

# Cryonics

Volume 10(3)      March, 1989

- Images of cryonics  
April, 1966 --  
The first person  
ever frozen.



**Cover:** The first person ever frozen. The suspension was performed in April, 1966 by *Cryocare Equipment Corporation* of Phoenix. This picture was taken at the time of her removal from suspension for conventional interment late that same year.

All photos courtesy of Ted Kraver.

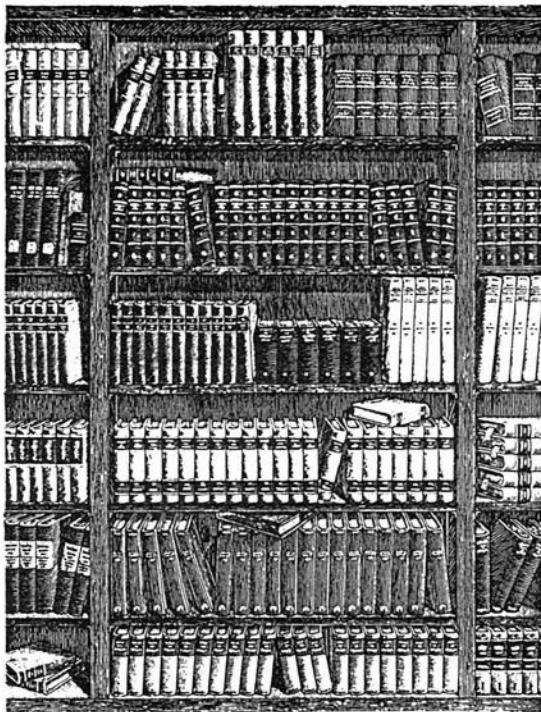
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## EDITORIAL MATTERS



Continuing our interest in the history of cryonics, this month we have an eyewitness account of the first human suspension ever, in early 1966. Ted Kraver was one of the founders of the *Cryocare Equipment Corporation*, and one of the first persons ever to approach cryonics as a practical engineering problem. As is usually the case with engineers, he succeeded in what he set out to do. And then he went on to do something he hadn't planned on at all; the first cryonic suspension. A generation ago he put his thoughts and memories down on tape, telling how he and his colleges bent available technology to their purpose, one small step at a time. Within six months of the time they began, Cryocare had performed the first cryonic suspension.

In the realm of speculation, one can wonder what the shape of cryonics would be like today had there been another half-a-dozen men like Ted Kraver at the dawn of cryonics; men able to realize in metal what other dreamers could only speak about.

On a much different note, another practical person, Dave Kekich, has written a practical memorial to a friend who recently died. Dave is a salesman, and "Oz" was his friend. One of the tragedies of cryonics is that we all have buried, and *will* bury, many people that we care about very much. Dave has gone beyond his sorrow, using his salesman's knowledge to write about how he might have sold cryonics to Oz more effectively, perhaps even successfully, and how we might do the same with those dear to each of us.

Whether or not you chose to use the sales pitch Dave has prepared, he makes a very telling observation: *people expect to be sold*. In fact, they *like* to be sold. Here, in this time, in this place, in this very commercial society of ours, being selected to be sold something is a measure of our value to others. For each of us, there are special people out there who are worth our selling the idea of cryonics to. *Get out there and sell them!* But don't alienate them. Never alienate them. Because if you don't succeed the first time, you have to be able to go back, again, and again, and again. And sell them.

### ERRATA

In his review of *The Man With Nine Lives* (February issue), Steve Harris speculated that perhaps Robert Ettinger saw the movie. However, in 1940, he would have been a young man rather than a teen-ager as stated in the article. This correction was made by Steve, but didn't make it to the final printout. We apologize to Dr. Harris and Robert Ettinger

for the error.

\* \* \* \* \*

## EXTRA BRACELETS AND NECKTAGS

We have found that orders to the supplier of the emergency notification bracelets and necktags worn by our suspension members are responded to more rapidly with a large order. If any Suspension Member is interested in acquiring spares of these, their price is \$22 each.

\* \* \* \* \*

## MEMBERSHIP COUNT

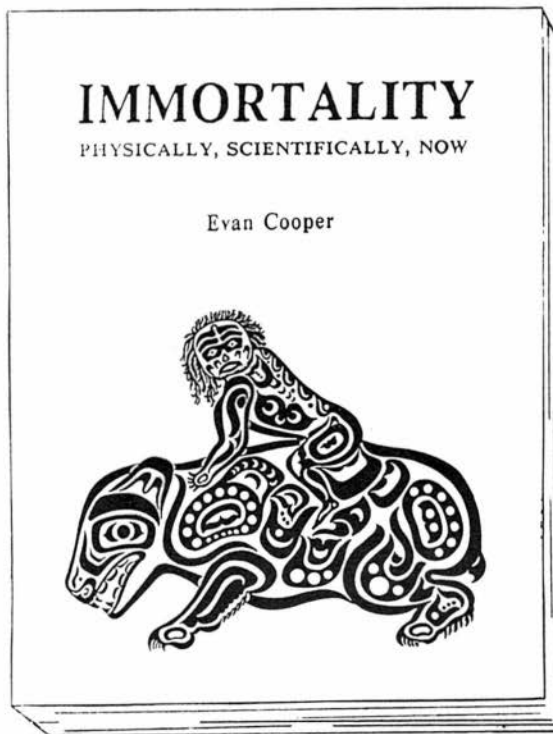
Alcor now has 118 Suspension members, 191 Associate Members, and 11 members in suspension.

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## RARE CRYONICS BOOK TO BE REISSUED BY THE VENTURISTS

by Mike Perry

Evan "Ev" Cooper was an enigmatic figure who in December, 1963 started the first organization to promote cryonics, the Life Extension Society (LES), based in Washington, D.C. Before that Cooper had written a short book, *Immortality Physically, Scientifically, Now* which expounded the cryonics thesis that persons should be frozen at death for later revival. This book was privately published in November, 1962, shortly before the first version of *The Prospect of Immortality* by Robert C.W. Ettinger was also privately published. Ettinger's book, revised and enlarged, was offered to the public by Doubleday in 1964, and is credited with being largely responsible for the cryonics movement that shortly developed, though substantial credit is also due to the parallel efforts of others, notably Cooper himself and LES. Meanwhile Cooper's book remained in the shadows, unknown to all but a few. Saul Kent has estimated that only about 50 copies were printed. A few more copies were made (from a defective photocopy master) by the Institute for Cryobiological Education in 1983, after Cooper was tragically lost at sea.



The book, though dated from a technical standpoint, still contains many interesting ideas and, in view of the revolutionary character of the cryonics thesis, is still well ahead of its time. It deserves to be read both for the insight it provides into the origins of the cryonics idea, and for the audacity and brilliance of some of its thinking. The Phoenix-based Venturists are interested in preserving cryonics history and disseminating information that will be of general interest. They have taken up the task of reprinting the book, with my assistance as editor, and plan to offer it later this year, date and prices to be announced. The book is to be offered in two versions, (1) a photocopied facsimile of the original, and (2) a laser-printed version with a supplemental selection of Cooper's other writings. The photocopy edition will satisfy the historical purist who wants to see the text exactly as Cooper typed it out in that pre-word processor era. Cooper was not a professional writer and the book, though generally well written, is not without soft spots. It would certainly have been edited had it been brought out by a major publisher. (Cooper himself was dissatisfied with his book and wanted Saul Kent to help him revise it, a project that was never completed.) The laserprint version will be modestly edited with the aim of improving the clarity of expression and fixing glitches where needed but keeping the thought intact throughout.

