁵⁵ Pauline Mandell, “If my son, Steven...” *Cryonics Reports* 4, no. 3 (March 1969):18.

³⁵⁶ *Ibid.*, 19.

³⁵⁷ *Ibid.*

experiences he might otherwise forget.” Steven marked the tape “private—hands off,” and asked that it be placed with him in his cryopreservation capsule.³⁵⁸ Steven J. Mandell would be the seventh person to be placed in cryonic suspension overall, and the first case to be handled by the CSNY.³⁵⁹

Mrs. Mandell was at Steven’s bedside when he died. She recalled her son’s words, “Now don’t forget, mom, if anything happens make sure they put ice cubes around me real fast.”³⁶⁰

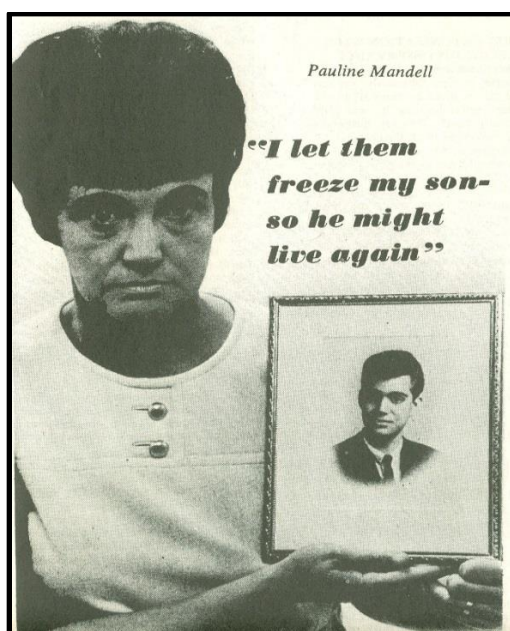


Figure 4. Pauline Mandell and Steven.

Source: Article, *The National Tattler*,
November 1970, PAMD.

The attending physician, Dr. John Prudden, who was aware of Steven’s wishes, disputed the credibility of cryonic suspension, but nevertheless cooperated.³⁶¹ “This is what he wanted,” Mrs.

³⁵⁸ Nancy L. Ross, “In search of forever,” *The Washington Post, Times Herald*, August 13, 1972, D-5.

³⁵⁹ R. Michael Perry, “List of Cryonic Suspension Patients,” *Cryonics* 11, no. 10 (October 1990): 4.

³⁶⁰ Mandell, “If my son, Steven...” 18.

Mandell explained, “what he believed in.”³⁶² Mrs. Mandell phoned CSNY President Curtis Henderson, who set in motion the process that eventuated in Steven’s cryonic suspension. Steven was packed in ice and relocated to St. James Funeral Home, where he was chemically perfused with glycerol by the owner and CSNY affiliate, mortician Frederik W. “Fred” Horn.

*not for her son
earth’s slow decay
sullen roots and granite grey
to lure his form down to the loam
until mud voidness is his home*

*not for her son
fire’s greedy flash
snatching all but bone and ash
consuming with relentless burn
until his beauty’s in an urn*

*but for her son
cool sheets of ice
halt departing in a trice
his being hopes as snowy lace
for an unreckonable space³⁶³*

Mr. Hope

The outcome of the CSNY procedure underwent by Steven J. Mandell was not in any significant way dissimilar from that of the CSC procedure underwent by Genevieve de la Poterie, save for one crucial detail. On September 5, 1968, days following Steven’s cool-down and

³⁶¹ See Anonymous, “Cryonics News,” September 1968, 161; David B. Weissman, “Science is on the Verge of ‘Conquering’ Death,” *Bluebook Magazine*, November, 1968, 65.

³⁶² Anonymous, “Cryonics News,” September 1968, 163.

³⁶³ Michelle Navarette and Jerry White, “Tribute to Mrs. Mandell,” *Cryonics Reports* 3, no. 10 (October 1968):197.

funeral service, CSNY personnel transferred him from a short-term containment vessel, which was lined with dry ice (-79°C, -110°F), to a long-term storage vessel: a liquid nitrogen-filled “Cryocapsule” manufactured by Cryo-Care, a human cryopreservation equipment corporation, which was owned and operated by Edward Francis “Ed” Hope of Phoenix, Arizona.³⁶⁴ A self-professed “promoter and wheeler and dealer,” Hope had owned a racetrack, delivered oil, operated a New Jersey nightclub called “Chubby’s, and established a very lucrative career in wig making before starting Cryo-Care in 1965.³⁶⁵ Here is Hope, self-promoting, wheeling and dealing, in 1966:

I always tried to promote something or other. I was the first and only guy to walk into Phoenix with wigs. And now just look. No other industry in the United States grew like wigs. I happened to hit it at the right time. Now I sell wigs wholesale across the United States. I have two wig colleges and a government contract to teach the Hopi Indians wigmaking [*sic*]. I wheeled and dealt because I had the right thing at the right time. Actually, that’s what we’re hoping to do with Cry-O-Care.³⁶⁶

Hope freely and openly admitted his every intention to “‘make a buck’ in the body freezing business.” And in this he was not alone. Hope’s Cryo-Care foray ultimately found him partnered with two “MIT graduate engineers,”³⁶⁷ as he described them, Ted Kraver and Frank “Rick” Rickenbacker.³⁶⁸ Kraver recounted years later, “our intention upon starting Cryo-Care was to simply build a product and sell it—if a market developed”—to the likes of the CSC and

³⁶⁴ Anonymous, “Cryonics News,” *Cryonics Reports* 3, no. 10 (October 1968):183. The present remarks on Ed Hope and Cryo-Care have taken a good deal of guidance from Perry, “The First Cryonics Operation,” 7-10.

³⁶⁵ Bob Rose, “Dead Men’s Hopes Put on Ice,” *Chicago Daily News*, January 29, 1968, 3-4, reprinted in *Freeze-Wait-Reanimate* 4, no. 43 (February 1968):2-3; Ted Kraver, “Notes on the First Human Freezing,” *Cryonics* 10, no. 3 (March 1989):12.

³⁶⁶ Rose, “Dead Men’s Hopes Put on Ice,” 3.

³⁶⁷ *Ibid.*

³⁶⁸ Kraver, “Notes on the First Human Freezing,” 12.

the CSNY, the organizations that were actually performing cryonic suspensions.³⁶⁹ Somewhat eerily echoing the plight of the de la Poteries; in a move revealing the close kinship of business acumen and poor taste, moreover, the Cryo-Care partners initially focused their venture on children—“their first creations were Kiddie Capsules.” Here is Ed Hope, barking, disappointed that a market for freezing dead children ultimately didn’t emerge: “I thought that a husband and a wife losing a daughter would just come the hell down to Phoenix and take care of that daughter. But it’s turned out to be just older people.”³⁷⁰

A key moment in the promotion of Cryo-Care’s line of post-Kiddie Capsule products, the full-sized “Cryocapsules,” came on New Year’s Day 1966, at the third annual Freeze-Wait-Reanimate (FWR) conference in Washington, D.C. The event was organized and hosted by Evan “Ev” Cooper, who years prior, in January of 1963, founded the Life Extension Society (LES), the first organization to actively promote the “freeze-wait-reanimate hypothesis.”³⁷¹ As with the previous two FWR conferences, which had also convened on New Year’s Day, attendance was quite modest, with some twenty-five people partaking. Cryocare had completed construction of a Cryocapsule late that December, which afforded Hope the opportunity to showcase it as one of the conference’s key attractions. The design of the capsule was relatively straightforward: the cryonics “patient” resided in an insulated aluminum tank (24” by 80”), set within in a larger thermos-like cylinder (34¼” by 48” by 121”). The capsule had a bold-on lid; when affixed, thermal insulation was achieved by evacuating the space between the two cylinders, the patient tank then filled with liquid nitrogen. The exterior of the capsule displayed

³⁶⁹ Ibid., 13.

³⁷⁰ Rose, “Dead Men’s Hopes Put on Ice,” 3.

³⁷¹ Mike Perry, “Notes,” *Freeze-Wait-Reanimate* Collection, compiled by Mike Perry (September 1990): ii.

an inner container pressure gauge, a liquid level indicator, temperature sensors with readout, and a liquid nitrogen boil off gauge.³⁷² The capsule, which sat horizontally, was furthermore equipped with a set of rollers. In fact, Ed Hope believed mobility would be one of his Cryocapsule's strongest selling points: "Hell, you could put it in a crypt in your front yard if you wanted to. Any place. It only needs to be serviced every seven or eight months."³⁷³

And so it ultimately came to pass that on the morning on January 1, 1966, in the parking lot of Marty Laffal's Restaurant, the FWR conference venue; for an audience of eager conference goers and members of the press, Ed Hope gave a demonstration of his product. With the aid of Robert C.W. Ettinger, a patient was transferred from a temporary storage vessel to the Cryocapsule: a frozen dog. She was a beautiful, healthy, black Labrador retriever-mix. On December 22, in anticipation of the conference spectacle, she was anesthetized, chemically perfused, and frozen by LES President Ev Cooper and a local veterinarian. Her name was Bel.

By the time Steven Mandell was suspended by the CSNY, some two years following the LES conference spectacle, the model of Cryocapsule in which Bel was placed had undergone several modifications. Within this window of time, however, five more freezings had taken place: all of them, in one way or another, ultimately involved the use of Cryo-Care "Cryocapsules"; three of them were carried out by Ed Hope himself. The first took place in April of 1966, just months after Bel was frozen.³⁷⁴ This time, however, the subject was not a dog but an elderly woman. Little about her is known beyond the fact that she had requested "cryogenic internment" upon death but, due to last-minute familial objects, was embalmed

³⁷² Brochure, "Description of Cryo-Capsule," Cryo-Care Equipment Corporation, 2 pgs., PAMD; Anonymous, "Cryo-Care Corporation Continues Cryogenic Capsule Construction," *Freeze-Wait-Reanimate* no. 3, 25 (June 1966), 3; cf. Perry, "The First Cryonics Operation."

³⁷³ Rose, "He Quick-Freezes Dead Men's Hopes," 4.

³⁷⁴ I can find no record of what happened to Bel following the LES conference.

instead. Only subsequent to this did the woman's son, overwhelmed with guilt, proceed to have her frozen in accordance with her dying wishes.³⁷⁵

Roughly a year later, however, following a stay at Ed Hope's Cryo-Care headquarters in Phoenix, the woman's son had her removed from the Cryocapsule, thawed and buried conventionally, somewhere in southern California.³⁷⁶ While technically the first human "freezing," this was not the first cryonic suspension, as the procedure, carried out by Hope, was done for "cosmetic" reasons alone, and as such did not entail chemical perfusion and slow cooling. It is in this sense that James H. Bedford, on January 17, 1967, is to be understood as the first human to be placed in cryonic suspension. While Hope did not directly participate in Bedford's suspension, Bedford, as noted above much earlier, did ultimately come to rest in one of Hope's Cryocapsules, the cost of which was covered by Bedford's sizable estate.³⁷⁷

Hope's Cryo-Care outfit was involved in the "freezing," thusly understood, of two others: Marie Phelps-Sweet, CSC member, LES coordinator, and civil rights activist, who died and was frozen in August of 1967 at the age of seventy-four,³⁷⁸ and Louis Tom Nisco, Michigan-based chef and amateur criminologist, who died and was frozen in September of 1967 at the age of fifty-five.³⁷⁹ Helen Kline, lastly, a founding member of the Cryonics Society of California, died in May of 1968; under the auspices of the CSC (not Cryo-Care) she was perfused and

³⁷⁵ See Nelson and Stanley, *We Froze the First Man*, 19.

³⁷⁶ Anonymous, "The First Freezing of a Human Body is Reported to Have Been Accomplished," *Freeze-Wait-Reanimate* 3, no. 24 (May 1966), 1-2; Rose, "Dead Men's Hopes Put on Ice," 3-4.

³⁷⁷ See Robert W. Prehoda, *Suspended Animation* (Philadelphia: Chilton, 1969), 114-117, 119.

³⁷⁸ Anonymous, "Cryonics News," *Cryonics Reports* 2, no. 9 (September 1967), 1-2; Rose, "Dead Men's Hopes Put on Ice," 4.

³⁷⁹ R. Michael Perry, "Nelson, Nisco, and the Cryotorium," *Cryonics* 13, no. 3 (March 1992), 8.

placed in temporary storage at Joseph Klockgether's Buena Park funeral home, entrusted to the watch of Bob Nelson.³⁸⁰ As we will see later below, Nisco and Sweet soon fell under Nelson's care at Chatsworth as well. Nisco, Sweet, and Kline, furthermore, would all ultimately come to rest in one of Ed Hope's Cryocapsules.

By the time of Steven Mandell's cryonic suspension, then, some two years following the LES conference spectacle, the model of Cryocapsule in which Bel was placed and in which the frozen others would ultimately come to rest had undergone several modifications. First, the inner tank of the capsule, where the patient resides, came to be made of steel, not aluminum. With this, instead of simply bolting the tank shut, it was now welded, which had the effect of reducing liquid nitrogen boil off. The maintenance of the essential vacuum between the patient tank and the outer cylinder, however, now required an additional piece of machinery: an electric pump. If for any reason the pump lost power, the vacuum would fail in a matter of hours, meaning no thermal insulation for the patient, significantly heightened liquid nitrogen boil-off, and eventual depletion. Moreover, if the vacuum failed, the end-cap of the apparatus would fall off, exposing the inner-patient tank.

Steven Mandell was placed in this latter model of Cryocapsule and stored at liquid nitrogen temperatures (-196°C, -320°F) in the space rented by the CSNY's partner corporation, CryoSpan, at the Washington Memorial Park Cemetery in Corum, Long Island.³⁸¹ When Genevieve de la Poterie was frozen, Bob Nelson did not place her in such a Cryocapsule—at

³⁸⁰ Permit for the Disposition of Human Remains, State of California—Department of Public Health. Form VS9, Death Certificate of Helen Kline, Alcor; Anonymous, "The Cryonic Suspension of Helen Kline," *Cryonics Reports* 3, no. 6 (June 1968), 120-122.

³⁸¹ Anonymous, "Cryonics News," *Cryonics Reports* 3, no. 10 (October 1968):182-189.

least not initially; with a five thousand dollar price tag, the de la Poteries could not afford one. Nor could they pay for the base freezing process itself. Nor the monthly fees for liquid nitrogen refills. Nelson, however, anticipating the publicity that would be garnered for the burgeoning cryonics movement, “couldn’t say no to [freezing] the first child.”³⁸² Moreover, Nelson expressed seemingly genuine concern for Genevieve: “I loved that little girl.”³⁸³ “I adopted her like my own child [...] and I watched her slowly get sicker and sicker.”³⁸⁴ While Nelson froze Genevieve at no financial expense to the de la Poteries, he did not have at his disposal a spare

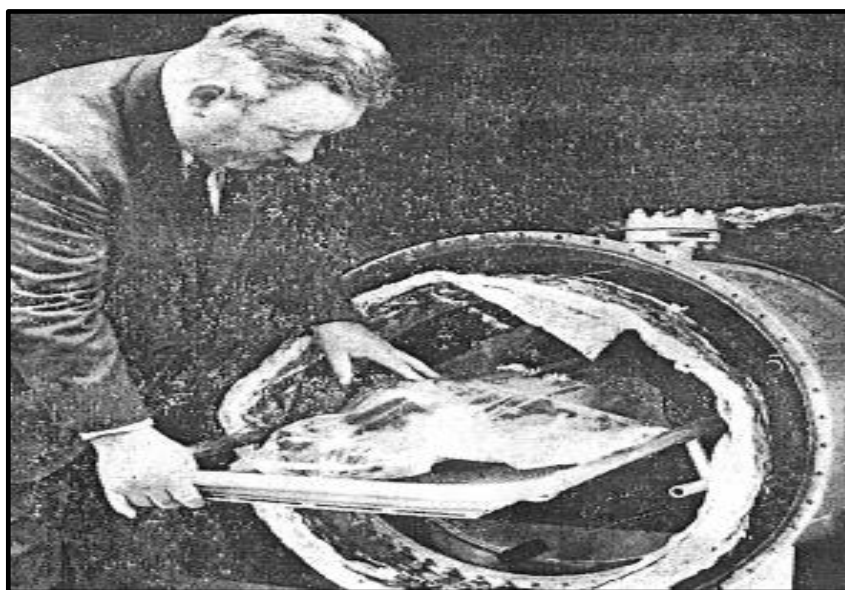


Figure 5. Ed Hope placing Bel in his Cryocapsule, January 1, 1966.