Unfortunately the secretive Cooper, who became disillusioned with the cryonics movement and dropped out in the late 1960's, destroyed his private correspondence and papers sometime before his death, which makes it difficult to track down introductory and supplemental material. I have had had considerable help in gathering materials though, from the Alcor Foundation, Ted Kraver, Bob Ettinger, and others. Extracts to be included, mainly from Cooper's newsletter, *Freeze—Wait—Reanimate*, form a natural addendum to the "postscript" section of the original book and recapture the early, heady days of the cryonics movement, when it seemed just possible that the idea might soon gain the widespread acceptance it deserved. It didn't work out that way, not yet, but we can still be inspired by this refreshing glimpse into a past age of innocence and enthusiasm.

Despite the success in finding materials, there still are many unknowns about Cooper. He was born in 1926 (according to Mike Darwin, *Cryonics*, March, 1983, who was able to obtain some information from Cooper's former wife, Mildred). He died, according to the best estimates, probably in a severe storm that wracked the Atlantic coast in late October, 1982. Cooper's main passion, which finally eclipsed his interest in cryonics, was his sailboat *Pelican*. From the scanty information I've found on his personal life it appears that he spent his later years (at least) sailing up and down the Eastern seaboard, from New England to the Carolinas or Florida, finding work as a boat carpenter when he needed or wanted to, and otherwise living a nomadic existence, with apparently no fixed address. His boat had been disabled in a storm at Nantucket, Mass., but Cooper, wishing to winter in a warmer southern locale, made makeshift repairs and set sail on October 17. His last written communication was from nearby Martha's Vineyard a few days later. He had been unable to find a sailing companion and thus was setting forth alone. When he didn't arrive on schedule in Beaufort, N.C. his friends had a Coast Guard search performed, but no trace of Cooper or his boat was ever found.

I'd like to learn some basic biographical information to include in an editor's introduction to the book, such as Cooper's full name, exact date and place of birth, educational background, occupation(s), etc. Anyone with information they'd like to contribute or leads (especially on the whereabouts of Mildred Cooper) should contact The Venturists, 1355 E. Peoria Ave., Phoenix, AZ 85020 or call me (Mike Perry), 714-736-1703.

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## MORTON DOWNEY SHOW

On February 17, the topic of the *Morton Downey Jr. Show* was cryonics. Alcor member Kevin Brown was there, and later wrote an article which he ran on the Internet of electronic mail networks. We reproduce it here.

\* \* \*

*From: kqb@ho4cad.att.com*  
*Subject: Morton Downey cryonics show*

*The Morton Downey, Jr. show, which is a nationally syndicated program broadcast to 80% of the people in the country, taped a program on cryonics Monday, February 6th, that was aired on the 17th of the month. The show featured Dr. Avi ben-Abraham (Chairman of the American Cryonics Society), Gerard Arthus and Philip Kirschner (members of the Cryonic Society of New York and also suspension members of Alcor), Irving Rand (of the Cryonics Coordinators of America, which provides life insurance for ACS members), Father James Labar, and Dr. William Ober, the Medical Examiner of Bergen County, NJ. I was in the audience but did not take advantage of the opportunity to be a "loudmouth". What follows is a combination of recollection and videotape of what happened.*

*Most members of the audience did not know the topic of the program until shortly before the taping of the show. Some, however, had received the word sufficiently in advance to make a sign reading "Freeze-Dry Coffee - Not People". The prospects looked ominous when the prep man introduced the topic: "Here is a man who wants his head cut off and frozen so that he can come back to life in 100 years. Do you believe it?" (Audience: snort, snort, guffaw, howl, grunt) Then a pre-taped introduction played on the monitor. Morton Downey was dressed in a butcher's apron amongst several carcasses in a meat locker telling people about cryonics.*

*The rules for success in talk shows are not the same as the rules for success in academic circles, and the rules for success on the Morton Downey show are even less academic. It is conducted more like a raucous party than a forum for intelligent conversation. In general you need to be both fast and loud. If you cannot get your point across in ten words or less, forget it; someone will interrupt and the topic of conversation will shift to something else. There is no doubt, however, that Downey is the ringmaster of his circus. When he wants silence, he gets silence ("ZIP IT!"). And when he wants to interrupt....*

*Morton Downey asked a few pointed questions, as he should, but it was only the audience that wanted blood. The highly-credentialed ben-Abraham was the focus of the show. The audience got to hear impressive things about him; it was said that he had been the world's youngest doctor, doing open heart*



**Morton Downey, Jr.**

surgery by the age of 16 and was also nominated for a Nobel Prize. (That has to be somewhat intimidating.) He also keeps his cool under fire, is insistent on making his points, is politically astute, has an understandable yet foreign accent, and can wear a suit. (Remember, we are talking about Show Biz here!) However, he did not respond to Downey's or Dr. Ober's questions, and seemed to have almost no specific knowledge of cryonics or cryobiology, substituting instead sweeping generalizations.

He is also good at one-upmanship. Gerry Arthus was originally told that he would be on the stage, but somehow ben-Abraham wound up in the only seat.

Father Labar was asked what problems might arise concerning the soul if cryonics brings back someone who was dead. He replied that the soul would come back to the body and did not seem particularly disturbed about it. He said that people who "die" in surgery and yet come back do not have problems losing their souls. The Medical Examiner was skeptical about cryonics and wanted details but was unable to deliver any crushing blows to the cryonicist's arguments. He even (unintentionally) helped give a good advertisement for Saul Kent's vitamins (Life Extension Mix) when he checked out, and found acceptable, the contents of Phil Kirschner's bottle of it. Arthus, who is quite tall, was questioned about his choice of neuropreservation rather than whole-body, while members of the audience shouted "Lurch, Lurch" and hummed the theme song of the Addams Family show. The show ended rather upbeat. Morton Downey said that he wants to come back in two hundred years so that he can see his AUDIENCE!

Considering how serious cryonics is (life vs. death), is a rowdy party (such as the Morton Downey show) an appropriate forum for presenting it? You will have to judge that for yourself. I can, however, point to some definite accomplishments. First, it presented the notion of cryonic suspension to a national audience and managed to do so without the cryonicists being dismissed as kooks. (On the Morton Downey show yet!) The public perception of cryonics influences our legal and political climate. This, in turn, may greatly affect the ability of cryonics organizations to do cryonic suspensions successfully, so consciousness raising and educational efforts to reduce the public's ignorance about cryonics and general death-oid orientation will always be valuable. This was not the first nationwide show on cryonics nor will it be the last.

This show also gave practice in media exposure to the cryonicists on stage and at the "loudmouth" stations. Certainly practice is needed. All the questions asked had good answers, but between lack of studying and lack of "combat training" for the show, not many of the questions were answered well. Furthermore, since the show will be televised, they will get excellent video feedback on their performance, which will be useful for future presentations. And there may indeed be future appearances on other television talk shows. The producers of these shows do not live in a vacuum; successful appearance on one show often leads to an appearance on other shows.

- Kevin Q. Brown  
 ...att!ho4cad!kqb  
 kqb@ho4cad.ATT.COM

PS: I was surprised by what was NOT said. I do not recall the Dora Kent case even being mentioned. Also, nobody claimed to know about Alcor's recent suspension of Dick Clair Jones ("John Roe") when Downey started fishing for it. Finally, this program showed (to the cryonics community) some cooperation among Alcor and ACS members because the members of both Alcor and ACS must have bit their tongues on several occasions where they normally would express differences of opinion.

## Our Legal Status: Or, You Can't Tell Who's Scoring Without A Program

by Hugh Hixon

Everyone always said that cryonics would get involved with the law sooner or later. Twenty-one years ago Curtis Henderson and Robert Ettinger got together for the *UCLA Law Review* and predicted law to come (*Reflections On The New Biology: Cryonic Suspension And The Law*, 15 *UCLA Law Review* 267, (1968) (Reprint available from Alcor)). Still, for a long time cryonics managed to be unobtrusive enough that our legal affairs were relatively minor. A good thing; until fairly recently, there were simply not enough resources in Alcor to mount any major legal battles. That's changed now. No surprise to anyone who has thought about cryonics very deeply, we're in the courts at last. And the money and people are there to make it likely that we'll get justice. Maybe not as much of either as we'd like, but we are employing attorneys with excellent track records.