Source: William Grigg, “Life Extensionists Meet: Frozen Dog is Placed in Capsule,” *The Sunday Star*, January 2, 1966, reprinted in *Freeze-Wait-Reanimate* 3, no. 20 (January 1966):4.

³⁸² Curran, “‘Deep-freeze’ girl’s family wants to forget,” 5.

³⁸³ Robert Nelson quoted in David Walker, “Cryonic sleep remains afloat in sea of mystery,” *The Valley News*, June 13, 1979, 10.

³⁸⁴ Robert Nelson quoted in Platt, “Robert Nelson and the Chatsworth Scandal,” 11.

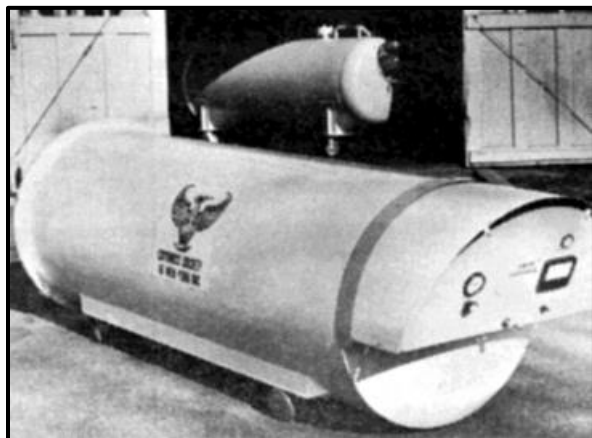


Figure 6. Mandell's capsule outside at the Cryo-Care facility in Phoenix. The previous model is behind it.

Source: *Cryonics Reports* 3, no. 9 (September 1968):165.

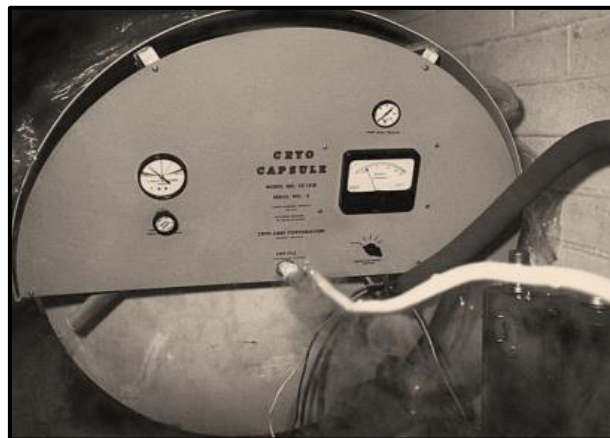


Figure 7: Mandell's capsule, with operational electric pump, being filled with liquid nitrogen at the CSNY storage facility on Long Island

Source: Photograph by Curtis Henderson, PAMD.

Cryocapsule in which to store her for long-term cryogenic internment. After he froze her in late January of 1972, therefore, Nelson kept Genevieve at Joseph Klockgether's Buena Park mortuary, packed in dry ice, which had to be replenished quite regularly.³⁸⁵

As for Steven, the CSNY expected the costs of his cryonic suspension to be covered by the proceeds of a ten thousand dollar life insurance policy, which he had taken out with the Aetna Insurance Company.³⁸⁶ The policy's two year contestability period had not expired at the time of Steven's death, however, and as such Aetna refused to pay. Even if it had expired, Aetna still would have had solid legal grounds upon which to contest the claim, given that Steven had already entered the final stages of enteritis when he took out the policy. In any event, CSNY was

³⁸⁵ Perry, "Death at the Edge of Forever," 37.

³⁸⁶ CSNY press release, "For Immediate Release," August 1, 1968, 2 pgs., PAMD; Anonymous, "Cryonics News," September 1968, 166.

burdened with the costs of Steven's cryopreservation, Cryocapsule, and continued care, the overwhelming majority of which Curtis Henderson, Fred Horn, and CSNY cofounder Saul Kent paid out of pocket over the course of approximately four years.³⁸⁷ Not insignificantly, as this period of was drawing to a close, Pauline Mandell transferred Steven and his Cryocapsule to the care of Bob Nelson, who moved them west: to the CSC's underground cryopreservation facility, at the Oakwood Memorial Park Cemetery in Chatsworth, California.

If my son, Steven, would be one of the lucky ones who could be brought back and made physically well 200 years from now, I think he'd have a ball. He'd love to learn anything that was new and futuristic. He was the kind of kid who would have liked to have been in the first rocket to the moon and he'd have a ball. I hope that it will be a good and better world. We don't know, of course. But I think he'd love it.³⁸⁸

Mildred and Gaylord

On Sunday, September 20, 1970, two years after Steven's suspension, and two years prior to Genevieve's freezing, a terminally-ill woman, stricken with bone cancer, died at her home in Des Moines, Iowa. Her name was Mildred E. Harris, and she was fifty-five years old.³⁸⁹ Over the course of the week leading up to Mildred's death her two sons, Terry and Dennis Harris, had been busy making arrangements for their mother's cryonic suspension. "We loved her so deeply," Terry Harris lamented, "she wanted to go through this process for us."³⁹⁰ The

³⁸⁷ Curtis Henderson, "Thus Spake Curtis Henderson," interview by Charles Platt, edited by Mike Darwin, 31, fn. 28; see also Mike Darwin, "An Interview with Curtis Henderson," *Cryonics* 12 (July 1981): 25-26.

³⁸⁸ Mandell, "If my son, Steven..." 17

³⁸⁹ Tom Tiede, "This Cemetery Offers a Choice of Cremation, Freezing," *Cape Girardeau Southeast Missourian*, November 2, 1970, 19; David Walker, "Cryonic sleep remains afloat in sea of mystery," *The Valley News*, June 13, 1979, 10; Robert C.W. Ettinger, "Mrs. Mildred Harris," *The Outlook* 1, no. 10 (October 1970):1-2;

³⁹⁰ Anonymous, "For these 'cryonic survivors,' a 2nd chance at life is no longer possible," *Newsday*, May 15, 1980; Los Angeles Superior Court Case C-161229, Deposition of Terry Ray Harris, February 4, 1980, 81-82, Alcor.

brothers wanted their mother to be “perfectly preserved.”³⁹¹ The Harrises opted for the CSC, not the CSNY, as their service provider. With this Bob Nelson came to Des Moines on Friday, September 18, to make contractual arrangements with the Harris brothers, and to make physical preparations for their mother’s suspension.³⁹² At the time of Nelson’s arrival, Mildred’s physician had predicted that she would live for several more weeks. Around 11am on Sunday, September 20, however, Nelson telephoned Robert C. W. “Bob” Ettinger in Detroit to report that Mrs. Harris had taken a drastic turn for the worse, and that the perfusion chemicals required to



Figure 8. Terry Harris and mother Mildred.

Source: Article, *The National Tattler*,
November 1970, PAMD.

³⁹¹ Platt, “Robert Nelson and the Chatsworth Scandal,” 11.

³⁹² Ettinger, “Mrs. Mildred Harris,” 2.

proceed with her suspension were not yet on hand. “Air freight was not available until the next day,” Ettinger recalled, so he “agreed to fly [to Des Moines] and bring the chemicals as baggage.” At 1:50pm, as Ettinger made arrangements to depart, Mildred died and was “immediately packed in ice.”³⁹³ Ettinger arrived in Des Moines around 8 pm, followed by Bob Nelson’s partner, mortician Joseph Klockgether. With the assistance of Ettinger and Nelson, and the consent of local mortician Robert Major, Klockgether perfused Mrs. Harris in the embalming room of Arnold’s Highland Park Funeral Home. The procedure was completed by 4 am, with Mildred packed in dry ice. Later that morning, a closed-casket “affirmation of life ceremony” was held for Mildred.³⁹⁴ On the morning of the following day, Bob Nelson had Mildred flown west, to California.³⁹⁵

Like Genevieve, Mildred was not placed in a liquid nitrogen-filled cryocapsule—at least not initially. Rather, Mildred was placed in a capsule-like box, which was constructed, presumably by Nelson,³⁹⁶ according to specific instructions, and which contained, somewhat disturbingly, “a see-through window.”³⁹⁷ (A reporter characterized Mildred as “resplendent,”

³⁹³ Ibid.

³⁹⁴ Los Angeles Superior Court Case C-161229, Deposition of Terry Ray Harris, February 4, 1980, 99, Alcor; Ettinger, “Mrs. Mildred Harris,” 1.

³⁹⁵ On Mildred Harris’s cryonic suspension and life affirmation ceremony, see Joseph Klockgether, “Report on the Perfusion of Mrs. Mildred E. Harris,” prepared for the CSC, December 4, 1970, 3pgs., Alcor; David M. McBride, M.D., “Certificate of Death,” prepared on CSC letterhead, Alcor; Deposition of Terry Ray Harris, 99, Alcor; Robert C.W. Ettinger, “Mrs. Mildred Harris,” *The Outlook* 1, no. 10 (October 1970):1-2. See also Ross, “In Search of Forever,” D5; Tom Tiede, “This Cemetery Offers a Choice of Cremation, Freezing,” *Cape Girardeau Southeast Missourian*, November 2, 1970, 19; David Walker, “Cryonic sleep remains afloat in sea of mystery,” *The Valley News*, June 13, 1979, 10; Myrna Oliver, “Man tells of hopes for ‘reanimating’ mother,” *The Los Angeles Times*, May 19, 1981, C1-6; William Scobie, “California’s deep freeze bodies left to melt,” *The Observer*, April 27, 1980, 12; Anonymous, “For these ‘cryonic survivors,’ a 2nd chance at life is no longer possible.”

³⁹⁶ Mike Darwin, phone interview by the author, 18 March 2014.

³⁹⁷ David Walker, “Cryonic sleep remains afloat in sea of mystery,” 10.

dressed “in a purple robe and glittering jewels, awaiting rebirth.”³⁹⁸) Months later, in December of 1970, Terry Harris traveled to California, to Joseph Klockgether’s Buena Park funeral home, to see how his mother was being maintained.³⁹⁹ Terry was reportedly quite satisfied with the setup; he was “happy” that when he peered through the window he could see his mother’s “freckles beneath her makeup.”⁴⁰⁰



Figure 9. “Terry Harris Viewing Mother Mildred.”

Source: Alcor

³⁹⁸ Walker, “Cryonic sleep remains afloat,” 10.

³⁹⁹ Deposition of Terry Ray Harris, 104.

⁴⁰⁰ Ross, “In search of forever,” D-5.

It was in the course of this visit that Bob Nelson engaged Terry in conversation about the fate of his father, Mr. Gaylord Dunbar Harris. Mr. Harris had died just months earlier, on July 8, 1970; at the age of fifty-six, he had suffered a heart attack while waterskiing.⁴⁰¹ Nelson ultimately persuaded Terry, who in turn persuaded his brother, Dennis Harris, to disinter and ship Mr. Harris's remains to California; Nelson promised that the CSC would "submerge [Mr. Harris's] body in the chemicals and super-cool him to prevent further decay," on the grounds that he might one day be cloned.⁴⁰² For six thousand dollars—a sum in addition to the fifteen thousand dollars that the Harrises would ultimately pay to cover the costs of a Cryocapsule, long-term liquid nitrogen storage and maintenance for their Mother—Nelson arranged to have Mr. Harris exhumed from the Violet Hill Cemetery in Perry, Iowa, and flown west, to California, where his remains, or so Nelson told the Harris brothers, would join their mother in cryonic suspension.⁴⁰³

Andrew

On Tuesday, November 19, 1968, a "heavy-set" man suffered a heart attack at his home in Vestal, New York. He was rushed to the emergency ward at nearby Ideal Hospital, where he was pronounced dead upon arrival at 7:26 pm. His name was Andrew F. Mihok, and he was forty-eight years old. A veteran of World War II, Mr. Mihok served in the United States Navy. After the war he found employment with the General Aniline & Film Corporation, where he

⁴⁰¹ Oliver, "Man Tells of Hopes for 'Reanimating' Mother," 6.

⁴⁰² Ibid.; Deposition of Terry Ray Harris, 25-26.

⁴⁰³ Ibid; Form V. S. No. 9 – PB-16409, Burial Transit Permit for the Remains of Gaylord Dunbar Harris, Division of Vital Statistics, Iowa State Department of Health, Alcor; Form VS-9, Permit for Disposition of Human Remains, Gaylord Dunbar Harris, State of California – Department of Public Health, Alcor.

worked as a drill press operator until ill-health forced him into early retirement in April of 1968; he had sustained chest and heart injuries in an automobile accident three years prior. It was around this time that Andrew and his wife, Mrs. Mildred Mihok, first read about the practice of cryonic suspension—but made no formal arrangements. Upon Andrew’s death, however, Mildred requested that her husband be frozen.⁴⁰⁴ “I love him so,” she cried, “I want him back.”⁴⁰⁵

The staff at the Allen Memorial Home in Endicott, New York was “stunned” by Mildred’s request.⁴⁰⁶ “We were caught flat-footed,” a spokesperson said.⁴⁰⁷ Though familiar with cryonics, the Allen staff was “not prepared to carry out the procedure.”⁴⁰⁸ The June issue of



Figure 10. Andrew F. Mihok

Source: Alcor

⁴⁰⁴ Anonymous, “CSNY Calls Off Suspension of Heart Attack Victim,” *Cryonics Reports* 4, no. 1 (January 1969), 4-6; Steve Hambalek, “Vestelite’s Body Frozen for Future,” source unknown, date and pages unknown.

⁴⁰⁵ Hambalek, “Vestelite’s Body Frozen for Future.”

⁴⁰⁶ Ibid.; Anonymous, “CSNY Calls Off Suspension,” 4.

⁴⁰⁷ Hambalek, “Vestelite’s Body Frozen for Future.”

⁴⁰⁸ Anonymous, “CSNY Calls Off Suspension,” 4.

the funeral trade-magazine, however, *Casket and Sunnyside*,⁴⁰⁹ a copy of which they luckily had on hand, contained information about cryonic suspension, which, through a series of frantic late-night phone calls, by 10:30 pm put Mr. Ward Allen, director of the funeral home, in touch with CSNY cofounder and treasurer Saul Kent. Early the following morning, on November 20, Kent, accompanied by Fred Horn and CSNY member Paul Segall, departed for Endicott in Horn's station wagon at approximately 6:00 am, with the requisite cryonic suspension equipment in tow. Seventeen hours and some two hundred miles later, the CSNY suspension team, having endured rain, sleet, and fog, finally arrived in Endicott, where Mr. Mihok lay in waiting, in the refrigerated morgue at Ideal Hospital. By 8:30 pm on November 21 the perfusion process was complete: Mr. Mihok was sealed in a rubber pouch, packed in dry ice and rock salt, and loaded in the back of Horn's station wagon for the return trip to St. James Funeral Home on Long Island, whereupon arriving at 3:30 am the following day he was placed in a temporary styrofoam-insulated storage vessel, lined with dry ice.⁴¹⁰ Mrs. Mihok followed, driving the long distance through the night, in the company of her three young children: Nancy, Mildred, and Andrew Jr.⁴¹¹ You can hear Mrs. Mihok: "I hope it works. He's got to come back to me."⁴¹²

But Andrew's freezing was halted and ultimately terminated. He was not placed in one of Ed Hope's Cryocapsules. He was not submerged in liquid nitrogen. The CSNY requested consent, in writing, from all members of the immediate family before they would agree to

⁴⁰⁹ The subtitle of the periodical boasts: "The Foremost Journal of the Funeral Profession since 1871."

⁴¹⁰ Anonymous, "CSNY Calls Off Suspension," 5.

⁴¹¹ Hambalek, "Vestelite's Body Frozen for Future."

⁴¹² Anonymous, "Family Bars Freezing for Heart Victim," *Suffolk Sun*, date and pages unknown.



Figure 11. Mrs. Mildred Mihok consenting to the cryonic suspension of husband Andrew.

Source: Photograph by Leo Fahey, “Vestallites Body Frozen for Future,” date and source unknown, PAMD.

commence with the next phases of Mr. Mihok’s suspension. Only Mildred consented. Maria Mihok, Andrew’s mother, as well as his three sisters, Mary, Matilda, and Julia, refused to sign, in no small measure because Andrew had not agreed to the process when he was alive. To proceed with the suspension, moreover, would have cost upwards of ten thousand dollars. And though while Mildred was the beneficiary of a life insurance policy for this very amount, she was without another source of income; with Andrew gone, she was furthermore left alone to support and raise three young children. With this Andrew was removed from the temporary CSNY

refrigeration vessel and placed in a conventional casket. He was taken to Saints Philip & James Roman Catholic Church in St. James, New York, where on December 5, 1968, a funeral mass was held for him. Andrew was then taken to Long Island National Cemetery and given a military burial.⁴¹³ Andrew F. Mihok would have been the tenth person placed in cryonic suspension, the second case handled by the CSNY. You can still hear Mrs. Mildred Mihok: “I feel [...] dreadful ... I didn’t want it this way.”⁴¹⁴

Ann, Paul & Herman

On Friday, January 3, 1969, a woman died of breast cancer at New York University Hospital in Manhattan. Her name was Ann DeBlasio, and she was forty-three years old. As was the case in the suspension of Stephen J. Mandell, hospital physicians were willing to cooperate with CSNY and CryoSpan personnel, but hospital administrators would not authorize the emergency use of a heart-lung machine, which would have enabled the performance of an optimal on-site perfusion. Thus, at the request of her husband, retired New York Police Officer Nicholas “Nick” DeBlasio, Ann was packed in ice at the pronouncement of clinical death and moved to the hospital’s refrigerated morgue. Hours later, she was taken by Fred Horn and Saul Kent to the basement of St. James Funeral Home, where she was chemically perfused, cooled, and packed in dry ice. There she remained for seven months in a short-term containment unit.

⁴¹³ Anonymous, “CSNY Calls Off Suspension,” 6; Anonymous, “Family Bars Freezing.”

⁴¹⁴ Anonymous, “Family Bars Freezing.”



Figure 12. Ann DeBlasio

Source: Alcor

On August 15, 1969, Ann was transferred to a long-term, liquid nitrogen-filled storage vessel housed at the facility rented by CSNY-CryoSpan at Washington Memorial Park Cemetery in Corum, Long Island, placing her in close proximity to Steven J. Mandell.⁴¹⁵

Ann's vessel, however, dubbed a "Forever Flask," was considerably different from the Cryocapsule in which Steven was sealed. For one, the Forever Flask was the product of a company called Minnesota Valley Engineering (MVE), not Cryo-Care. CSNY President Curtis Henderson had become acquainted with Edward Schuster, founder and majority shareholder of MVE, through the cryobiology conference scene in 1967. The vessel itself was large enough to accommodate two cryonics patients. The principle improvement of Schuster's MVE Forever Flask over Hope's Cryocapsule, however, and what Henderson found most attractive about it, was that the former boasted a permanently-sealed vacuum jacket (guaranteed for ten years),

⁴¹⁵ On the cryonic suspension of Ann DeBlasio see Ross, "In Search of Forever," D-5; Anonymous, "Mrs. Ann DeBlasio, Cancer Victim, Frozen in New York," *Freeze-Wait-Reanimate* 4, no. 2 (December 1968):2; Anonymous, "Woman Suspended by Cryo-Span Corporation," *Cryonics Reports* 4, no. 2 (February 1969): 3; Curtis Henderson, "Cryonic Suspension of Ann DeBlasio," *Cryonics Reports* 4, nos. 9-10 (September-October 1969):10-15.

eliminating the tedium and added expense of the continuous electric pumping required to maintain the operational integrity of the latter. This feature furthermore took the vessel's lid out of the loop: it no longer played a role in maintaining the vacuum, and as such could be removed at any time for purposes of viewing and maintenance, doing away with the need for external gauges and displays. The lid itself was thus quite modest, unsealed and foam insulated. This ultimately resulted in a higher liquid-nitrogen boil off rate, but the costs of this were offset by the fact that the Forever Flask's vacuum did not require continuous electric pumping.⁴¹⁶

And yet, perhaps the most striking difference between the two vessels was that Ann's Forever Flask, unlike Steven's Cryocapsule, stood vertically, not horizontally. Because it stood as such, and at eight feet tall was quite inaccessible, Henderson had to construct a "six-sided, four-foot high platform" around it for added stability, and to enable maintenance and top-down observation of Ann. As it came time to transfer her to the flask and submerge her in liquid nitrogen, Henderson's ad hoc platform also aided, somewhat unexpectedly, in the performance of a consecration ceremony. As the DeBlasio's were members of the Catholic Church, on the day of Ann's transfer a priest was in attendance: Reverend Saverio C. Mattei. Henderson, having placed Mrs. DeBlasio inside, began to fill the Forever Flask:

Striking the bottom of the inner vessel, the liquid nitrogen boil off began with a deep roar that resonated in the giant tank. White clouds of condensed water vapor were formed upon contact with the rising tide of ultra cold [*sic*] liquid nitrogen, and the sudden eruption from the tank enveloped all of us in a chilled embrace. In the midst of this spectacle, Reverend Mattei calmly climbed onto the platform and proceeded to consecrate the flask.⁴¹⁷

⁴¹⁶ Henderson, "Cryonic Suspension of Ann DeBlasio," 11-15.

⁴¹⁷ *Ibid.*, 15.



Figure 13. Left to right: Nick DeBlasio (sunglasses), Fred Horn, and Reverend Mattei, consecrating Ann DeBlasio’s MVE Forever Flask at the CSNY-CryoSpan storage facility, August 15, 1969.

Source: Photograph by Curtis Henderson, PAMD.

Ann DeBlasio was the tenth person to be placed in cryonic suspension overall, and the third case to be handled by CSNY-CryoSpan.

Early on Nick DeBlasio visited Ann daily. In the course of doing so, he became acquainted with Pauline Mandell; Steven was being stored in the same facility. The relationship between Mrs. Mandell, herself a widow, and Mr. DeBlasio soon became romantic.⁴¹⁸ After two years, however, they fell out with one another, and with Curtis Henderson, from whose care Ann and Steven were ultimately removed. These events took shape as a series of conflicts developed and played out. First, following changes in management at Washington Memorial Park Cemetery, CSNY-CryoSpan’s rent was raised significantly. The cryonics operation had for

⁴¹⁸ Ross, “In Search of Forever,” D5; Mike Darwin, phone interview by the author, March 18, 2014.

some time drawn considerable and unwanted media attention to the cemetery. “Camera crews and journalists,” Curtis Henderson recalled, “were always coming around, and reporters would always enquire about cryonics at the cemetery offices. It was a terrible hassle for them.” Thus, raising rent was a way to force CSNY-CryoSpan to halt operation and, ultimately, quietly nudge them out of the cemetery all together.⁴¹⁹

Second, there was a severe disconnect between the polished technoscientific aesthetic cultivated by CSNY’s brochures and monthly newsletter, *Cryonics Reports*, and the actual conditions of the CSNY-CryoSpan facility—which also housed unclaimed cremains and served as storage space for groundskeeping tools and other cemetery supplies. It was essentially a garage. The cemetery groundskeepers had full access to the facility, and furthermore took their lunches there: they would tell jokes about the patients, leave food strewn about the storage vessels, and throw cigarette butts on the floor. This did not at all sit well with DeBlasio and Mandell, as well as other CSNY members, who attributed the poor state of the CryoSpan facility to negligence on the part of Henderson, who they furthermore blamed, somewhat unfairly, for *provoking* cemetery management to raise rent so as to squeeze CSNY-CryoSpan out.⁴²⁰

Third, in the spring of 1970, amid these growing tensions, Henderson took on another suspension case, despite the admonishment of cemetery management not to do so. The patient was a forty-two year old heart attack victim named Herman Greenberg. The freezing request itself, however, came from Herman’s daughter, a young and artistically talented woman named Beverly Greenberg (aka Gillian Cummings). Serious complications were present at the outset,

⁴¹⁹ Henderson, “Thus Spake Curtis Henderson,” 34; Aronson, “The Fine Art of Living Forever,” 90; Anonymous, “New Storage Facilities,” *The Outlook* 2, no. 9 (September 1971):1-2.

⁴²⁰ Henderson, “Thus Spake Curtis Henderson,” 35; Beverly Greenberg Article in ALCOR. Cf. Arlene Sheskin, *Cryonics: A Sociology of Death and Bereavement* (New York: Irvington Publishers, 1979), 52-53.

though they were not of a financial sort: an eight thousand dollar insurance policy covered Herman's suspension and storage. Rather, the problem was that Herman had been dead, embalmed and buried for a good while *before* Beverly contacted the CSNY. As Beverly herself explained in an interview, "I simply could not go on with my own normal existence thinking of my father decomposing in the ground [...] I probably would have been a basket case if I hadn't done this, just thinking of him decomposing."⁴²¹ The call having been made, Henderson and Horn traveled to the Philadelphia cemetery where Herman was buried. Accompanied by Beverly and her mother Doris (Herman's widow), and with the aid of a backhoe, Herman was disinterred by Henderson and Horn and trekked back to Long Island, where in the basement of St. James Funeral Home he was chemically perfused, cooled, and packed in dry ice. Henderson's attempt to bring Herman to the storage facility proved to be the last straw with cemetery management, however: CSNY-CryoSpan and their patients were finally evicted from the premises.⁴²²

Within these developments, though beginning well before Herman's suspension in the spring of 1970, DeBlasio, Mandell, and eight other CSNY members who had grown disappointed with Henderson formed a new organization, the Cryo-Crypt Corporation, and set out to find a new storage site for Steven, Ann, and future suspension patients.⁴²³ Each of the ten members put one thousand dollars toward the venture, which was ultimately used to purchase an old Methodist Episcopal Church in the town of Brookhaven, Long Island, just two miles south of the CSNY-CryoSpan facility. Their plan was to renovate the church's cellar and use it as a crypt,

⁴²¹ Beverly Greenberg, "Tape Transcript: Freeze-Wait-Reanimate," transcribed by Brian Shock, *Cryonics* (First Quarter 1998):17, 21.

⁴²² Ibid.; R. Michael Perry, "Remembering Beverly Greenberg," *Cryonics* (Second Quarter 1998), 41-42; Aronson, "The Fine Art of Living Forever," 91-92; Henderson, "Thus Spake Curtis Henderson," 39-41.

⁴²³ It merits underscoring here that Mandell and DeBlasio were the only two members of Cryo-Crypt who actually had relatives in cryonic suspension at the time, i.e. Steven and Ann, respectively.

and to this end they applied for and were granted a building permit. Their intentions, however, were not spelled out in the permit application. The permit itself, moreover, was granted *after* construction had already begun. The Cryo-Crypt Corporation thus found itself in violation of Brookhaven's town zoning ordinances, and their building permit was revoked just as the storage site neared completion. Though a very short-lived endeavor, Cryo-Crypt's demise was strikingly dramatic. On the night of October 31, 1970—Halloween—an angry mob of some thirty Brookhaven conservatives gathered around the church carrying torches. They held a demonstration against Cryo-Crypt and cryonic suspension and called for the resignation of Albert Carnes, the town building inspector who had issued the group a building permit. The mob leader, attorney Donald W. Leo, represented several of the church's trustees, who claimed they were neither notified of nor consented to the sale of their church to Cryo-Crypt.⁴²⁴

By the time of Cryo-Crypt's demise, Curtis Henderson had secured a new rental space for CryoSpan operations: an industrial bay in West Babylon, New York. There, Herman Greenberg was finally transferred from temporary storage to an MVE Forever Flask, which he occupied with Paul M. Hearst Sr. (CSNY-CryoSpan's third patient, frozen some three months after Ann DeBlasio, but about whom very little is otherwise known).⁴²⁵ DeBlasio and Mandell,

⁴²⁴ On Brookhaven and the formation and demise of Cryo-Crypt, see Bob Keeler, "Brookhaven Bars Frozen-Body Site," *Newsday*, November 8, 1971, 16; Anonymous, "After-Death Freezing Stirs Town on L.I.," *New York Times*, Nov 21, 1971, A14; Anonymous, "Notes From Here and There," *The Outlook* 2, no. 3 (March 1971): 2-3; Anonymous, "New Storage Facilities," 1-2; Henderson, "Thus Spake Curtis Henderson," 35; cf. Sheskin, *Cryonics*, 53-55.

⁴²⁵ The historical record is especially thin on Paul M. Hearst Sr. Indeed, the only information I have been able to turn up about this patient is that at sixty-two years of age he was frozen by the CSNY on March 14, 1969, at the behest of his son, Paul M. Hearst Jr., a biologist employed by the University of Pennsylvania. The MVE Flask in which Herman Greenberg was placed, which was designed to accommodate two patients back-to-back, was purchased by Mr. Hearst Jr. for his father. See Anonymous, "Cryo-News Capsules," *Cryonics Reports* 4, no. 3 (March 1969):6; News Brief, "Cryo-Span Freezes Thirteenth Human," PAMD; Anonymous, "These 12 Lie Frozen in 'Cryonic Suspension,'" in *A Pictorial History of Cryonic Suspension*, ed. Michael G. Mann (New York: Cryonics Information Service, 1970), Section D; "Henderson, "Thus Spake Curtis Henderson," 30.

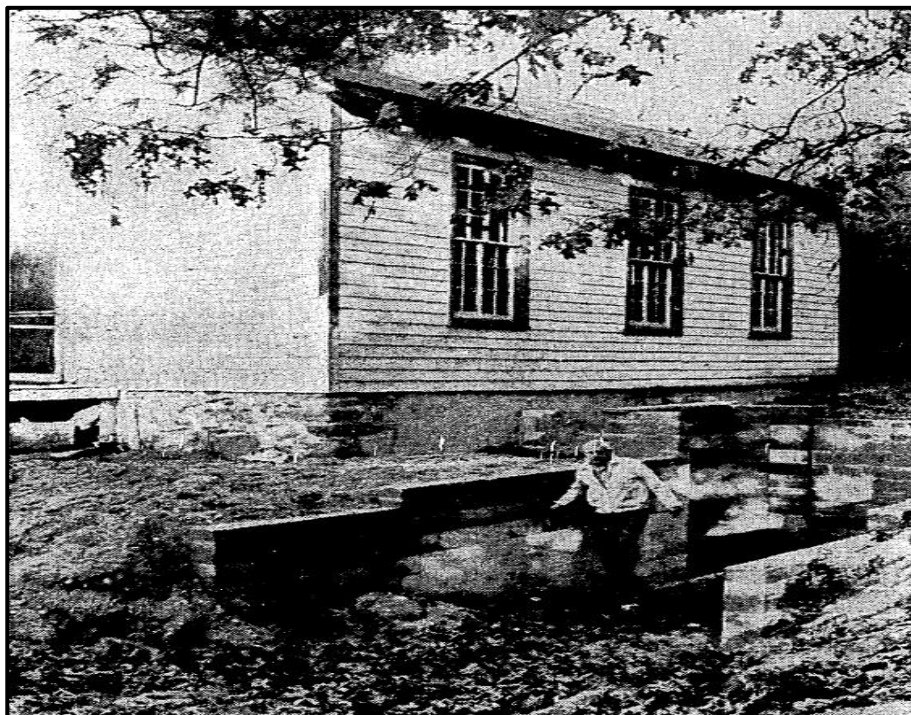


Figure 14. John Bull, treasurer of the short-lived Cryo-Crypt Corporation, standing at the ramp entrance to the storage facility under the Brookhaven church.

Source: Keeler, “Brookhaven Bars Frozen-Body Site,” photograph by Mitch Turner.

however, given their already failing relationship with Henderson, opted not to move Ann and Steven to the new CryoSpan site, and instead turned to Bob Nelson for assistance.

Mr. Nelson

On August 17, 1971, Ann DeBlasio was removed from the care of CSNY-CryoSpan and relocated to Mt. Holiness Cemetery in Butler, New Jersey. There Nick DeBlasio, in partnership with Bob Nelson,⁴²⁶ had purchased a plot of land and constructed a long-term,

⁴²⁶ In an interview with Charles Platt, Curtis Henderson indicated that the Mt. Holiness facility was financed by a two-hundred thousand dollar settlement that Nick DeBlasio had received following the wrongful death of Ann. This



Figure 15. The top shell of the facility being lowered into place, ca. summer 1971.

Source: Alcor



Figure 16. The Mt. Holiness Cryonics storage facility upon completion ca. fall 1971 (unidentified man).