So what's the score? We have reported regularly in *Cryonics* on Alcor's legal doings, but it's been piecemeal. It's time for a summary. There are some things we can't tell, for various reasons. For example, a lot of this is legal work in process, and the judge gets upset if he reads about what's going on in his court before it happens, but I'll try to make this as complete as possible.

First, our team. We now have a firm of civil and constitutional attorneys (Garfield, Tepper, & Ashworth) for the civil suits that have come about as a result of the Dora Kent Affair and the lawsuit against the California Department of Health Services (DHS). They are also acting independently for Saul Kent in the contest over Dick Jones' estate; another firm of civil attorneys (Santucci, Potter, & Leanders), that has handled our corporate work for several years now; a probate firm (Stantun & Ballsun), working on the Dick Jones case and other probate matters with Saul Kent; Samuel Ingham, probate attorney, representing Alcor in the suit over Dick Jones' estate; Carol Reichsteder, probate attorney, subbing for Samuel Ingham during an illness; Gerald Polis, criminal attorney, representing the Alcor suspension team in the Dora Kent Affair; three other attorneys representing individuals on the suspension team; Henson, Donaldson, & Gregory *pro per* (for themselves); and Keith Henson, lobbying and bureaucratic interrogation done for fun.



The Other Side includes the Riverside County Counsel; the Riverside County District Attorney; the Attorney General of California; the United States Attorney; and an assortment of civil attorneys representing other parties in the suit over Dick Jones' estate.

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(Note: *The following titles are descriptive, rather than exact.*)

*Kent vs. Carrillo*; Christopher Ashworth vs. Riverside County Counsel. Superior Court of California, County of Riverside, Case # 191277. They lost. On 10 November, 1988, Riverside Coroner Ray Carrillo (represented by his chief deputy coroner, Scotty Hill) accepted a permanent injunction from "removing or causing the removal of Dora Kent or [any other suspension patients cared for by Alcor as of February, 1988], from cryonic suspension". This was a double victory, since it prevented the coroner from autopsying Dora Kent or any other of the named patients, and it recognized implicitly that people in cryonic suspension had the right to chose that method of disposition. As a side effect, it produced a number of persuasive expert testimonials on the feasibility of cryonic suspension, which have found their way into the literature of both Alcor and another cryonics organization.

*The Six vs. the Coroner*; Christopher Ashworth vs. Riverside County Counsel. Superior Court of California, County of Los Angeles, Case # C 699270. This is the false arrest suit against the Coroner by the six Alcor members (Mike Federowicz, Hugh Hixon, Dave Pizer, Mike Perry, Arthur McCombs, and Carlos Mondragón, in order of arrest) who were hauled off in handcuffs during the first Coroner's search on January 8, 1988. The case was undertaken by Ashworth for contingency plus a retainer. Current status: The Coroner's office made the counter-claim that the people were taken into custody and released, rather than arrested. No further action expected until the District Attorney completes the Dora Kent "homicide" investigation.

*Dora Kent "homicide" investigation*; Gerald Polis and others vs. the Riverside District Attorney. The bottom line is: after 16 months of "investigation", no charges have been filed. Explanations for the DA's behavior in this are speculative and Byzantine. Most likely: one of the Deputy DA's sees eventually bringing in some kind of homicide charge as a good career move, and hasn't been able to quit dreaming. In November, Keith Henson's pressuring of the Coroner's office finally produced a report of the investigation of the Dora Kent suspension, an autopsy report, and a report of drugs present (all about 10 months overdue by the internal administrative standards of the Coroner's office). It is *very* circumspect, making no claims whatsoever of any wrongdoing, and is not in the least supportive of the February, 1988 death certificate claiming homicide.

*John Roe and Alcor vs. Mitchell, Kizer, et al (and Sherman Oaks Community Hospital)*. David Epstein of Garfield, Tepper & Ashworth vs. California Attorney General, Superior Court of California, County of Los Angeles, Case # C 697147. John Roe is of course Richard Clair Jones, long-time Alcor member placed in suspension December 12, 1988. Dick initiated this lawsuit while he was still lucid, to compel the Office of the State Registrar (Mitchell), of the California Department of Health Services (DHS) (Kizer) to issue a VS-9 form (Disposition of Human Remains) for him for cryonic suspension, which they had refused to do in two prior suspensions. Sherman Oaks Community Hospital was dragged in when the hospital administration decided they would rather defy Dick's wishes than those of the DHS. Judge Aurelio Munoz resolved their ethical dilemma for them on October 14, 1988, in the form of an injunction against the hospitals' interfering, and Dick's suspension went forward without further problems from the hospital (See *Cryonics*, November, 1988 and January, 1989). A declaration has been taken from Mitchell, but David Epstein has been prevented from completing work on the case and going into court by his involvement in the probate fight over Dick's estate. This case could be titled "Cryonic suspension vs. the Bureaucrats", and may well make or break cryonics. Current status: No action anticipated before the end of March, if then.

*The Two Wills Of Richard Clair Jones*. David Epstein (Garfield, Tepper & Ashworth)

vs. others. Los Angeles Superior Court, Dept. 88, Case #s P 730905 (first will) and P 730881 (second will). All the elements are here for a mainstream novel. The ins and outs of this are too Byzantine to detail here, but essentially, Clair Martin (Dick's sister) felt that he didn't leave enough for her and her children, nieces, and nephews in his will of August, 1987, so she enlisted Jenna McMahon (Dick's business partner) and a will more favorable to her was written. With the assistance of attorney Barrett McInerney, Esq., Dick's signature was obtained on it less than 56 hours before he deanimated. He had not been lucid for several weeks prior to this. Alcor has remained uninvolved in all this except as a beneficiary. Saul Kent held Dick's Power of Attorney and Medical Power of Attorney, and was named as the Executor of the August, 1987 will. Saul is contesting the second will in his capacity as Executor of the first one, and was granted standing in the matter on February 24. All the people involved in the creation and signing of the second will are being deposed. This case will probably be resolved by trial late this year.

*Henson, Donaldson, & Gregory vs. Federal Bureau of Investigation.* Keith Henson, Thomas Donaldson, & Roger Gregory *pro per* vs. United States Attorney. U.S. District Court, Northern District of California, Case # C 88 20788. When the Riverside County Coroner hauled off Alcor's equipment with a search warrant in February, 1988, one of the things they took was the computer with the Alcor electronic bulletin board files. As it turned out, this is in violation of the 1986 Electronic Communications Privacy Act. Interfering with electronic mail is tantamount to intercepting first class mail. Even law enforcement officials are required to get a warrant to do this sort of thing. The Coroners, not being computer-literate, did not do this, nor did they make any attempt to address the problem when notified of it by Keith Henson. Nor did the Riverside Police Department, when they later took custody of the equipment. Keith reported this violation of Federal Statute to the FBI and the United States Attorney's office, both of which refused to investigate to even see if the law might have been violated. Why they should have refused to do this is a matter of speculation, as all Keith's attempts to get them to act (including asking his Congressman to investigate) have resulted in bureaucratic drivel without any action. This suit is Keith's, Thomas's and Roger's reply to all the stonewalling. If they are unable to get the court to force the FBI and the U.S. Attorney to protect people's basic rights to privacy, the law also allows them to take civil action. Current status: No reply to the suit has been received, but the FBI and U.S. Attorney are required to respond by March 21, and meet in a status conference March 24, when court scheduling must be done.