Source: Alcor

underground cryonics storage facility, which was opened under the auspices of the CSC's sister corporation, Cryonic Internment, Inc. The facility's construction was somewhat crude: two concrete shells, one placed atop the other, formed a rectangular underground crypt (approximately 10' x 8' x 16') that housed Ann's MVE Forever Flask. Access to the Flask (for maintenance) and the crypt itself was achieved through one of two manholes cut in the top concrete shell. The manholes, which were capped with lids boasting decorative Christian crosses, were surrounded by (approximately 8' x 4' x 1') brick boxes, each with a sliding metal roof. In contrast to CSNY-CryoSpan's new industrial-bay facility, DeBlasio likened his and

is a spurious claim on two counts: in regard to the nature of Ann's death and the source of the money. As to the former, I have found no other archival reference to Ann DeBlasio's death as wrongful; all simply note that she died of breast cancer. In turn, the absence of evidence to this effect throws into question Henderson's claim about the settlement that supposedly financed the construction of the new facility. What matters most presently, in any event, is that DeBlasio partnered with Nelson under the auspices of Cryonic Internment, Inc. See Henderson, "Thus Spake Curtis Henderson," 32.

Nelson's Mt. Holiness facility to a finished basement. Indeed, the walls inside the crypt were lined with wood paneling, decorated with photographs of Nick and Ann. Somewhat curiously, Nick DeBlasio is also reported to have placed in the crypt next to his frozen wife a "perpetual Christmas tree."⁴²⁷



Figure 17. Left to right: Bob Nelson, Pauline Mandell, and Nick DeBlasio in the Mt. Holiness facility, ca. 1971. Ann's "forever flask" stands in the background.

Source: Alcor

Pauline Mandell had initially made arrangements with Bob Nelson and Nick DeBlasio to have Steven stored in the Mt. Holiness facility with Ann. By the time the facility was operational,

⁴²⁷ Ross, "In Search of Forever," D5. On DeBlasio and the Mt. Holiness facility see Anonymous, "New Storage Facilities," *The Outlook* 2, no. 9 (September 1971):1-2; Anonymous, "Private Storage Offered," *The Outlook* 10, no. 10 (October 1979):1-2; Anonymous, "From Nicholas DeBlasio," *The Outlook* 19, no. 3 (March 1979):2; cf. Sheskin, *Cryonics*, 52-65.

however, the romance between Mrs. Mandell and DeBlasio had ended. Thus, while Ann remained in New Jersey under the watch of her husband, Pauline Mandell entrusted Steven to the care of Bob Nelson, who had her son's frozen body and Cryocapsule shipped to California.⁴²⁸

The opening of the Mt. Holiness facility was featured in the September 1971 issue of the CSC's irregular monthly newsletter *Cryonics Review*, the front page of which boasted, "New East Coast Facility Opened." The story went on to indicate that the facility was "designed to accommodate 24 persons [i.e. twelve two-person capsules] at liquid nitrogen temperature," and that it would furthermore serve as a compliment to the "first long-term multiple-storage unit in operation in Chatsworth, California."⁴²⁹ It is now evident in retrospect that this publication conspired in producing imagery of Mt. Holiness and Chatsworth that was significantly at odds with the actual states and capacities of both facilities at the time. For one, while the Mt. Holiness facility was designed to accommodate multiple cryonics patients, twelve two-person capsules (twenty-four patients) would have made for remarkably cramped quarters. Indeed, it would have been next to impossible to maintain and provide regular liquid nitrogen service to twelve capsules given the quite modest dimensions of the facility (noted above). In fact, according to Nick DeBlasio himself, the facility could only accommodate *ten* patients (i.e. five two-person capsules), *less than half* of what the CSC had advertised.⁴³⁰

From here the discrepancies only mushroom. The very first issue of *Cryonics Review*, which appeared in January 1969, announced the opening of "the world's first commercial, long-term cryonic suspension facility in Southern California," located at the Oakwood Memorial Park

⁴²⁸ Ross, "In Search of Forever," D5.

⁴²⁹ Anonymous, "New East Coast Facility Opened," *Cryonics Review* (September 1971): cover and inside cover. PAMD.

⁴³⁰ Anonymous, "From Nicholas DeBlasio..." *The Outlook* 10, no. 3 (March 1979):2.

Cemetery in Chatsworth, just outside of Los Angeles—Steven J. Mandell’s final destination. Ironically, the write-up underscored the CSC’s use of the model of Cryocapsule in which Steven was suspended: “the facility utilizes high-reliability, multiple-patient, vacuum storage units that will maintain [...] patients at temperatures in the liquid nitrogen range.” When Bob Nelson took possession of Steven’s capsule, he managed to have it crated and shipped to California by air—in no small measure by neglecting to inform the shipping company of the frozen body inside. Doing so, however, meant that the electric pump which drew and maintained the vacuum on Steven’s Cryocapsule *had been removed from a source of power* for the duration of a coast-to-coast flight at the very least, and quite likely more. Based on failure tests carried out by the Cryo-Care Equipment Corporation, Steven’s cryocapsule would have likely been depleted or nearly depleted of liquid nitrogen, and his body temperature up to between -50 to -80°C, by the time he arrived in California.⁴³¹

While Steven J. Mandell thawed under Bob Nelson’s watch, en route to long term storage at the CSC’s Chatsworth facility, his Cryocapsule arrived operational. There is little to dispel the suspicion that this may have been in keeping with Nelson’s plans all along, as the arrival of Steven and his Cryocapsule coincided with the freezing of Genevieve de la Poterie in early 1972. By this time, moreover, Mildred Harris had been on dry ice, residing in her temporary storage vessel for approximately two years, despite the fact that her sons, Terry and Dennis, had paid Nelson fifteen thousand dollars to cover the costs of a Cryocapsule, long-term liquid nitrogen storage and maintenance, as well as an additional six thousand dollars, subsequently, to handle the disinterment, shipping, suspension and storage of their father’s

⁴³¹ Mike Darwin, phone interview by the author, March 18, 2014; Darwin and Platt, “Thus Spake Curtis Henderson,” 18, fn. 26.

remains. What happened to the money allotted by the Harrises remains a mystery,⁴³² but one thing is certain: Nelson did not use it to purchase Cryocapsules for Mildred and Gaylord Harris. Indeed, upon its arrival in California, early in 1972, Nelson, unbeknown to Joseph Klockgether, opened Steven Mandell's Cryocapsule, placed Genevieve and Mildred inside with the recently thawed Steven, resealed and (presumably) refilled the capsule with liquid nitrogen, and moved it to the CSC's storage facility in the Chatsworth cemetery: an underground concrete chamber, 20' long, 10' wide, 12' deep, with a steel-paneled roof and a hatch for access. (A far cry, in other words, from the state of the art facility Nelson conjured in *Cryonics Review* and elsewhere.) While Nelson claimed, moreover, to have maintained the capsule for some two years, this was doubtful the case considering that the CSC's Chatsworth facility—again, *Cryonics Review* pronouncements to the contrary notwithstanding—was not equipped to supply the electricity required to draw and maintain the cryocapsule's vacuum. By 1974 the capsule had been more or less abandoned, with Genevieve and Mildred thawed, Steven thawed for a second time, and all of them radically decomposed.⁴³³ As for Mr. Gaylord Dunbar Harris...

Marie, Helen, Russell & Louis

This preceding nightmare scenario is tied to another. In November of 1971, about a year after Mildred's arrival at Chatsworth and a year before Steven's arrival and Genevieve's freezing, Nelson had already ceased liquid nitrogen maintenance on another capsule, one in

⁴³² Platt, "Robert Nelson and the Chatsworth Scandal," 11.

⁴³³ The preceding remarks take considerable guidance from Platt, "Robert Nelson and the Chatsworth Scandal"; Perry, "Suspension Failures"; and Perry, "Death at the Edge of Forever," all of which were read up against the Deposition of Terry Ray Harris, Alcor, and personal notes of Joseph Klockgether, "Typed Notes—Important," 7 pages, Alcor.

which he and Joseph Klockgether, in May of 1970, had crammed *four* cryonic suspension patients.⁴³⁴

While the freezing of the first man, James H. Bedford, was backed by a sizable estate, the first woman to be frozen died all but destitute of resources. Marie Phelps-Sweet died in her sleep sometime between the night of August 26 and the early morning of August 27, 1967. She was seventy-four years old. Her lifeless body was discovered in the bed of a Santa Monica hotel room, early in the afternoon of August 27, some ten hours after she had checked in. The reason for Sweet's stay at the hotel remains a mystery. What is known is that a local mortician from the undertaking firm Gates, Langley, and Gates, upon summation from the authorities to remove Marie's body, discovered her Life Extension Society (LES) membership card, which carried "instructions to freeze her body." Marie's body was ultimately taken into custody by the county coroner, who in keeping with the LES instructions placed her in a "refrigerated storage facility at 30 degrees [Fahrenheit], just below freezing." In the course of these events, as Marie was an active member of the CSC as well as Evan Cooper's LES, Bob Nelson was informed of the situation, and began making preparations to have her suspended.⁴³⁵ The lack of funds available to carry out Marie's suspension, however, complicated matters, to say the least.

Marie Phelps-Sweet's involvement with cryonic suspension represented a small fraction of what can only be described as a lifelong career of social activism. In an appeal for donations to fund Marie's suspension, her husband, artist Russel Le Croix Van Norden, wrote the following:

⁴³⁴ Klockgether, "Typed Notes—Important," 4.

⁴³⁵ On the death and freezing of Marie Phelps-Sweet: Anonymous, "Cryonics News," *Cryonics Reports* 2, no. 9 (September 1967), 1; Anonymous, "Marie Phelps-Sweet, Pioneer Activist for Justice and Progress, Dies and is Frozen in California," *Freeze-Wait-Reanimate* 3, no. 38 (September 1967), 1-3; Rose, "Dead Men's Hopes Put on Ice," 4.

As I sorrowfully sort thru packet after packet of the miscellaneous [*sic*] papers of Marie Phelps-Sweet, Organizational identification cards in amazing numbers come to light ... I am humbled that I have done so little. Tears dim my eyes and anguish wrenches at my heart as I recall with crystal clarity the many (tho [*sic*] still comparative few) crusades for the peaceful communication for mankind in which a kind fate permitted me participation with so wonderful a person. Here in the recorded minutes of many an organization I find the note “Marie Phelps-Sweet offered to pay for the Charter, the equipment or other urgent need. How could she have done so much and had so little?”⁴³⁶

The passion that drove Marie’s involvement with a myriad of social causes clearly found expression in her commitment to and advocacy for cryonic suspension. In one of the several letters she sent over the years to Robert C. W. Ettinger, Marie wrote:

Even I, way out here on the rim, feel that all my energies should be devoted to this life extension advance. But how to do it escapes me at the moment. For the first time in my entire career, I yearn to be wealthy and free to endow an essential work. Formerly the idea of the responsibility of physical wealth made me shudder—in a world mad for the quick buck. Honesty, via which there are a few if any millionaires, seemd [*sic*] to me the more precious value. Now—it seems we have the power and method to change for the better. “Remove the fear of limited life—and remove the greed and ruthlessness.” ... I want to see it happen—with all possible speed! Yet here I sit. More or less helpless, to speed things up.⁴³⁷

In 1964, accompanying what appears to be the first letter Sweet sent to Ettinger, she enclosed two pictures of herself. Ettinger recalls, “One face showed 71 years of care, the other a young woman full of hope and vigor.”⁴³⁸ Sweet identified with the latter image, taken in 1940,

⁴³⁶ Van Norden goes on: “The list is long and without doubt incomplete, remembering only those more recent ventures.” He then lists the following organizations in which Marie was active: Color Research Institute, World Cultural Center, Enchanted Boundary, Committee for a World Constitution, Women United Against War, WISP, Sane Nuclear Policy, NAACP, American Civil Liberties Union, American National Red Cross, International Platform Association, VISTA, National Congress of American Indians, Santa Barbara Historical Society, Citizens International Exchange Corps, The Assistance League of Southern California, The “INFINITES,” World Future Society, Foundation for Anti-Aging Research, Cryogenic Society of California, Life Extension Society of California. Russel Le Croix Van Norden, “2-Page Typed Letter,” September 1967, PAMD.

⁴³⁷ Marie Phelps-Sweet to Robert C. W. Ettinger, “6-26-64,” *Excerpts from Letters of Marie Sweet*, pg. 3, compiled by Robert C. W. Ettinger, PAMD.

⁴³⁸ Robert C. W. Ettinger, “A Young Woman’s Trust,” pg. 1, no date, PAMD.



Figure 18. Image of Marie Phelps-Sweet, ca 1940. The handwritten instructions are Sweet's: "This is as I wish to be 'Restored!.' I believe it can be done in time!"

Source: PAMD

and included handwritten instructions: "This is as I wish to be 'restored!' I believe it can be done in time!"⁴³⁹ This exchange, and well as excerpts from the several other letters that Sweet sent to him over the years, were included in an appeal for suspension funds that Ettinger, at the

⁴³⁹ Marie Sweet to Robert C.W. Ettinger, cited in *Ibid.*; see also Anonymous, "Marie Phelps-Sweet, Pioneer Activist for Justice and Progress, Dies and is Frozen in California," 1.

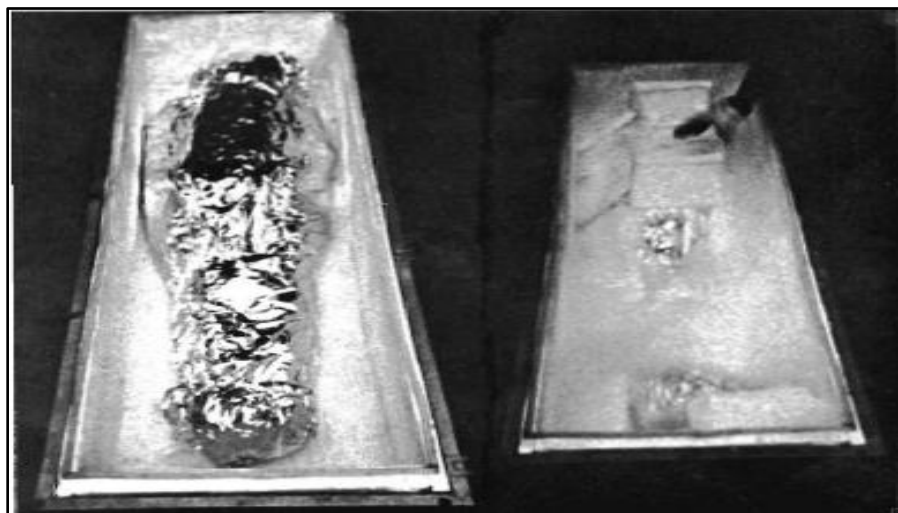


Figure 19. Marie Phelps-Sweet in her temporary storage vessel at CryoCare, wrapped in aluminum foil (at left) and packed with dry ice (at right).

Source: ALCOR

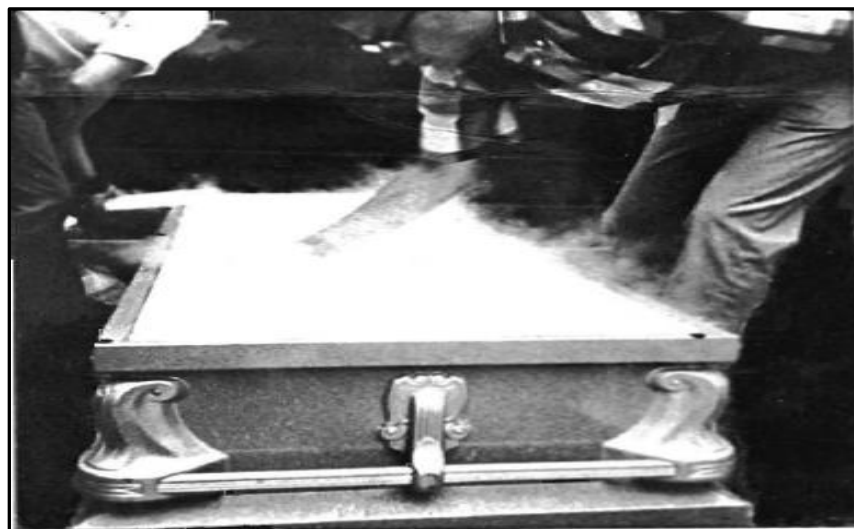


Figure 20. CryoCare employees (most likely Fred Rickenbacker and Ted Kraver) layering dry ice atop Marie Sweet as they prepare to place the cover on her temporary storage vessel.

Source: ALCOR

request of Bob Nelson, prepared and circulated through the CSC, the CSNY, the LES, and the Cryonics Society of Michigan.⁴⁴⁰

While the actual amount raised over the long-term remains elusive, enough money was on hand initially to *prepare* Sweet for long-term storage in cryonic suspension. While the preparatory work was carried out under the auspices of the CSC, all of this took place *prior* to Nelson's partnering with Joseph Klockgether. In order to have Marie Sweet chemically perfused and placed in temporary dry-ice storage, then, Nelson had to liaise with Ed Hope's Phoenix-based CryoCare Corporation, where following the completion of the preparatory work Sweet was also momentarily stored.⁴⁴¹ It was not until November of 1967 that Marie Sweet arrived at Klockgether's Buena Park mortuary operation, rendering concrete the latter's (unofficial) partnership with Nelson and the CSC.⁴⁴² Indeed, Marie Sweet was the first cryonics patient to be stored at Klockgether's mortuary. "At this point," Klockgether recalls, "the building used as a garage prior to being used for storage of caskets was converted for storage of Marie Sweet." She was wrapped in aluminum foil and stored in a "large a large insulated wooden shipping case that dry ice was placed in periodically to maintain her temperature."⁴⁴³ Marie Phelps-Sweet would remain in such a state for two years and six months, until she was finally placed in a Cryocapsule, for long-term storage, in May of 1970.⁴⁴⁴

⁴⁴⁰ Robert C. W. Ettinger, letter to Saul Kent, September 19, 1967. PAMD.

⁴⁴¹ Rose, "Dead Men's Hopes Put on Ice," 4.

⁴⁴² Klockgether, "Typed Notes—Important," 2-3.

⁴⁴³ *Ibid.*, 3.

⁴⁴⁴ *Ibid.*, 4; R. Michael Perry, "Nelson, Nisco, and the 'Cryotorium,'" *Cryonics* 13, no. 3 (March 1992), 6.

In the interim, with Marie in temporary storage, her ultimate fate uncertain, the campaign to raise funds to secure her long-term cryonic suspension carried on. Russell Le Croix Van Norden, as his wife was placed in temporary storage, recalled, and pleaded:

I [touched] her hair and kissed her now cold lips in a farewell for what may well be on a few short years when swiftly developing science may remove her from her minus zero suspended animation and have her here among us her enthusiasm [undimmed]. If you would dare to believe that it could be, the need is now for funds for Cryogenic care until the days pass with the final ceiling of her enclosing capsule for the long wait of months or years ahead ... Fears only hover at the outer edge of my consciousness. For I believe and some of you in steadfast earnestness believe that she will come back to us.⁴⁴⁵

In his grief, in his ongoing efforts to raise funds for and revive his frozen wife, Van Norden also took to writing poetry:

Only when I awaken
 In silence of a deepening night
 And listen for your little sigh
 Somehow made up a part
 Of consciousness and fleeting dream
 So like the sound of wayward leaf aflutter
 Falling thru space or endless time
 When no sigh or faintest sound
 Of You can come to me
 But only the strange hum of nighted silence
 Then like encroaching fog
 My loneliness bears in on me
 From every compass point
 By your ill-fated absence
 The price we pay, perhaps
 For some rewarding future yet unseen
 So I must be consoled to know
 That farawayness is a shortening span
 And that the price is not too high to pay
 For possible environmental change
 Of new creative growth

⁴⁴⁵ Van Norden, "2-Page Typed Letter," 2.

An even brighter prospect looms
 A kind of glimpsed glad immortality⁴⁴⁶

Among those who made donations to aid with Marie Sweet's cryonic suspension were fellow CSC members Helen Kline and C. Russell Stanley: each gave fifty dollars.⁴⁴⁷ Kline and Stanley were also the next two people to be frozen by Nelson. The historical record is somewhat thin on Kline and Stanley, unfortunately, excepting a few significant details about the circumstances of their respective deaths and subsequent freezings.

A founding member of the CSC, Helen Kline died of lung cancer on the morning of May 14, 1968, in the Burlington Convalescent Hospital in Los Angeles.⁴⁴⁸ She was fifty-five years old.⁴⁴⁹ The Burlington staff cooperated with the CSC, and Helen was chemically perfused and placed in temporary dry ice storage. Like Marie Sweet, however, Helen died without the necessary funds allocated to secure a Cryocapsule and long-term storage. As such, a "Helen Kline Fund" was set up, with appeals for donations issued through the same channels they were issued for Marie Sweet.⁴⁵⁰

CSNY President Curtis Henderson had anticipated such an unfavorable set of circumstances developing with Helen Kline months before she died. Russell Stanley, who was Helen's close friend,⁴⁵¹ in a letter to Saul Kent dated October 13, 1967, mentioned in passing that

⁴⁴⁶ Russell Le Croix Van Norden, untitled, 1 page., dated September 15, 1967. PAMD.

⁴⁴⁷ C. Russell Stanley, letter to Evan Cooper, September 18, 1967. PAMD.

⁴⁴⁸ Anonymous, "The Cryonic Suspension of Helen Kline," *Cryonics Reports* 3, no. 6 (June 1968), 120.

⁴⁴⁹ Permit for the Disposition of Human Remains, State of California—Department of Public Health. Form VS9, Death Certificate of Helen Kline. Alcor;

⁴⁵⁰ Anonymous, "The Cryonic Suspension of Helen Kline," 122.

⁴⁵¹ *Ibid.*, 121.

Helen was “far from well.” As Kent (and Henderson) had briefly met Helen during a trip to California many months prior, Stanley suggested:

If you have the time, a postcard saying HELLO would be appreciated. She is a fine person and a good friend and her interest is genuine and lasting. It is always money that is lacking unfortunately.⁴⁵²

Presumably having caught wind the letter by way of Kent, Henderson, incensed, responded. In a letter dated November 22, 1967, Henderson wrote to Stanley, on Helen’s behalf:

Now if “not being well” means that she is in danger of dying in the near future, then you had better do more than send [her] a postcard. Is the Marie Sweet experience to be repeated again and again? The time is now to make financial arrangements, to get her to sign a body authorization, her relatives to sign affidavits, to discuss the matter with Nelson, to [make] provisions to keep in close contact with her ... Condolences and sympathy cards are a mockery and an insult, now that something can be done. We will do more than send a card. ... We will extend you any help we can in this matter.⁴⁵³



Figure 21. Helen Kline

Source: Alcor



Figure 22. C. Russell Stanley

Source: Earlham College
yearbook photo, ca.
1932. Alcor

⁴⁵² C. Russell Stanley, letter to Saul Kent, October 13, 1967. PAMD.

⁴⁵³ Curtis Henderson, letter to C. Russel Stanley, November 22, 1967, emphasis original. PAMD.

Henderson's admonishments notwithstanding, the "Marie Sweet experience" was in a sense, of course, repeated in the case of Helen Kline. It was not, however, repeated in the case of Russ Stanley himself—at least not entirely. A pioneering cryonics advocate and founding member of the CSC, Charles Russell Stanley died of heart failure on September 6, 1968, at the Santa Fe Memorial Hospital in Los Angeles.⁴⁵⁴ He was sixty years old. A former Assistant Chief Clerk for the Santa Fe Railroad, Stanley had amassed retirement savings, and early on put up a sizable sum of money to the CSC, between five and ten thousand dollars,⁴⁵⁵ to secure his cryonic suspension and long-term storage in a Cryocapsule. Nelson, however, unbeknown to Stanley, had been using this money to construct the cryonic suspension storage facility at Oakwood Memorial Park Cemetery in Chatsworth.⁴⁵⁶ Russ Stanley, consequently, like Helen Kline and Marie Sweet before him, was chemically perfused and placed in a temporary storage container—a "wooden insulated case"⁴⁵⁷—and packed in dry ice, which required regular replenishment. Both Russel and Helen were stored and presumably maintained as such for nearly two years at Klockgether's mortuary.⁴⁵⁸ As with Marie Phelps-Sweet, neither Russell nor Helen would be placed in a Cryocapsule until May of 1970.

Enter Louis Nisco. As with Russell Stanley and Helen Kline, the historical record is quite thin on Louis Nisco himself. What details there are with respect to his death and especially his subsequent freezing are quite significant, however.

⁴⁵⁴ Permit for the Disposition of Human Remains, State of California—Department of Public Health. Form VS9, Death Certificate of C. Russell Stanley. Alcor.

⁴⁵⁵ The only point of record I have been able to turn up on Stanley's finances is Charles Platt, "Robert Nelson and the Chatsworth Scandal," 10.

⁴⁵⁶ *Ibid.*; see also Perry, "Death at the Edge of Forever," 38.

⁴⁵⁷ Klockgether, "Typed Notes—Important," 4.

⁴⁵⁸ *Ibid.*, 2, 4.

A long-time resident of Detroit, Michigan, Louis Tom Nisco⁴⁵⁹ worked as a chef for a number of local country club restaurants, and is furthermore rumored to have been something of an amateur criminologist. Nisco died of a heart attack on September 7, 1967. He was seventy-seven years old. Nisco's daughter Marie Bowers (née Nisco), years prior to his passing, had kindled a strong interest in having herself and her parents placed in cryonic suspension. No arrangements were in place, however, at the time of her father's unexpected death. Upon Louis's passing, therefore, Marie contacted Robert Ettinger at his Detroit-based Cryonics Society of Michigan. In something of an ad-hoc partnership between Ettinger and the Phoenix-based Ed Hope, Marie managed to have her father chemically perfused, frozen, and placed in Cryocapsule for long-term storage. To raise money for the costly procedure, the capsule, and liquid nitrogen maintenance—upwards of five thousand dollars—Marie refinanced her home and her car. Coupled with the proceeds of Louis's five hundred dollar insurance policy, however, Marie was still short some two thousand dollars. Ed Hope, who was storing Louis at his operation's base in Phoenix, agreed to let Marie pay off the balance in monthly payments of fifty dollars, in addition to monthly liquid-nitrogen maintenance payments of forty-seven dollars.⁴⁶⁰

In the course of both arranging her father's suspension and negotiating with Ed Hope, Marie Bowers had been in contact with Bob Nelson via telephone. In April of 1969, her father having been in storage at Cryo-Care for some eighteen months, it came to pass that Marie

⁴⁵⁹ The historical record is thin on Nisco. The present narrative borrows considerably from Perry, "Nelson, Nisco, and the Cryatorium," and Platt, "Robert Nelson and the Chatsworth Scandal." Their accounts have been compared with all available primary materials, which are cited throughout the following.

⁴⁶⁰ Platt, "Robert Nelson and the Chatsworth Scandal," 10.



Figure 23. Louis Tom Nisco

Source: Alcor

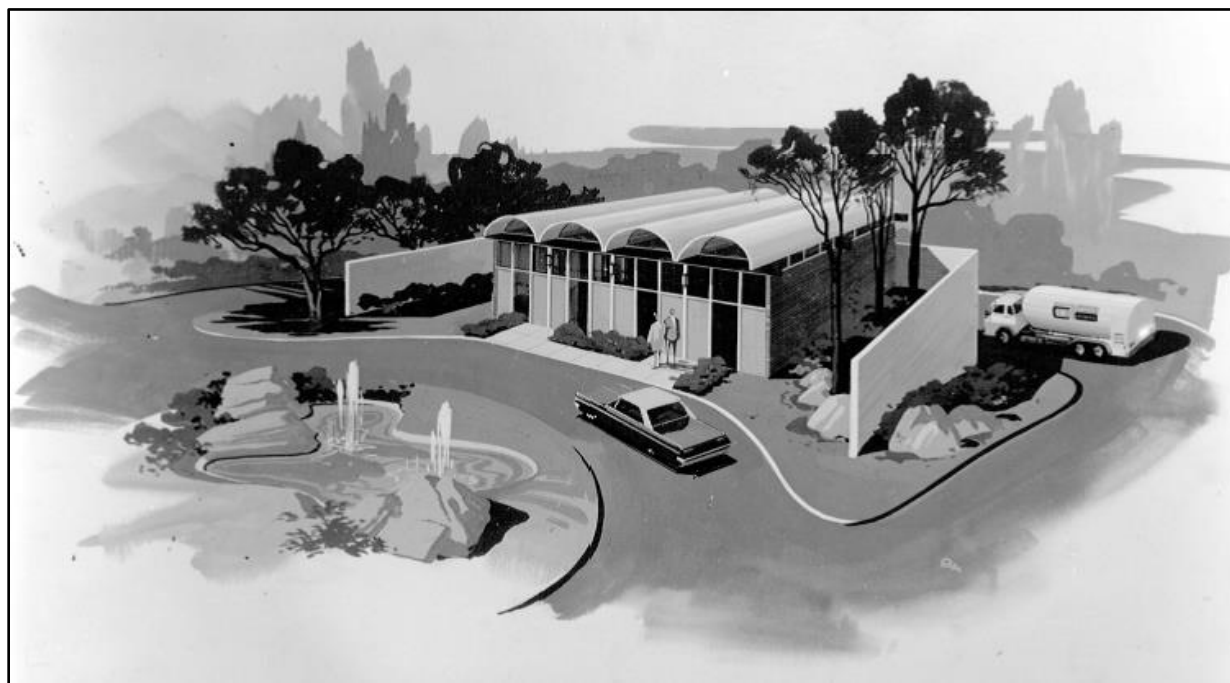


Figure 24. Artistic rendering of the entrance to the CSC “permanent storage facility” at Chatsworth, circulated by Nelson at the 1969 Cryonics Conference.

Source: Alcor

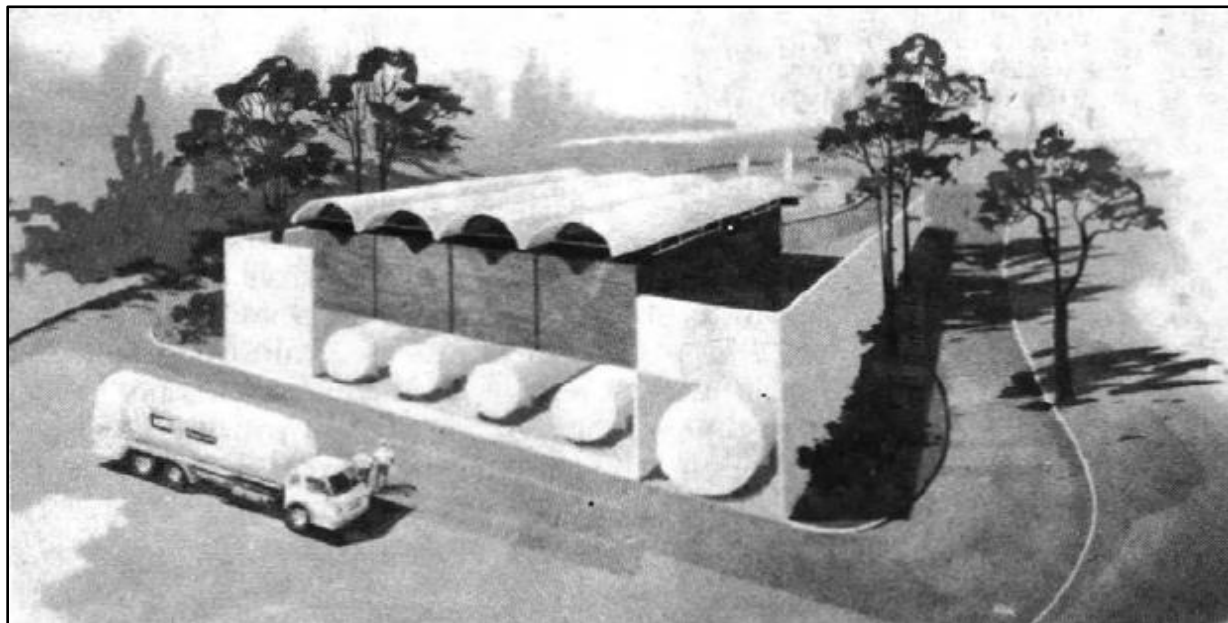


Figure 25. Artistic rendering of the back of the CSC “permanent storage facility” at Chatsworth, circulated by Nelson at the 1969 Cryonics Conference.

Source: PAMD

encountered Nelson at the 1969 Cryonics Conference, which was being held that year at the University of Michigan, Ann Arbor.⁴⁶¹ Nelson’s participation in the conference entailed showcasing artistic renderings of the CSC’s “permanent storage facility,” which in the course of a CSC presentation was described as being “on the verge of completion.”⁴⁶² In an interview with Saul Kent, subsequent to the conference’s proceedings, Nelson offered the following description of the facility:

This is a facility that is built below ground, but it is not a hole in the ground that bodies and tanks are thrown into. It’s a multiple-storage facility that cost in the neighborhood of \$40,000 to manufacture. The multiple storage units have a maximum capacity of 20 or

⁴⁶¹ Saul Kent, “1969 Cryonics Conference,” *Cryonics Reports* 4, no. 4 (1969):8-15.