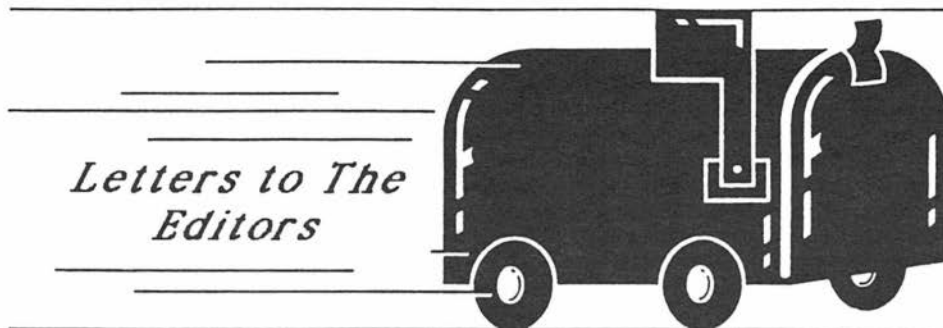


*Keith Henson vs. Dept. of Vital Statistics.* This is not a court case, but when the DHS starting making obstructive noises after the suspension in May, 1988, by failing to issue a VS-9, Keith requested their files under the California Public Records Act, which allows public access to the files of state agencies. This battle has gone two rounds already, and a third is probably in the offing since it is obvious that they are holding things out. This action of Keith's has resulted in several interesting revelations concerning the history of attempts at regulation of cryonics in California and a number of documents that our lawyers have incorporated into our legal documents. Keith expects to cover his activities and findings in several forthcoming articles here. At this time,

Cath Woolf is intending to go after the files of other state agencies that have been involved with cryonics over the years. Current status: Keith is about to get on their case again.

*California Attorney General and Alcor.* This is not a court case. Since Alcor is a charitable trust incorporated in California, it is regulated by the Attorney General's Office of Charitable Trusts, which has the right to investigate our conduct. They have chosen to do this for reasons unknown at this point. Since we have already had several of our attorneys and CPAs look at us, Alcor President Carlos Mondragón regards this as no more than a transitory nuisance.

\* \* \* \* \*



To the Editors:

In *Cryonics*, Vol. 10(2) (Feb. 1989) there is an article by Steve Bridge, Alcor's Midwestern Coordinator, entitled, *Cryonics The Home Town Way: Practical Planning For A Cryonic Suspension In Your Own Area*. This article was informative, I'm sure for many of our members not involved in providing patient services for Alcor. It has been suggested that Steve's article be reprinted and given to every new Alcor member.

There are, however, some problems with the article that should be addressed here, for those of you who have read it in *Cryonics*, and changes made before the article is reprinted and distributed to the novice Alcor member. The article had section headings in bold type, so I will use them here to help the reader reference my comments to the article.

**Getting Your Thoughts In Order** -- The term or phraseology "*ischemic coma*" is used here and elsewhere in the text, without explanation. "Ischemic coma" is used in this context to mean "*clinical death*", for those of you who are not cryonics insiders of long enough standing to be aware of this usage. Both Brain Wovk and Mike (Darwin) Federowicz like to use this phraseology, and now Steve Bridge. Unfortunately, there is a clinical class of coma that is caused by ischemia. Many heart patients who have experienced cardiac arrest and been resuscitated lapse into coma as a result of the ischemic episode during their cardiac arrest. Many of these clinical patients recover from their coma, depending on the duration of their ischemia, and go home. If the novice cryonicist starts telling a physician that Alcor wants to take charge of a patient when ischemic coma occurs, the cryonicist may find himself being escorted off the grounds of the medical facility by one of their security guards. The medical professions use the term *clinical death*, and not

"ischemic coma", which can have another clinical meaning. I find the use of "ischemic coma" in the cryonics context to be unjustified and I believe it could lead to a breakdown in communication with medical professionals if used in the hospital context. We have enough trouble communicating our ideas about cryonics without using insider jargon that contributes to misunderstanding. Please use a term everyone at the hospital or nursing home will fully understand, *clinical death*.

**What You Need To Prepare For** -- Steve comments that one shouldn't count on physicians to sign the Alcor *Physician's Affidavit* and says, "I'm not sure if anyone has ever signed it". I have informed Steve that I have a signed *Physician's Affidavit* in my file at Alcor. Arthur McCombs, the Alcor administrator handling members' files, informs me that less than 20 *Physician's Affidavits* have been signed. Perhaps it would be of help if new member applicants whose physicians refuse to sign the *Physician's Affidavit*, ask doctors what could be changed in the affidavit, if anything, so that they would sign and that would still accomplish our purpose. Let's not give up trying to obtain signed *Physician's Affidavits*.

**Mortician** -- Among other things, Steve recommends you tell the mortician, "that you would not ask him to do anything illegal". I believe if you adequately explain what you want the mortician to do for you, he will know that he is being asked to perform only lawful services. When trying to obtain professional services, it would be counterproductive to raise the spectre of illegality.

**Fees** -- I *do not* recommend making a specific cash offer, such as the \$500 or \$1,000 suggested by Steve in the article. It is my experience that you are likely to secure the mortician's services and the use of his facility for less if you ask him to set the price. The mortician is operating a competitive business and he may well make a lower offer than you expect. As a matter of fact, doing this with the last two morticians asked to supply their services has resulted in a net savings to Alcor of nearly \$600, if compared to making a \$1,000 offer up front.

**Ice** -- Steve rightly points out that reducing the patient's temperature, inducing hypothermia, is probably the single most important factor. However, the statement, "It is certainly more important than CPR", is made in a context that could be misleading to the novice who has not read our transport protocol. Transport personnel trained by Alcor know that the first thing to be done after pronouncement of clinical death is CPR. CPR reduces ischemia, circulates the medications given to counter ischemic injury, and increases the patient cooling rate when ice packs are applied. It would be wrong to pack a patient in ice while neglecting to begin CPR, if the patient has just been pronounced clinically dead.

**Oxygen** -- I believe Alcor must maintain a policy of dealing with everyone in a forthright manner. When Steve ordered oxygen cylinders delivered to the mortuary, it may have seemed a small thing to "play dumb", and claim not to have known why oxygen was not needed at a mortuary. Alcor must not allow any policy other than playing straight, which is playing smart. I suggest another strategy. The mortician is typically a trusted businessman in the community, so refer people to him without comment, and let him handle transactions with other businesses, if you anticipate or are confronted with problems making purchases.

**Sterile Water** -- Our remote total body washout (TBW) procedure requires nearly 20 liters of water, not 16 as indicated in the article. Sterile water for injection and for irrigation are both USP grade, and qualitatively the same, regardless of the pharmaceutical supplier. The only difference is the size and/or type of the container. Large (two liters or more) irrigating containers with screw-type caps are preferable because they are easily opened and quickly poured.

**The Press** -- There is a detail not mentioned in this section of the article that needs to be said. It is important to remember *confidentiality*. Every Suspension Member tells Alcor in his/her suspension paperwork whether or not Alcor can release their name to the media when they are suspended. If you are going to talk to the press you need to get permission from Alcor to release specific information, even the suspension patient's name. I would prefer all press queries be referred to Alcor staff in California, in order to avoid breaches of confidentiality and interference with an ongoing transport or other parts of the suspension procedure.

The advance preparation done by Steve Bridge and other Alcor members to assist with the remote standby and TBW in Indianapolis last October was very helpful. I believe Steve's work proves the value of the Alcor Coordinator program. I hope others will be stimulated by Steve's articles to participate in locations remote from Southern California.

Jerry Leaf  
Vice-president, Alcor

\* \* \*

Steve Bridge replies:

I thank Jerry Leaf for his observations; I only wish we could have run the article past him before it was printed. I see nothing in his comments to argue with, and they will be given great weight as we revise the article for distribution to new members. Further recommendations from other experienced members are welcome.

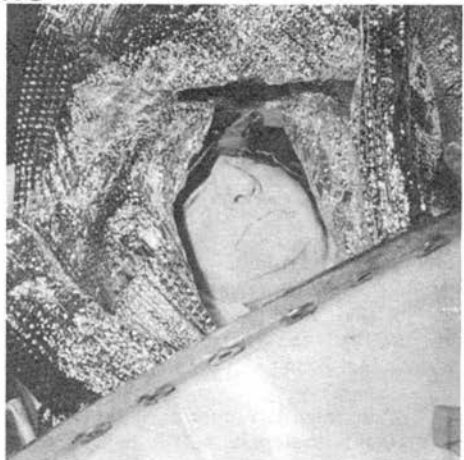
Steve Bridge  
Indianapolis, IN

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## NOTES ON THE FIRST HUMAN FREEZING

by Ted Kraver

*The text below was transcribed and then edited from a recording made by Ted Kraver, chief engineer for Cryocare Equipment Corporation in May of 1966, about two weeks after freezing the first human being in the hopes of future resuscitation.*



To begin with a little history: For me, the idea of making storage units for cryogenic interment purposes dates back to September of 1965. Frank (Rick) Rickenbacker and I met with Ed Hope where we worked at the Technical Services Department of the *AiResearch Manufacturing Company* (Phoenix). The meeting was held after I got off work. I'd joined the Life Extension Society several months before from a small ad in the *Mensa* newsletter, and noticed in the LES newsletter that Mr. Hope was going to be building a

*First woman frozen, just prior to thawing.*



"cryogenic interment facility in Phoenix" -- and my interest was sparked.

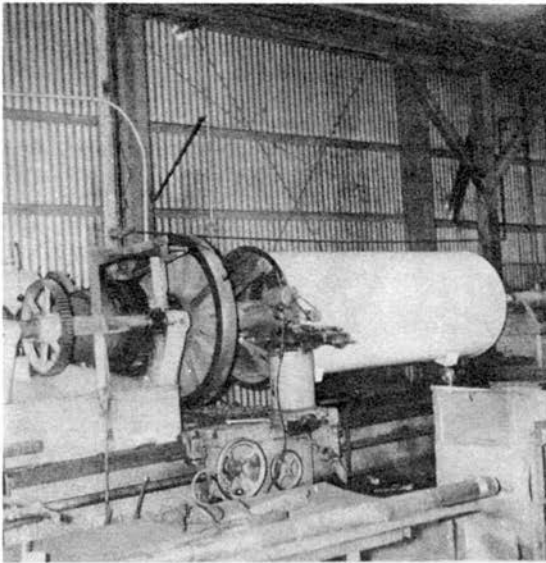
With our engineering background I thought there might be some possibility of personal involvement and we decided to contact Mr. Hope. Rick and I had gotten together a couple of times to discuss ideas for businesses which we could start by ourselves. We were both interested in cryogenic interment -- we thought it would be a tremendous thing. But neither one of us had really done anything about it, mainly because we just didn't have the financial backing, knowledge, or freedom to undertake such an enterprise. We had built a large cryogenic test facility for *AiResearch* and had just completed a year of testing of Saturn S IV B components. This had required massive use of liquid hydrogen and nitrogen, and very cold, high-pressure helium. We had designed, built, and used a dozen unique cryogenic test rigs for valves, hoses, and tanks.

So I gave Mr. Hope a call. I was able to locate him without difficulty because our temporary secretary at Technical Services at that time turned out to have a sister who worked for Mr. Hope and was very interested in cryonics. Mr. Hope came over to our place. It's hard to say what our first impressions were. Rick came down after work and we sat around and just talked over the idea. So Rick and I got together a couple of nights later at his house and laid out the first drawing of what we thought a single-person capsule would look like. We had a few ideas on insulation and engineering the vacuum system. We decided on glass matte-foil insulation. The horizontal inner tank would hang on thin rods with stacked flat washers for minimum heat flow. The inner aluminum tank would have a bolted lead gasket that was compressed as the tank cooled. The outer steel tank also had a bolted head. Copper-constantan thermocouples monitored temperature, a simple automotive gas tank gauge monitored liquid level, and vacuum was measured by a thermocouple gauge. A long, spiral fill line and long vent line with bellows for expansion minimized heat leakage. Our target was six months between fills (0.55 % per day).

We both did some reading and we got together at Ed's house over the course of the next couple of days, and spent an evening there going over what we would do. We decided to set up a corporation and build a human storage capsule. Ed would finance it, at least the first few thousands, and we would provide the engineering expertise and even carry out the fabrication. Rick and I were putting in a more or less equal amount of time, and \$500 each, and a little more time than Ed was at this point. Ed was going to handle not only financing the venture, but also running the business end of it; handling marketing, sales, and that sort of thing. That's how *Cryocare Equipment Corporation*, the first company actually to manufacture human cryogenic storage units came to be. Ed had a number of small businesses (oil delivery, night club) in the Philadelphia area. When he came to Phoenix, he opened several wig shops at the beginning of the wig fad, and owned and built industrial buildings. He built the first "do-it-yourself storage warehouse" two years before the industry started.

Prior to our first meeting, Ed had visited a number of places around the country -- including a fellow by the name of Leonard Gold back in Springfield, Illinois who was also intending to manufacture and market cryogenic interment equipment. I don't think he had talked to Ettinger yet, but he had met with just about everyone else. Most of the other outfits that were supposed to be manufacturing equipment either weren't producing an item or just had the product developed to the point of an artist's conceptions. In short, there was no real product and no sign of any being developed soon.

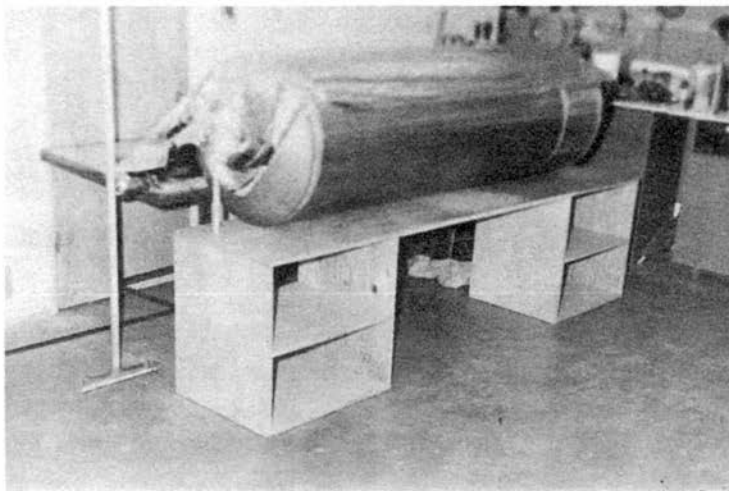
Our intention upon starting Cryocare was to simply build a product and sell it -- if a market developed. We had no interest at all in getting involved with handling the actual freezing of patients. We intended to leave the processing aspect of the operation to Ettinger and his group or anyone else who wanted to do it: morticians, physicians,



*Vacuum flange of outer vessel being machined on large lathe.*

small, unexpected snags that cropped up. We had a fair amount of custom machining which had to be done and that took some time. Finally we ran some pressure and leak checks on it -- not very good ones but we ran them -- and put the thing together.

We originally designed it for powder (perlite) insulation using low vacuum, but actual calculations proved this old technology not to be good enough at all. So we got some aluminum foil and glass mat insulation and wrapped the inner tank with it. This was an extremely touchy operation. We had everyone there -- Barb (my wife), Rick's wife and Mrs. Hope. We spent a couple of nights just wrapping the thing and an entire weekend



*Inner vessel just prior to wrapping.*

whoever and however it developed. We would just build the physical hardware. But life is almost never that simple.

About two or three months after we formed Cryocare, following the usual quota of design changes, we built our first cryocapsule. The outside was fabricated of high carbon steel -- we used a commercially available steel tank 32 inches in diameter and eight feet long as the starting point. We put a single compression gasket on the front, just a flat neoprene gasket. It turned out to be one of our biggest headaches. The inner tank we had custom-fabricated from aluminum.

We had the ends for the inner tank spun locally from a die one of the local people had for spinning something else. It was sort of jerry-built right from the start. Many nights were spent just hauling things around, getting this done, getting that done, working out myriads of

was spent with the unit up on-end just wrapping the head. This involved interlacing over a hundred layers of foil and glass mat, a kind of "do it yourself" version of superinsulation. This presented a number of very difficult problems and the work was tedious and unpleasant.