⁴⁶² *Ibid.*, 12.

15 people, depending on the size of the patients. Each patient is in an individual metal container very similar to the units that were used in *2001: A Space Odyssey*. The inside is stainless steel. It's 14ft. by 6 ft. in width, and the patients are introduced into an allotted slot inside the inner chamber similar to a honeycomb unit. It doesn't turn. Units are moved by a series of stainless steel cables that guide them into position and they can be introduced and retrieved at will without disturbing the other patients, the liquid nitrogen, or the vacuum.⁴⁶³

Nelson's description was of course far removed from the actual conditions at Chatsworth, and is furthermore off with respect to the state in which his "patients" at the time—Marie Sweet, Helen Kline, and Russell Stanley—were then being stored: wrapped with foil, in wooden boxes, packed in dry ice. With these images in tow, however, Nelson appealed to Marie Bowers, who at this time still owed Ed Hope eleven hundred dollars for the vessel that was maintaining her father, as well as monthly maintenance fees.⁴⁶⁴ In addition to the preceding artistic renderings, Nelson also is said to have shown Bowers "interior" shots of the storage facility, in which "technicians wearing lab coats were standing in front of capsules fitted with viewing windows, gauges, and dials"—"similar," no doubt, to the "units that were used in *2001: A Space Odyssey*." Nelson offered to pay the balance that Bowers owed Hope, who was by this time looking to exit the cryonics scene,⁴⁶⁵ provided that she transfer Louis and his Cryocapsule to Nelson and the CSC; thereafter she would only be responsible for monthly payments to cover liquid nitrogen maintenance. She agreed, albeit unaware of Nelson's intentions.

⁴⁶³ Nelson and Kent, "Bob Nelson Speaks Out," 25.

⁴⁶⁴ See especially Perry, "Nelson, Nisco, and the 'Cryotorium,'" 5-6.

⁴⁶⁵ Perry, "The First Cryonics Operation," 10.

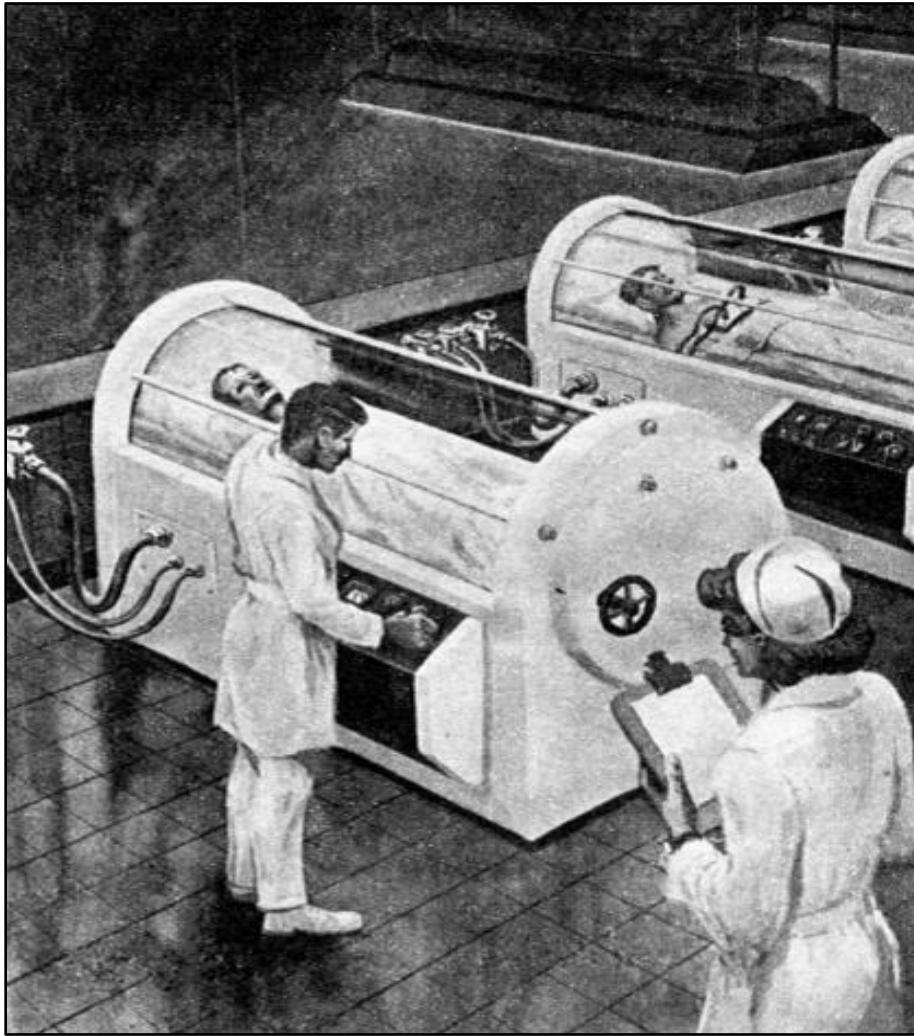


Figure 26. Artistic rendering of patients in cryonic suspension, taken from a magazine article featuring an interview with Robert F. Nelson. This image is presumably similar to if not at one with, the image Nelson showed to Marie Bowers.

Source: Aron, “The New Ice Age,” 1. Artist unknown. PAMD.

Louis Tom Nisco and his Cryocapsule were shipped to Klockgether’s mortuary in May of 1970. Upon arrival the capsule was opened and Nelson, with the aid of a reluctant Joseph Klockgether, proceeded to remove Marie Phelps-Sweet, Helen Kline, and C. Russell Stanley

from temporary dry-ice storage, cramming them into the capsule with Louis Nisco.⁴⁶⁶ Some eighteen months later, in November of 1971, Nelson is believed to have temporarily ceased maintenance on the Cryocapsule: all four patients were allowed to thaw and decompose before Nelson resumed liquid nitrogen maintenance. This took place, moreover, as will be recalled from above, about a year after Mildred's arrival at Chatsworth and a year before Steven's arrival and Genevieve's freezing, all of whom, by 1974, had been abandoned by Nelson.⁴⁶⁷

Still, as late as 1973, Terry Harris, upon making a return trip to California to attend to the status of his parents and to pay respects, was allowed to visit the Chatsworth facility. Accompanied by Nelson, Harris entered the facility, which by this time housed *two* of Ed Hope's Cryocapsules—Steven Mandell's and Louis Nisco's. Nelson led Harris to believe that Mildred *alone* was suspended in one Cryocapsule, Gaylord in the other. This was, of course, hardly the case with Mildred. As for Mr. Gaylord Dunbar Harris, Joseph Klockgether's notes reflect that his disinterred body was never perfused or frozen.⁴⁶⁸ Taking Nelson at his word, however, Terry Harris affixed to each capsule one of two brass plaques, which he and his brother Dennis had had commissioned, to denote the Harris parents' tentative resting place and to commemorate them. Mildred's plaque read: "Mildred E. Harris entered suspended animation on September 20, 1970. Today is the first day of the rest of your life." And Gaylord's plaque: "Gaylord Harris [...]: Some Men Look at Things as They Are and Ask Why. I Look at Things as They Could Be and Ask Why Not."⁴⁶⁹

⁴⁶⁶ Klockgether, "Typed Notes—Important," 4.

⁴⁶⁷ On this see also Perry, "Death at the Edge of Forever," 37-38.

⁴⁶⁸ Klockgether, "Typed Notes—Important," 6-7.

⁴⁶⁹ Deposition of Terry Ray Harris, 66.

Had Harris seen the artistic renderings of the facility that Nelson had shown to Marie Bowers, he may not have concluded that the facility, in the course of his 1973 visit, was “very pretty inside.” In any event, upon his return to Chatsworth once again in 1980, this would no longer be the case: Terry Harris found the Cryocapsules and his parents’ plaques on the floor, the carpet of the facility rotted, and the white paneling warped and cracked.⁴⁷⁰ By this time, the nature of Bob Nelson’s misdeeds at Chatsworth had become known and made public. The Harris brothers, partnered with Marie Bowers, would ultimately enroll Los Angeles attorney Michael Worthington to pursue a civil suit against Robert Nelson for damages perpetrated.

Clara

Amid the storm brewing at the CSC Chatsworth facility on the west coast, Bob Nelson nevertheless continued to accept suspension patients in conjunction with the Mount Holiness facility on the east coast, partnered with Nick DeBlasio. Clara Dostal died of cancer on December 10, 1972, at George Washington University Hospital in Washington, D.C. She was sixty years old.⁴⁷¹ The extent of Clara’s involvement with cryonics prior to her death is unknown. Quite significantly, however, she had signed a contract which allocated twenty-thousand dollars from her estate to CSNY-CryoSpan. The funds were to cover the costs of her perfusion and a Cryocapsule, with the remainder being placed in a trust to for purposes of ensuring her long-term maintenance and storage. Upon her death, then, Clara was covered in ice and eventually transported to the CSNY-CryoSpan facility on Long Island. Upon her arrival, Clara was chemically perfused and placed in a temporary storage vessel under dry-ice, in

⁴⁷⁰ *Ibid.*, 63.

⁴⁷¹ Anonymous, “New York Freezing Confirmed,” *The Outlook* 4, no. 1 (January, 1973), 1; Perry, “Table of Cryonic Suspension Patients,” *Cryonics* 11, no. 10 (October 1990), 4.

preparation for long-term storage in a Cryocapsule, which she would enter several months later.⁴⁷²

Clara's estate was riddled with complications. While her children, Claire Halpert (née Dostal) and Richard Dostal, wanted to follow through with their mother's request to be placed in cryonic suspension, Clara's medical bills were significant. Halpert, the executrix, was to say the least reluctant to pay CSNY-CryoSpan twenty-thousand dollars out of the estate in lump sum. In an attempt to negotiate with Curtis Henderson, the Dostal children proposed a month-to-month payment arrangement, hoping to curb the initial cost to the estate while still honoring their mother's wishes. Henderson declined.⁴⁷³

CSNY-CryoSpan was at the time of Dostal's suspension on its way out. In the wake of the CSNY member exodus and coterminous formation of the shortly-lived Cryo-Crypt, and with Nick DeBlasio and Pauline Mandell defecting to Nelson, leaving only two patients under the charge of the CSNY—Herman Greenberg and Paul Hurst, Sr.—the CSNY received yet another, ultimately fatal series of blows with the mysterious death of Herman Greenberg's daughter Beverly (aka Gillian Cummings). Following her father's suspension, Beverly became deeply involved in the operations of the CSNY, at one point assuming the duties of vice-president.⁴⁷⁴ While the details are murky, it is known that Beverly would regularly visit the CSNY storage facility in New Babylon. A one-time industrial bay, converted by Henderson to suit the needs of CSNY-CryoSpan, Beverly would often pull her car into the facility, and with her father's

⁴⁷² Los Angeles Superior Court Case C-161229, Deposition of Claire Halper, August 4, 1978, 18-21. Alcor.

⁴⁷³ *Ibid.*, 22.

⁴⁷⁴ The following account of Beverly Greenberg takes principle guidance from Perry, "Remembering Beverly Greenberg;" Tape Transcript, "Freeze-Wait-Reanimate: Part One," transcribed by Brian Shock, *Cryonics* (First Quarter—1998): 16-21; Tape Transcript, "Freeze-Wait-Reanimate: Part Two," transcribed by Brian Shock, *Cryonics* (Second Quarter—1998): 31-36; and Henderson, "Thus Spake Curtis Henderson," 39-41.

Cryocapsule close and in sight, spend the night there. One such night, on November 15, 1973, Beverly died from carbon-monoxide poisoning in the CSNY-CryoSpan facility. With her car running, trying to stave off the cold New York November, she fell asleep. Despite her involvement with CSNY, Beverly had made no arrangements for cryonic suspension. The fate of her remains ultimately fell to her mother, Doris Greenberg, who had her cremated.⁴⁷⁵

Making matters worse, amid the ensuing investigation into Beverly's death, the capsule containing Herman Greenberg and Paul Hearst was discovered by the authorities, and reported to the New York State Department of Public Health. Due to a zoning violation, Henderson was ordered to cease and desist operations and dispose of the frozen bodies within fifteen days, under threat of being fined one thousand dollars per day until compliant. Both Herman and Paul were removed from cryonic suspension, thawed, and ultimately buried. CSNY-CryoSpan itself would ultimately fold by 1974.⁴⁷⁶ Just prior to this, however, and on the coattails of this storm of events, Clara Dostal was placed in cryonic suspension. Indeed, she was removed from temporary dry-ice storage only once Greenberg and Hurst had been vacated from the capsule they shared. Clara was then placed inside.

Twenty-thousand dollars from the Dostal estate might have kept the CSNY afloat for a bit longer. Given the circumstances brewing, however, it is hardly surprising that Henderson declined to negotiate an alternative arrangement with the Dostal children. Henderson's refusal,

⁴⁷⁵ Perry, "Remembering Beverly Greenberg," 44.

⁴⁷⁶ Sometime before this, however, Henderson would perform one final cryonic suspension, that of Michael Barburka Sr. Next to nothing is known about Mr. Barburka, the details of his suspension, and his involvement with the CSNY and cryonics broadly. According to R. Michael Perry, after the freezing Mr. Barburka was watched over by his son, who maintained him in a Cryocapsule for several years before he was ultimately thawed and conventionally buried. Perry, "Suspension Failures," 5-8.

however, did come with a referral to the services of Bob Nelson, who according to Claire Halpert “was delighted to help.”⁴⁷⁷

Nelson offered to transport Clara from CSNY-CryoSpan to the Mount Holiness facility in New Jersey, where Ann DeBlasio was being maintained, and to cover storage and maintenance for roughly thirty-five hundred dollars annually, to be paid in monthly installments. Up front, to get things moving, Nelson was paid a sum approximating twenty-five hundred dollars out of Clara’s estate. After Nelson had been paid, however, and for unknown reasons, the Dostal children ultimately decided to forego Clara’s cryonic suspension and instead had her conventionally buried.⁴⁷⁸ The Dostal children ultimately had to hire an attorney in order to recover the funds paid out of the estate to Nelson and the CSC.⁴⁷⁹ In their suit against Nelson, they would ultimately come into partnership with the Harris brothers and Marie Bowers.⁴⁸⁰

Dorothy

On November 13, 1972, roughly a month before Clara Dostal’s death, a woman died of cancer in her home in Beverly Hills, California. Her name was Dorothy B. Labin, and she was fifty-one years old.⁴⁸¹ Like Clara Dostal, the historical record is virtually silent on Dorothy

⁴⁷⁷ Deposition of Claire Halpert, 21-22, 24, 48.

⁴⁷⁸ Claire Halpert, letter to Curtis Henderson, October 31, 1974. PAMD; see also *Ibid.*, 58.

⁴⁷⁹ Deposition of Claire Halpert, 81.

⁴⁸⁰ See Los Angeles Superior Court Case C-161229, First Amended and Supplemental Complaint for Declaratory Relief, Breach of Contract, Negligent Misrepresentation and Fraud, prepared and filed by Michael Worthington, December 1, 1970. Alcor.

⁴⁸¹ This narrative account of Dorothy B. Labin has been constructed with principle reference taken to the following sources: Permit for the Disposition of Human Remains, State of California—Department of Public Health. Form VS9, Death Certificate of Dorothy B. Labin, Alcor; Anonymous, “Nelson Reports Another Suspension,” *The Outlook* 3, no. 11 (November 1972), 1; Anonymous, “New York and California: New Delayed,” *The Outlook* 3, no. 12 (December 1972), 1; Anonymous, “New York Freezing Confirmed, *The Outlook* 4, no. 1 (January 1973), 1; see also Perry, “Table of Cryonic Suspension Patients,” 4.

Labin's involvement with cryonics.⁴⁸² There is some indication, however, that she came into awareness of the practice, some ten months before her death, through the publicity that attended the suspension of Genevieve de la Poterie.⁴⁸³ In any event, sometime prior to her passing, Dorothy Labin made arrangements with Bob Nelson, under the auspices of the CSC, to be placed in cryonic suspension. Labin's perfusion appears to have taken place at Klockgether's mortuary. Interestingly, however, and quite tellingly, on November 17, just days after her death, Nelson shipped Dorothy Labin east, to be stored at the Mount Holiness in Butler, New Jersey.⁴⁸⁴ The reason for the otherwise impractical move of a California-based patient to the east coast is not difficult to fathom given the timing of Labin's death—Nelson's ability to accommodate at Chatsworth had grown increasingly limited. Upon her arrival at the Mt. Holiness facility, then, Dorothy Labin entered long-term storage with Ann DeBlasio, whose MVE forever flask, as will be recalled from above, could accommodate two patients, back-to-back.