Next we welded on some heat shields and wrapped many additional layers of insulation around it; we really insulated the devil out of the space between the inner and outer tanks.

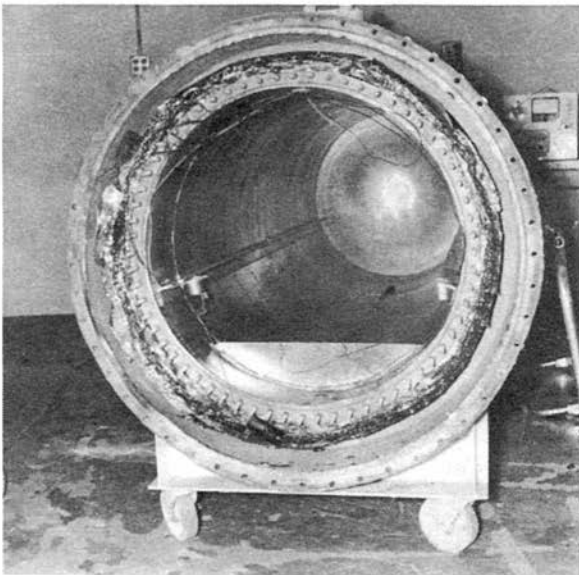
We decided we had to get a helium leak check on it -- we didn't feel we had a chance of holding a high vacuum any other way, so I called about thirty places. During this time I was hospitalized for appendicitis and I missed a couple of weeks of the fabrication as a result! In any event, we called a number of places and finally found a firm, Dixon Electronics, with a helium leak detector we could use. So, we went over and leak-checked the inner and outer tank one Saturday morning. There were no leaks that we could find, so it worked out pretty well, better than we had expected. We were fairly confident our leak check was reliable, so we assembled the whole thing and then spent about a month debugging it. It was just before Christmas, 1965 when we got it all assembled.

There was supposed to be a demonstration of the capsule in January of 1966. This put a lot of pressure on us since we had to be in Washington D.C., with the unit by January 1st. We worked nights until midnight and one o'clock in the morning getting it put together and tested. We didn't have too much luck with the initial vacuum system. Ultimately we had to tear it out and increase the vacuum line size to 1" and put in a larger vacuum pump. We ended up having to air-express some special valves out, get a bigger vacuum pump, and then we had a lot of trouble with the front outer gasket. We made several of them before we came up with a workable system. We settled on a lead gasket with a layer of silicone glue over it.

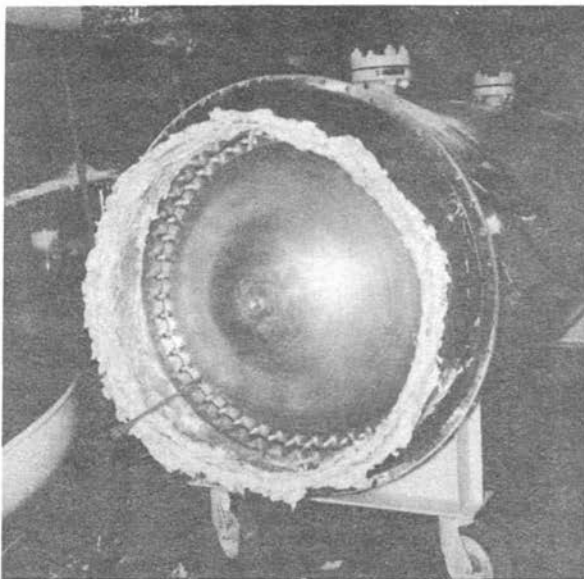
The inner cylinder had had a lead gasket from the beginning. We had tried to cast these gaskets, got nowhere on it, and finally we just got sheets of lead and cut the gaskets out, which worked well, compared to how we thought it would perform. We also had troubles with the aluminum bolts breaking on the inside. The system to suspend the inner cylinder within the outer one with a minimum of



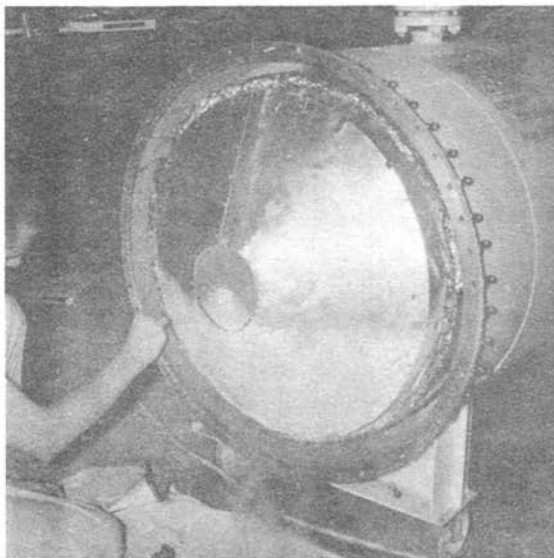
*Barbara Kraver and Ed Hope (with hat) wrapping glass matt and aluminum foil on inner vessel of first cryocapsule.*



*Open cryocapsule, showing inner capsule with aluminum bolts, superinsulation, dam for LN<sub>2</sub>, rails for body rack, liquid level sensor, and thermocouple in vent line.*



*First cryocapsule with spun aluminum inner head in place and bolted tight, and fiberglass/aluminum insulation layers exposed.*



*Sheet aluminum holder of fiberglass/aluminum foil insulation cap for head of inner tank of first cryocapsule.*

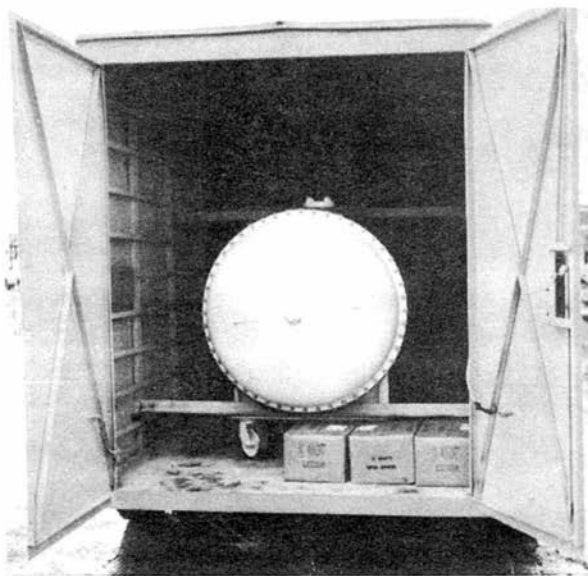
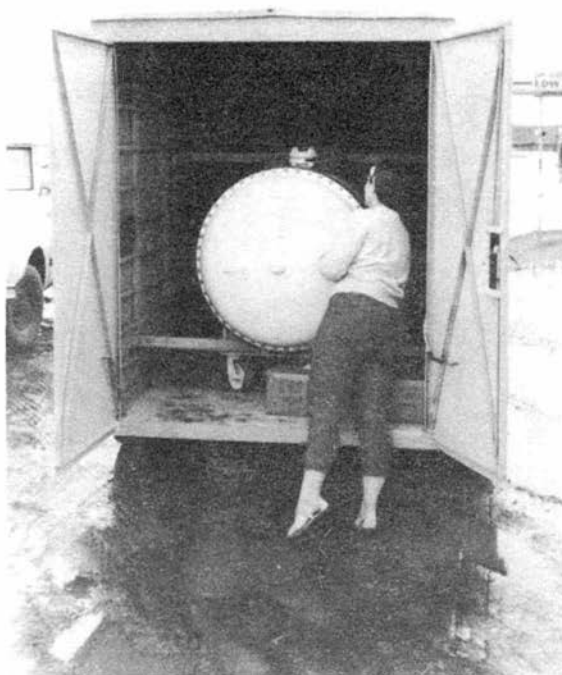
heat transfer worked very well. We had a lot of trouble with leaks on the outside, and extrusion of the outer lead gasket. We made a number of those and ruined them about every third time we'd tighten up on them. Despite the problems we got this thing in a semblance of order. We finally rolled it down to a paint shop and had it painted white and took pictures of it.

Shortly thereafter we loaded the capsule aboard a trailer and Ed drove it all the way to Washington. It was on display there for the Life Extension Society Conference, on January 1st. There was a lot of to-do over it, then Ed brought it back here, and we worked on it again for another month or so and finally got it into a state of readiness where we felt that it actually would work. At this time John Flynn, a biophysicist who had started a company in New York to offer cryogenic interment services (called *Biopreservation*) had purchased the capsule and we more or less got it into working order and sent it off to him.

We drove it over to L.A. and air-expressed it off. He wanted to use it on the Merv Griffin show. The capsule was on that show, just the capsule, with Ettinger. He showed it off, displayed it, showed quite a bit about it -- it was a pretty good show. There were some arguments against cryogenic interment, but all in all it was a very interesting show. There were even some cuts to the audience with Ed in the audience chaperoning it. Then Flynn took it in and tested it and had all kinds of troubles with it. Flynn has it at this time which is May 6 or 7 [1966] and is working on it.

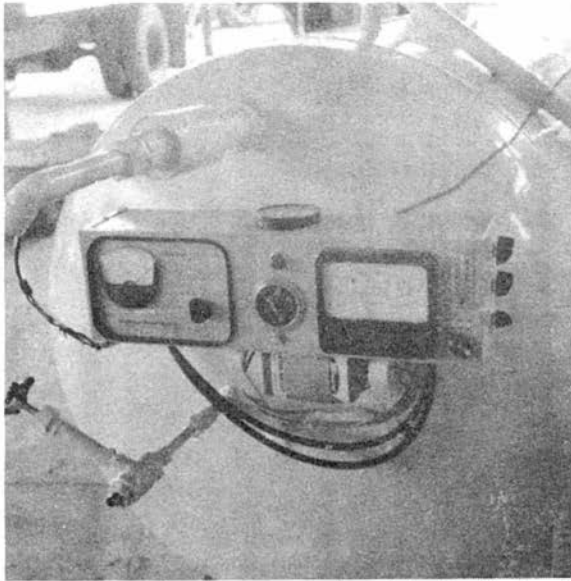
During that time -- two to three weeks ago -- Ed flew back to New York again, picked up the capsule, took it to Philadelphia and it was on the Mike Douglas Show. We had a very good show -- Ed was on the show and

*First cryocapsule being loaded for trailering*



*First cryocapsule and supplies on trailer.*





*Control panel of cryocapsule with liquid level gauge (center) and vacuum gauges.*

they really showed off; and they had a guy climb inside and the audience loved it! Anyway, so much for the history of the first cryocapsule.

During that time we were designing and building our second capsule, which had many improvements over the first one. We cut the price on certain things. We modified the vacuum system to handle a bigger flow. We reduced the blowoff disks on it to one, which is all that is really necessary. We changed the insulation from this real pain which we had with fiberglass and aluminum insulation to aluminized mylar, which is more expensive but still quite a much better insulation. Not to mention a lot easier to handle. So we wrapped the inner tank with this. We leak-checked everything before we even wrapped it. We did a better job on the leak checking than we had on the other one: when we leak-checked the first unit we didn't use liquid nitrogen on the

front end. There were no leaks so we feel this has a tightening effect on the lead gasket on the front. It turned out that it does.

Anyway, getting back to capsule number two; we finished it up, had it painted, ran some tests on it, and there was an amazingly small amount of leakage, practically none. It was more-or-less a couple orders of magnitude better than the other tank right from the start. We changed to a lead gasket on the outside seal, which I think was an excellent idea. On our next one there'll probably be an O-ring in it. Anyway, the lead gasket worked well on the outside, with some help from sealants, and the inner tank also had a lead gasket. We got it all together and vacuum-checked and everything looked fine.

This tank had been contracted for by a young man in L.A. who had wanted his mother frozen. She had died a couple of months earlier and was taken to Phoenix and kept in cold storage, just above freezing. She was embalmed after she'd been dead about 18 hours, and then lay there in the funeral home for awhile, and finally was refrigerated maybe four or five days later. So there was a certain amount of deterioration, and the hope of the young man was that there would be some intact DNA that would not have been destroyed by the embalming and post-mortem deterioration. So she was brought over and stored in a local mortuary until we got the capsule ready. Well, Friday night we got the capsule ready and things were getting sort of shook. The man came over from L.A. and Ed was not too happy about the whole situation, neither was Rick, they were both sort of queasy about it. Myself -- I don't know what my feelings were -- sort of, you know, another job to be done. A person was dead, and that was all there was to it.

We came in right after work, Friday night, and Barb (my wife) was with us, and we got the tank set up, and everything hooked up to it and ready to go. Ed went out and got the refrigerated truck and brought the casket in -- it was surprisingly heavy. I guess you never realize it until you lift a casket and feel how heavy it is as you lift it out of a truck. At the time, there was an odor in the truck and everyone was imagining what she

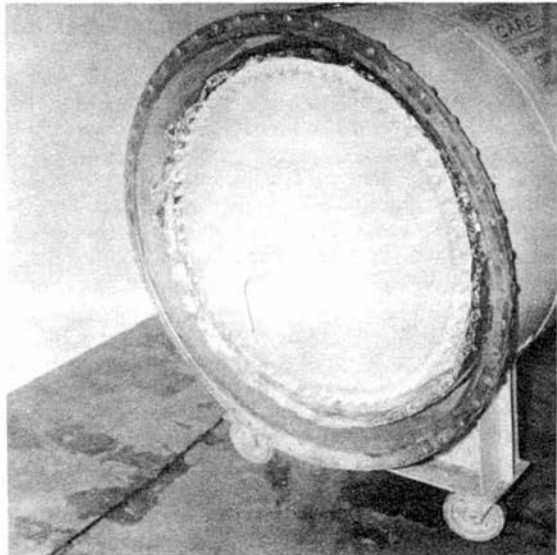
was going to look like after this time. So we put her in a small back room in the bay we had rented for our company. We put her off in a side room and we finally got things organized. The stretcher bed was set, the final instrumentation was all in, everything was all checked out, so we were ready to go. All the liquid nitrogen was there -- we had about four or five 160 liter dewars -- and by eight o'clock or that time everyone else had disappeared. Ed went out. Rick took Barb out to eat. We'd taken some pictures beforehand, before the young man came over to look at the tank.

So Ed was conveniently gone and Rick split, and I was there with the young man and I went in while they were gone, and opened up the casket, and it turned out she was very well preserved. There was no deterioration we could notice except for a little bit of discoloration in the fingers. So we went in there, the young man and I, and we opened it up for the second time, and he was of course much relieved. I didn't want to tell him I'd opened it up originally because if I had and she was very bad off I'd want to prepare him for it. But she wasn't, so it worked out pretty well.

We tried to see if we could lift her out onto the bed that went in the capsule, but she was much too heavy and we decided we would have to have Ed and the others. We called the restaurant and managed to reach them there. Ed had met the others there and in response to our call they came back over. Things went very smoothly from there on. We got a blanket under her and lifted her out onto the stretcher and put her inside the sleeping bag -- a standard camping sleeping bag with aluminized mylar wrapped around it. We put her in there and taped her up very securely so she was completely surrounded by insulation. The reason for this was that given her condition we didn't feel that freezing really was going to cause too much additional damage. We weren't really interested in a rapid cooldown. Again,



*Aluminized Mylar superinsulation cap in place just after removing outer vacuum tank head.*



*Frost on inner head after removal of insulation cap.*

because there was no DMSO or other perfusion, just normal embalming fluid, we felt that very slow freezing would be best. The insulation was also wrapped around her so that if there was a failure in the tank that it would provide some additional protection against warming. The sleeping bag slowed cooling down quite a bit, as we had hoped, and in the future it would seem like a good idea to wrap the person in one for additional protection.