Dorothy and Ann remained in the Mt. Holiness facility until July of 1980, when their remains were removed and conventionally buried. In the interim, Nelson resigned from the CSC, which by 1974 had folded, and had furthermore ended his involvement with the Mt. Holiness operation.⁴⁸⁵ Consequently, the maintenance of Ann and Dorothy fell to the charge of Nick DeBlasio, who reportedly arranged for the vessel to be refilled with liquid nitrogen every

⁴⁸² Mike Darwin, Interview with the Author, 14 March 2014.

⁴⁸³ Anonymous, "Nelson Reports Another Suspension," 1.

⁴⁸⁴ Trans World Airlines, Uniform Airbill, LAX 13633745, November 11, 1972, Alcor.

⁴⁸⁵ Between 1974 and 1976—the timing is unclear—Nelson froze two other people: a six-year-old boy whose name is unknown, and a man named Pedro Ledesma. Beyond the fact that Ledesma and the boy were placed together in the same cryocapsule, the historical record is painfully silent on these two cryonic suspension patients. On this see Perry, "Suspension Failures," 5-8.

seven or so weeks.⁴⁸⁶ The vessel was apparently modified to accommodate the needs of a bulk liquid nitrogen delivery service: two “fill pipes” were added to the capsule. While the pipes expedited the filling process, by virtue of their connecting the inside of the storage vessel with the outside they also served as a heat conductor. This had the effect of speeding up the rate of liquid nitrogen level boil-off, which in turn had the effect of producing a cap of ice over the top of the vessel, making it difficult to open for inspection.⁴⁸⁷ In order to do so, the ice had to be chipped away. On one occasion, DeBlasio or a liquid-nitrogen service employee—it is not clear who—took a hammer and chisel to the ice, and in so doing inadvertently damaged the vessel’s vacuum seal, causing all the liquid nitrogen to rapidly deplete. Long before the damage was recognized, Dorothy and Ann had thawed and begun to decompose. There is some record of an attempt to repair the vessel,⁴⁸⁸ but ultimately the remains of Ann and Dorothy were removed from MVE Forever Flask and conventionally buried.⁴⁸⁹

All in all, between the efforts of the CSC, the CSNY, and the Cryo-Care Corporation, seventeen cryonic suspensions were in some sense attempted or initiated between 1967 and 1976. Of these, only James H. Bedford remains in cryonic suspension today. Nelson had been found out by 1979. By June of 1981, a California civil court had found him guilty of “fraud and intentional infliction of emotional distress,” and ultimately ordered him to pay upwards of one million dollars in damages to those who brought the suit against him—Terry and Dennis Harris, Marri Bowers, and Claire Halpert, the adult children of the CSC patients who under his watch

⁴⁸⁶ Mike Darwin, Letter to Paul Labin, four pages, September 19, 1980, PAMD.

⁴⁸⁷ Ibid., 1-2.

⁴⁸⁸ Ibid.; see also Henderson, “Thus Spake Curtis Henderson,” 48.

⁴⁸⁹ Darwin, Letter to Paul Labin, 4.

were left to thaw and decompose at Chatsworth. Some thirty-four years later, Nelson has yet to pay a cent.

Chapter 5: Conclusion

I began this interpretive venture with an endorsement of Jonathan Z. Smith's insight, derived from Viktor Shklovky, that an "extraordinary cognitive power" comes with the strategy of "defamiliarization"—making the familiar seem strange in order to enhance perception.⁴⁹⁰ My engagement with the practice of cryonic suspension has been based on the wager that the other side of this is also true—that there is an extraordinary cognitive power that comes with rendering the seemingly strange familiar, part of the ordinary every day. It is time now to pull together the interpretive claims threaded through the preceding chapters; to see if my wager has paid off.

The most basic claim yielded by the interpretive labors resting upon this wager is that cryonic suspension becomes increasingly intelligible to the extent that the pervasive yet ultimately futile impulse to sequester death under western modernity is thrown into question, and is furthermore recognized, following Zygmunt Bauman, as *the* principle constitutive feature of modern social *life*.⁴⁹¹ Indeed, cryonic suspension emerged at a moment when the sequestration of death came up especially short—the American 1960s. Following from this, the difficulty in pinning down cryonic suspension, in contextualizing and linking the practice to extant strands of scholarship, in large measure derives from the fact that modernity's impulse to sequester death tends overwhelmingly to be *replicated* in the epistemic norms and practices that structure sociological theory and research proper. This is nowhere more apparent than with the existence of a well-defined subfield devoted to the sociology of death, dying, and bereavement, which both

⁴⁹⁰ Jonathan Z. Smith, *Imagining Religion: From Babylon to Jonestown* (Chicago: The University of Chicago Press, 1982), xiii.

⁴⁹¹ Bauman, *Mortality, Immortality, and Other Life Strategies* (Stanford, CA: The Stanford University Press, 1992), 131.

reflects and reinforces the decidedly modern presumption that death is an “end of life event” at best marginally important to apprehending the shape of the modern social.⁴⁹² Thus the dilemma of cryonic suspension’s (un)intelligibility—a practice that emerged in a space *produced* by the institutional shortcomings of death’s sequestration presents a lived reality that *strains* the conceptual comfort zones of modernist epistemology and historiography. It is in this sense that cryonic suspension, as I have argued following Robert Orsi, evidences an *abundant phenomenon*.⁴⁹³ In departing from those epistemic conventions which would prescribe “passing over in silence”⁴⁹⁴ the lived reality of cryonic suspension, then, I have opted instead, following Bauman, for a sociology *centered about* death’s sequestration⁴⁹⁵; keeping with Orsi, I have attempted to offer an *abundant sociological history* of cryonic suspension.⁴⁹⁶

Taking principle guidance from Bauman and Orsi throughout, then, the central interpretive claim my labors have developed is that cryonic suspension is at once both a *simulacrum* of cold war technoscience and a *second order* (magical) survival strategy—it is ultimately a *magical* practice masquerading as the technoscience it simulates. Cryonic suspension’s “hybrid” status, thus understood, compounds the aforementioned epistemic disconnect produced by modernity’s sequestration of death, further evidencing the practice’s complexity and experiential abundance. Developing an abundant sociological *history* of cryonic

⁴⁹² See Phillip A. Mellor, “Death in High Modernity: The Contemporary Presence and Absence of Death,” *The Sociological Review* 40, no. 1 (May 1992):11-12.

⁴⁹³ “When 2+2 = 5: Can We Begin to Think about Unexplained Religious Experiences in Ways the Acknowledge Their Existence?” *The America Scholar* (Spring 2007):6; Robert A. Orsi, “Abundant History: Marian Apparitions as Alternative Modernity,” *Historically Speaking* 9, no. 7 (September/October 2008):15; see also Monica Black, “The Supernatural and the Poetics of History,” *The Hedgehog Review* 13, no. 2 (Fall 2011):73.

⁴⁹⁴ See Norman K. Denzin, *Interpretive Interactionism* (Thousand Oaks, CA: Sage, 2001), 44.

⁴⁹⁵ See Bauman, *Mortality*, 8.

⁴⁹⁶ See Orsi, “When 2+2=5.”

suspension, of course, entails demonstrating the non-essential, and thus perhaps largely accidental, *contingency* of the practice's hybrid status. To this end broadly, I have attempted to demonstrate that cryonic suspension appears to be the emergent product of an affinity between, on the one side, the "failed containment" of and ensuing cultural malaise surrounding death and dying, and, on the other side, the largely undisciplined "wanderings" of cybernetic concepts and predictions throughout the broader culture of the tumultuous American 1960s. Contextualized relative to this affinity as such, and with an eye throughout trained upon explicating and rendering intelligible the practice's hybrid status, the architecture of study reflects my effort to produce an interpretation that cuts across three different though related moments in the history of cryonic suspension: 1) the emergence of the practice, marked by the appearance in 1962 of the "freeze now" manifestos penned by Evan Cooper and Robert C. W. Ettinger; 2) the subsequent performance and material instantiation of cryonics, marked by the plights of those who froze and were frozen throughout the American 1960s and 70s; those who answered the call to "freeze now"; and, tied to and fomented by the lattermost especially, 3) catastrophic failure by 1979, marked by the conduct of Robert Nelson and the so-called "Chatsworth scandal."

The parameters of the study were thus not arrived at willy-nilly. At the same time, however, they were also developed to point out and counter the combined effects of what I have called the Ettinger "origin narrative" and the Nelson "atrocious tale"—the former crediting the emergence of cryonic suspension to Robert C. W. Ettinger, the latter attributing responsibility for the failure of cryonics at Chatsworth to Robert F. Nelson. As caricatured surrogates for sociohistorical treatments of cryonic suspension's emergence and ultimate failure, the origin story and the atrocious tale have long conspired in bracketing from consideration matters of cultural and historical context. This is readily evidenced by the pervasive *silence* that extant

engagements with cryonics, academic and otherwise, exhibit with respect to the conditions of the practice's emergence and eventual failure.⁴⁹⁷

The pervasive silence on these quite critical aspects of cryonic suspension's history underscores all the more the true significance, indeed the novelty, of the uncatalogued and largely unutilized historical materials to which I was granted access. These historical materials, then, are at root what enabled me to discern the "origin story" and the "atrocious tale" and to counter their combined effects, leading me to the position that grasping the nature, complexity, and sociohistorical significance of cryonics in many ways follows from their undoing, thus as well training my focus on the three aforementioned historical moments that shape the study's overall architecture. The novelty of the historical materials at my disposal, in other words, quite crucially informed the periodization of the study, the contributions of which should also be understood as sociohistorical interventions with respect to the Ettinger "origin story" and the Nelson "atrocious tale."

Thus the study's principle interpretive claims necessarily follow from my engagement with cryonic suspension along these lines; driven principally by previously unutilized historical materials, vacillating between guiding concerns with what cryonic suspension "is," i.e. its hybrid status, and how and under what conditions it took shape, played out in practice, and ultimately

⁴⁹⁷ The following evidence this silence: Stephen B. Harris, "The Immortality Myth in Technology," in *Immortal Engines: Life Extension and Immortality in Science Fiction and Fantasy*, ed. George Slusser, Gary Westfahl, and Eric S. Rabkin (Athens, GA: The University of Georgia Press, 1996), 45-67; Oliver Krüger, "The Suspension of Death: The Cryonic Utopia in the Context of the U.S. Funeral Culture," *The Marburg Journal of Religion* 15 (2010):1-19; Jill Lepore, "The Iceman," *The New Yorker*, January 25, 2010, 24-30; Jill Lepore, *Mansion of Happiness: A History of Life and Death* (New York: Vintage, 2012), Ch. 10; W. Patrick McCray, *The Visioneers: How a Group of Elite Scientists Pursued Space Colonies, Nanotechnologies, and a Limitless Future* (Princeton, NJ: The Princeton University Press, 2013), Ch. 6; Bronwyn Parry, "Technologies of Immortality: The Brain on Ice," *Studies in History and Philosophy of Biological and Biomedical Sciences* 35 (2004):391-413; Arlene Sheskin, *Cryonics: A Sociology of Death and Bereavement* (New York: Irvington Publishers, 1979); Grant Shoffstall, "Freeze-Wait-Reanimate: Cryonic Suspension and Science Fiction," *Bulletin of Science, Technology, and Society* 30, no. 4 (2010):285-297.

met with failure. In proceeding as such, while following the lead of Bauman and Orsi, I have also taken methodological guidance from the interpretive “practice of inquiry” that John R. Hall terms “specific history.”⁴⁹⁸ A latter-day iteration of Max Weber’s project of *verstehende soziologie*, the methodological prescriptions of specific history include attention to the temporality and context of events and characters, with the overriding aim of teasing out and (thickly) describing and interpreting (intrinsically linked) narrative plots; attention to cultural elements, i.e. meanings, metaphors, tools, techniques and their sources, travels and linkages to plot; and dialogue with social theory.⁴⁹⁹ Given the architecture of the study, the nature of the historical materials at my disposal, and my aims in engaging cryonic suspension overall, I have been especially reliant upon specific history’s core methodological strategy of sociohistorical emplotment, which requires attention to the very basic yet crucial questions: “What happened and how?”⁵⁰⁰

The claims advanced in Chapters 3 and 4 especially should collectively be read as responses to these questions, mediated by the broader context of the study’s aims, theoretical commitments, and overall architecture as an *abundant* sociological history, and which were enabled *at root* by the novel historical materials to which I was granted access. To these ends, in Chapter 3, I attempted to move beyond the conventional traps of the Ettinger origin narrative, chiefly by calling attention to the role of Evan “Ev” Cooper in conceptualizing and facilitating the emergence of cryonic suspension. With the move to Cooper, then, I decentered Ettinger, while at the same time calling attention to the formative place of the postwar science of

⁴⁹⁸ John R. Hall, *Cultures of Inquiry: From Epistemology to Discourse in Sociohistorical Research* (Cambridge: The Cambridge University Press, 1999), 210-216.

⁴⁹⁹ *Ibid.*; On thick description-interpretation, see Denzin, *Interpretive Interactionism*, 98-118.

⁵⁰⁰ Hall, *Cultures of Inquiry*, 212.

cybernetics in the “freeze now” manifestos that *both* men, initially unbeknown to one another, privately published and circulated in 1962: Ettinger’s *The Prospect of Immortality and Cooper’s Immortality: Physically, Scientifically, Now*. Several interpretive claims and contributions followed from this move.

First, by attending to the manifestos, I demonstrated cryonic suspension’s formative ties to the “wanderings” and largely undisciplined appropriations of cybernetic concepts and predictions throughout the American 1960s⁵⁰¹—one side of the historically contingent affinity that I have argued facilitated the emergence of the practice. In so doing, I also positioned cryonic suspension as a case through which to arrive at contributions to social studies of science and technology broadly. On the one side, I set forth Chapter 3 as evidence in support of Ronald Kline’s disunity of cybernetics thesis; on the other, I presented the historical emergence of cryonic suspension as a quite striking illustration of how science and technology can acquire unintended meanings and give rise to otherwise as unanticipated projects, as they are variously consumed, appropriated, and repurposed “downstream,” as it were, by “non-” scientific actors.⁵⁰²

Second, underscoring this lattermost point especially, I demonstrated that Ettinger and Cooper, lay-scientific actors at best, in constructing their respective manifestos, were beholden to a decidedly *magical* impulse—i.e. “wishful thinking”—which they articulated with and up through cybernetic concepts and predictions. With respect to arriving at this interpretation, borrowing from Marcel Mauss and Richard Stivers,⁵⁰³ I developed and set forth two key sets of

⁵⁰¹ See Andrew Pickering, *The Cybernetic Brain: Sketches of Another Future* (Chicago: The University of Chicago Press, 2010), 11.

⁵⁰² See Steven Epstein, “Culture and Science/Technology: Rethinking Knowledge, Power, Materiality, and Nature,” *The ANNALS of the American Academy of Political and Social Science* 619 (September 2008):165-182.

⁵⁰³ Marcel Mauss, *A General Theory of Magic*, trans. Robert Brain (London: Routledge, 1972); Richard Stivers, *Technology as Magic: The Triumph of the Irrational* (New York: Continuum, 2000).

claims. First, I demonstrated that the cybernetic language of organism-machine equivalence was a key cultural source and the root ontological-metaphorical basis upon which cryonics was constructed by Ettinger and Cooper. Relatedly, I demonstrated that both Ettinger and Cooper issued their respective calls to “freeze now” in light of expectations produced by Norbert Wiener’s famed proclamation that systems of computerized control would soon usher in a “second industrial revolution”⁵⁰⁴—a cybernetic “new age” in which machines would outstrip human intelligence and capabilities. In terms of *construction*, I argued that *Prospect* and *Immortality* clearly evidence a form of bricolage—*magic*—piecemeal, unpredictable argumentation that *fails* in terms of legitimating technoscientific criteria (but which, as I argued subsequently, nevertheless also serves the pragmatic aim of rendering death in some sense knowable and thus manageable). In terms of *expectation*, likewise, I argued that magical thinking is at play in Cooper and Ettinger’s tendency to *enlarge* upon the virtues of certain objects, specifically “thinking machines,” i.e. computers, in the perceived ability of the latter to eventually be capable of reversing any given “cause” of death, and thus as well “repair” the damage incurred by the freezing process they advocated. What makes their “freeze now” proposal so confusing, I argued, so difficult to pin down, yet so tempting to “pass over in silence,” to dismiss as “pseudoscience,” is that both *Prospect* and *Immortality* are the products of a *magical* impulse—i.e. *wishful thinking*—finding a medium of expression *in*, by way of the computational metaphor, otherwise technoscientific fields of endeavor.

⁵⁰⁴ Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York: John Wiley, 1948), 36-37.

Third, this interaction, I argued, goes to the root of one side of cryonic suspension's "hybrid" status—it is a *simulacrum*. Drawing from Gilles Deleuze,⁵⁰⁵ I attempted to demonstrate that cryonic suspension is a *magical* practice masquerading as the technoscience it simulates. The practice's external technoscientific *form*, deriving from the manner of its construction through the cybernetic language of human-machine equivalence, conspires in *masking* the fact that there is a severe discord between its internal (magical) logic and that of its putative technoscientific model. And it is this masked internal difference, it will be recalled, that is the principle source of the uncanny affect—i.e. the feeling of being "ill at ease," not quite "at home"⁵⁰⁶—that is the chief calling card of simulacra broadly. One key reason for this affective quality is that cryonics, by virtue of the fact that it is at once both "removed from and proximate to its point of origin,"⁵⁰⁷ its putative technoscientific model, is *remarkably resistant to narration*. Thus, I took to *narrating* the conceptualization and emergence of the practice, with an eye to locating and rendering this affective quality intelligible, as a key component of advancing an abundant sociological history of cryonic suspension—and thus one of the study's overall contributions toward rendering the practice intelligible.

Finally, I also argued that cryonics harbors uncanny potential for an additional reason—it eventuates in the collapse of any hard and fast distinction between the living and the dead. Recalling to this point Ernst Jentsch, "doubt as to whether an apparently living being is

⁵⁰⁵ Gilles Deleuze, "The Simulacrum and Ancient Philosophy," in *The Logic of Sense*, ed. Mark Lester with Charles Stivale (New York: Columbia University Press, 1990), 253-279; see also Brian Massumi, "Realer than Real: The Simulacrum According to Deleuze and Guattari," *Copyright* no. 1 (1987):92.

⁵⁰⁶ Ernst Jentsch, "On the Psychology of the Uncanny," trans. Roy Sellars, *Angelaki* 2, no. 1 (1995):7-16.

⁵⁰⁷ Scott Durham, *Phantom Communities: The Simulacrum and the Limits of Postmodernism* (Stanford, CA: The Stanford University Press, 1998), 4.

innate and, conversely, doubt as to whether a lifeless object may not in fact become animate,”⁵⁰⁸ this is a key source of the cognitive distress associated with the experience of the uncanny. To sharpen this point, again in the interest of advancing an abundant sociological history of the practice, I took to comparing cryonics patients, i.e. “cryonauts,” with two other forms of cybernetic entity, both of which emerged in the same sociohistorical context, both of which harbor considerable uncanny potential—what Andrew Pickering has aptly called cybernetic “monsters”⁵⁰⁹ and the iconic figure of the cyborg. As with cryonics, the decidedly uncanny affect produced by these entities derives from their rootedness in the language of human-machine equivalence—an equivalence which perpetrates as well the collapse of any hard and fast distinction between matter that is alive and matter that is dead. Cryonic suspension is both predicated upon and instantiates the collapse of this distinction in material practice.

This connection, then, as with the interpretive claims set forth in Chapter 3 overall, should be understood as the outcome of interpretive guidance taken from Orsi and Bauman with respect to previously unutilized and quite novel historical materials. Absent these materials and interpretive guides, all would likely either be “passed over” in silence, dismissed as pseudoscience, or otherwise bracketed from consideration by the constraining conventions of the Ettinger “origin narrative.”

In parallel to my attempt in Chapter 3 to move beyond the Ettinger “origin story” by way of Evan Cooper, in Chapter 4 I attempted to move beyond the Nelson “atrocious tale” by way training my focus on the early cryonic suspension patients and those who froze them. Very

⁵⁰⁸ Ibid.

⁵⁰⁹ Andrew Pickering, “A Gallery of Monsters: Cybernetics and Self-Organization, 1940-1970,” in *Mechanical Bodies, Computational Minds: Artificial Intelligence from Automata to Cyborgs*, ed. Stefano Franchi and Guven Guzeldere (Cambridge, MA: The MIT Press, 2005), 231.

broadly, just as the move to Cooper in Chapter 3 allowed me to demonstrate the ties of cryonics to the widespread and undisciplined “wanderings” of cybernetic concepts and predictions throughout the American 1960s—*one* side of the historically contingent affinity defining the practice’s emergence—the move in Chapter 4 to the cryonics patients and those who froze required further contextualization of cryonics relative to the widespread cultural malaise surrounding death and dying, *also* in the American 1960s—the *other* side of this affinity. Relatedly, just as the move beyond Ettinger in Chapter 3 ultimately fed my interpretation of cryonics as a simulacrum of Cold War technoscience—*one* side of the practice’s “hybrid status”—so also did my move beyond Nelson in Chapter 4 feed my interpretation of cryonics as a second order (magical) survival strategy—the *other* side of the practice’s “hybrid status.” It is here, not only in considering these juxtapositions but in *mediating* them by way of my theoretical commitments that we can begin to throw into sharper relief the overall interpretive payoff of the study—as a move away from sociologies “of” death and towards a sociology *centered about* death’s sequestration; as an *abundant sociological history* of cryonic suspension.

The key term in this work of mediation is, of course, *magic*, i.e. “wishful thinking,” specifically its deep-seated relationship to the modern impulse to sequester death. Throughout the present study and in Chapters 2 and 4 especially, I relied heavily upon Zygmunt Bauman’s interpretation of this relationship, which holds that the sequestration of death is *the* principle constitutive feature of modern social *life*. Several of Bauman’s insights merit brief recapitulation here. As will be recalled, the modern impulse to sequester death derives at base from the position of sovereignty accorded to reason under western modernity. Because death does not yield to reason, death constitutes a declaration of “reason’s lie,” and thus threatens to undermine

reason's sovereignty. Reason, then, principally in its instrumental form as science and technology, is pressed into the service of *excluding* death, *concealing* it from modern life.⁵¹⁰ This takes in the institutional process of sequestration, connoting the familiar historical narrative by which death, in being shifted from a religious to a medical register of authority, is over time removed from communal space, drawn into the technoscientific space of the hospital. Sequestration, however, will always fall short, as death is ultimately unresolvable—people die. Compounding matters is the fact that the move to sequester death maps onto the demise of the efficacy, or at least the perceived legitimacy, of those forms of knowledge and ritual practice which have historically served as shared normative guides in the practical matters of confronting and dealing with death. Indeed, this is conterminous with the reason's rise to sovereignty, the ultimate upshot of which, with respect to death especially, is that reason is constitutionally incapable of replacing with scientific certainties the moral, religious, and otherwise normative certainties it has placed under suspicion. This places the living in an especially tenuous existential situation with respect to death—both one's own and of others—indicating as well the source of a potential threat to reason's sovereignty. And yet with this Bauman finds not a retreat of reason in the face of death, i.e. at those moments and in those spaces where reason and its attendant strategy of sequestration come up short, but rather recourse taken, quite paradoxically, to decidedly *non-rational* measures that create and maintain the *illusion* of reason's capable handling of death (fostering reassurance among the living) and thus as well the *illusion* of reason's sovereignty (for the two illusions are ultimately at one). Indeed, as we have seen,

⁵¹⁰ Zygmunt Bauman, *Mortality, Immortality, and Other Life Strategies* (Stanford, CA: The Stanford University Press, 1992), 15, 133-134, 143.

Bauman charges that the sovereignty of reason under western modernity ultimately fosters and gives way to *magic*,⁵¹¹ i.e. “wishful thinking.”

As I set out to demonstrate in Chapter 4, the magical logic discerned by Bauman appears especially distilled in two decidedly modern developments: 1) the medicalization and deconstruction of death, and 2) the emergence of a policy of “self-care.” Both are to be understood as what Bauman terms “survival strategies”: “attempts to keep death at bay through a strategic maneuvering between various life options.”⁵¹² Both evidence magical thinking. Medicalization, as we have seen, eventuates in what is arguably the most apparent modern survival strategy: the deconstruction of “Death” into individual “deaths,” each of which is attributed a “cause.” This renders any given death explainable, manageable, and, at least in theory, surmountable by way of medical technoscience. Thus medicalization, the attribution of causality, perpetrates a sleight of hand; it makes Death *seemingly* amenable to rational control, and furthermore operates as a discursive impetus to develop and mobilize medical technoscience. Bauman’s policy of “self-care,” following from this, ultimately extends through modern life the individuation and technoscientific mobilization wrought by Death’s biomedical deconstruction, steering people to “engross themselves in projects geared toward their own survival, which are increasingly focused upon maintaining the health of their bodies.”⁵¹³ Indeed, self-care elides the *ultimate* limit of the human body—Death—by way of breaking down, training focus and work upon “its *currently* encountered *specific* limitations”⁵¹⁴—*causes* of one’s death, both actual and

⁵¹¹ Ibid., 16, 143.

⁵¹² Chris Shilling, *The Body and Social Theory* (Thousand Oaks, CA: Sage, 2003), 166.

⁵¹³ Ibid.

⁵¹⁴ Phillip A. Mellor and Chris Shilling, “Modernity, Self-Identity, and the Sequestration of Death,” *Sociology* 27, no. 3 (August 1993):425.

potential. Whatever their limited successes in extending and prolonging life, techniques of self-care and the biomedical deconstruction of death broadly will always fall short with respect to keeping Death at bay, and thus evidence a pervasive form of wishful thinking, i.e. a modern recourse to *magic*.

What follows from this, and what calls for heavy underscoring, is that the root magical impulse that I explicated in Chapter 3, in the writings of Ettinger and Cooper, is decidedly (though paradoxically) modern and thus quite pervasive, *and as such is hardly unique to the practice of cryonic suspension*. Indeed, *magic links* cryonic suspension to what Bauman regards as the principle constitutive feature of modern social life. Ettinger and Cooper not only presumed these magical logics, however, but in their writings *replicated* and *compounded* them at a second-order level. Cryonics, then, is an emergent product of an articulation between, on the one side, the logic of “cause” and the pervasive policy of “self-care,” and, on the other side, the cybernetic concepts and predictions discussed in Chapter 3. The status of cryonics as a *second-order* (magical) survival strategy derives at base from the temporal orientation of the technoscientific predictions appropriated by Cooper and Ettinger, chiefly Norbert Wiener’s famed proclamation regarding the imminent arrival of a “second industrial revolution” to be heralded by the advent of cybernetic “thinking machines.” The temporal orientation of this prediction, i.e. towards a *future*, opened up a space of anticipation, of hope, in which “thinking machines” could be envisioned not only to overcome the shortcomings of (then) extant survival strategies, but as well to usher in new and more effective survival strategies—advanced technoscientific means through which to address and even envision overcoming “causes” of any given death. Thus cryonic suspension’s “hybrid” status: it is at once both a *simulacrum* of cold war technoscience and a second-order (magical) survival strategy. In terms of rendering the

cryonic suspension *intelligible*, a pervasive problem introduced Chapter 1 and taken up again in Chapters 2 and 4, clearly the present study's most significant interpretive contribution comes with recognizing that while cryonics ultimately fails in terms of legitimating technoscientific criteria, inviting dismissal as "pseudoscience, Bauman's call for a sociology oriented towards death, paired with Orsi's call for empirical studies of abundant phenomena, require recognizing that cryonics as embodied in Ettinger and Cooper's "freeze now" manifestos has a *practical* import, in that it offers a recipe for action vis-a-vis death; a way of knowing death and acting, even though at base "wishful thinking," *magic*. Again, with the claims set forth in Chapter 3, this interpretation is to be understood as the outcome of guidance taken from Orsi and Bauman, coupled with a consideration of quite novel historical materials.

In Chapter 4 I proceeded to round out this interpretation by discussing the other side of the historically contingent affinity that conspired in the emergence of cryonic suspension. I argued that the cultural malaise surrounding death and dying in the American 1960s was the outcome of the sequestration of death and its attendant strategies of biomedical deconstruction and combative technoscience coming up especially short. In this sense cryonic suspension, as a second-order (magical) survival strategy, is to be read in turn as an emergent product of modernity's key survival strategies coming up short against death. Cryonic suspension as set forth by Ettinger and Cooper, I argued, while conceived as offering an alternative to the status quo through recourse to an envisioned cybernetic future, nevertheless and quite ironically evidences a second second-order appeal to the very base logics of sequestration at a moment in which they had fallen decidedly short. Just as Ettinger and Cooper were in this moment moved to produce their respective manifestoes, issuing the call to "freeze now," so also were others in this moment moved to consume their arguments, to answer their call, to freeze and to be frozen.

With these contextual considerations in mind, in Chapter 4 I set forth a series of deeply interdependent narrative accounts of the first cryonic suspension patients, broadly in keeping with the methodological dictates of specific history: “What happened and how?”; more specifically in response to the following questions: Who were they? When and under what circumstances did they or their families come to learn of cryonic suspension? What ultimately happened to them? It is here that the novelty of the historical materials at my disposal is arguably thrown into sharpest relief, as through these materials I was able to offer (re)constructions of the first cryonic suspensions—the families and lives of those frozen and those who froze them—and to press the resulting narrative accounts into the service of several interpretive ends. I demonstrated, first of all, how the manifestos produced by Ettinger and Cooper circulated and brought together various families and individuals in a shared space of anticipation, under the auspices of the first cryonics organizations: The Cryonics Society of California, The Cryonics Society of New York, and the Cryo-Care Equipment Corporation. In proceeding as such, I also attempted to *demonstrate* the material instantiation, the often chaotic *performance* of cryonic suspension, as a second-order (magical) survival strategy.

The patient narratives also had the effect of showing the horrific events at Chatsworth “in the making,”⁵¹⁵ and thus as well putting on display the highly questionable conduct of Bob Nelson. The principle aim in constructing the narratives, however, was not vilify Nelson but to humanize the patients, demonstrating that they and their families espoused and acted upon a hope that was to them and others quite real, which is understandable given the nature of the historical moment in question, regardless of Nelson’s intentions and misdeeds. Indeed, the recovery of this hope, nowhere more plainly evidenced than in the act of freezing itself, should

⁵¹⁵ See Bruno Latour, *Science in Action* (Cambridge, MA: Harvard University Press, 1987), 4.

be understood as the outcome of interpretive guidance taken from Orsi and Bauman with respect to quite novel historical materials. As with the interpretive claims set forth in Chapter 3, in the absence of either these materials or interpretive guidance this hope would likely remain hidden, bracketed from consideration by the constraining conventions of the Nelson “atrocious tale.” Indeed, the recovery of this hope links the plight of the first cryonic suspension patients and their families to the shortcomings of the otherwise pervasive, modern magical logic that in no small measure conspired in producing the historical moment in which they sought an alternative—an alternative, however, that simply replicated and compounded the logic of modern magic at a second-order level, arguably expressing nothing less than the sequestration of death taken to its extreme: the envisioned eradication of any given “cause” of death.

It is the recovery of this hope precisely, then, that is in keeping with the present study’s opting for a sociology *centered about* death’s sequestration, an *abundant sociological history*, for however false a hope it may be, its root logic nevertheless pervades the modern world. The first cryonic suspensions failed; they fell short. But then so also will reason more broadly, with respect to death, continue to fall short, as will its attendant strategies of sequestration, medicalized deconstruction, and policies of self-care. The present study has in part aimed to demonstrate, by way of cryonic suspension, that a sociology which fails to recognize the sequestration of death as the principle constitutive feature of modern social life will similarly come up short. For in replicating, epistemologically and in governing standards of research practice, the logic of death’s exclusion and sequestration, sociology is ill-poised to accommodate, account for, and interpret the hybrid entities and abundant phenomena the modern impulse to sequester has conspired in creating. By refusing to pass over in silence the lived reality of one such hybrid entity, one such abundant phenomenon, I have attempted to render

cryonic suspension intelligible by opting for a sociology centered about death's sequestration. If my wager has paid off, then perhaps the exclusion of death, dying, and the dead from everyday life in the modern world will in time come to appear strange—and cryonic suspension a little less so.

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