She was put on the stretcher and we carried her back into the other room, set her down, and tried to lift her in. It turned out that there was a bar that we'd put in there to keep the bed from sliding around and it was preventing us from getting her in because she sat so much higher up on the stretcher than we'd suspected she would. So we had to take her off. We cut the bar out of the front end of the capsule and then slid her in. Her hands had slipped down to the sides and we had to push them back up over the top to get her in.

We put thermocouples -- two of them -- inside the sleeping bag to monitor the temperature of the body on the inside. This was around nine o'clock at night and all the instrumentation checked out. Then we tried to put the head on the inner tank, and it turned out that the last time we had bolted it on for some of our tests, the bolts had gone sideways slightly and the flange had distorted. As a result the bolts were cocked at an angle and we had to do quite a bit of work to straighten them out. We reamed out the holes, and finally bent the bolts back a little bit and eventually were able to slip the head on after about another half-hour.

Fortunately we had all the shop tools there, and when this was on we tightened it down and then waited for awhile, tightened it down again and then tightened it for the third time. After the head had been tightened down three times we put a basket with all this insulation over the end of it. (This isn't really satisfactory -- we're going to have to change this.) Once this insulating end-cap was in place we put the outside head on, bolted it down and started pulling a vacuum on it.



*First woman frozen, after being removed from cryocapsule for thawing and burial.*

The vacuum went down very quickly, much more rapidly than we thought it would. We then started adding liquid nitrogen. Immediately the vacuum started going up again to around 300 microns, which is completely unacceptable. This would be much too wasteful -- we'd use about 10 to 100 times the liquid nitrogen that we would ordinarily use if we had a vacuum this high. So we were semi-panicked at the time. It turned out that the problem was due to the brass ferrules around the fill line, around the Swage-Loc fitting. The brass immediately contracted when chilled with liquid nitrogen during filling, breaking the compression seal and allowing atmosphere to leak into the vacuum jacket. Unfortunately, we didn't notice it at the time.

There was quite a bit of boiloff and billowing vapor from the vent line and the chamber on the inside

cooled down to a pretty low level. When we stopped filling, the vacuum started coming down again because the fill lines started warming up and the ferrules expanded and started sealing again.

We filled it up to a level below the body so that it would cool down pretty slowly -- and that was it. We left her that night about one o'clock with everything all buttoned up, and liquid nitrogen was outgassing quite a bit. The next morning we went around and the vacuum was way down -- I'll take it back -- it was still around 16 microns. That following night we went over and added one more dewar of liquid nitrogen and I took one slight turn on the Swage-Loc fitting -- it was loose -- so I took a turn on it. Immediately, the vacuum went right on down, so it was this fitting that was causing our leak and we went down to less than one micron.

All I can say about this test is that it is probably one of the most fabulous engineering feats I've ever pulled off. I -- well, I shouldn't say I -- Rick, Ed, and I -- to have something like this second prototype work so extremely well under such adverse conditions with a minimal setup -- sort of a back garage affair -- to have something this vacuum-tight work in a liquid nitrogen environment with this large gasket -- we really lucked out on this tank.

Our second design just proved itself tremendously. We've added a couple of dewars since then and if we look at the boiloff, it's maybe about 20 percent higher than we've calculated. We also feel we have a little higher vacuum than we had. We still have a slight leak of about two or three microns an hour. We can easily maintain a good vacuum with a vacuum pump. However, we think we may be able to track down the leaks if they are on the outside tank. In any event, this is where we sit now. We're starting to work on some new design concepts for our third and fourth capsules, and we need six more. Ed is building a building now to house Cryocare Corporation plus several other businesses. We'll have good facilities there. We're building up our machine shop. We now have a drill press, a small lathe, a band saw, and a heliarc welder, plus a regular welder. We're building our capabilities up to a level that will let us control our quality better. We're also looking at some freeze-drying equipment and small-project subcontract work.

So, that's what happened. It just happened. It was one engineering step after another. I would say there was quite an emotional response, as far as we're concerned, that we actually did freeze the first person. We wanted to keep it quiet because the young man requested this, but the news leaked out to Ev Cooper (Life Extension Society President) in Washington, D.C. He immediately called the United Press news service, and UP broadcasted over the wires. Then the *Arizona Republic* called Ed and he told them that we had frozen this woman and that she wasn't in the Phoenix area any more. He also told them that he didn't want them print any more about it because of the family's wishes.

The *Arizona Republic* published a story stating that it had been done. We've been getting a number of contacts. We've maybe gotten a hundred letters from various people interested in cryogenic interment. Some are seriously interested. The problem is that our tank costs about thirty-eight hundred dollars. We have to charge this just to try to break even on some of our labor and development costs and get this organization on its feet so we can really start mass producing cryocapsules and get the cost down to a decent level.

The thing is that we initially never intended to go carry out a freezing ourselves. We figured someone else would do this. But it turned out we had to because there was no one else available to do the job. So we more or less fell into it and it worked out quite well. We've gone from equipment manufacturer to becoming the entire vertical structure, and we just don't know where it's going to carry us from here.

Right now we're designing a new capsule, a better capsule. We feel it will be better made with the object being a real long life and less work involved in manufacturing it and setting it up. If this thing catches on, fine, if it doesn't -- well, we'll just have to see.

\* \* \*

*Less than a year later, the first person ever frozen was removed from cryonic suspension and conventionally interred. Almost nothing else is known about her at the time of this writing. -- Eds.*



*Cryocare manufacturing facility owned by Mr. Hope. Never fully used.*

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## **A Practical Memorial**

by Dave Kekich

The cryonics movement is growing more rapidly than at any time in history, but it is still not progressing as rapidly as it should. We can all learn some simple guidelines which will make us more successful ambassadors and which will make our organization and our personal chances stronger than ever.

Over the course of the last two or three years, I have assisted several members of Alcor with questions regarding their suspension arrangements. At times it became very frustrating in trying to overcome procrastination and the banal objections to cryonics that we all too often hear. However, when I am finally able to help convince some prospects into becoming suspension members, and to a much lesser degree, subscribers to *Cryonics*, the elation can be euphoric. Not only might have I saved a life, but I might have helped give that person a chance at *immortality!* In addition, with any new enthusiastic member, a ripple effect is put into motion which could eventually directly affect tens, hundreds, or even thousands of lives.

How is it then, that I have not yet convinced even one loved one to join Alcor? Granted, the people I work with as an Alcor coordinator have pre-qualified themselves by



requesting information or were referred by an Alcor member. However, I have friends and relatives who take my word as Gospel on comparatively trivial matters. When it comes to cryonics, the best I get is mild interest and perhaps a polite commitment for "sometime later".

On December 7, 1988, one of my oldest and dearest friends and possibly my best personal prospect passed away after a brief and unexpected illness. Oz loved life as much as anyone I have ever known. He crammed more into his forty-five years of life than most people who die at an old age. Oz was intelligent, articulate, and knowledgeable about a broad range of subjects. He was honest, productive, generous, had a phenomenal memory, and was a technophile. He was the kind of person who deserved to be around for a long time, the type, who on the surface, one would expect to embrace the idea of cryonics. The type that most of us would have for a friend had we all had the opportunity to know him.



Three weeks prior to his death, Oz learned that he had terminal cancer. It is possible, but not probable, that he would have had time for his suspension arrangements if he really wanted to and if he had admitted to himself that he was going to die. He was the only person who thought he would make it. Even when his wife asked his advice in making precautions, he denied that he was going to die. That was Oz for you, the eternal optimist. Even when he had a brush with death one year ago, he refused to really believe that it would happen again so soon. He only paid lip service to cryonics then, and it cost him his life.

This was my first experience with a close contemporary dying. He's the first person who died who was close to me since I made my own suspension arrangements. Oz's forty-five years of accumulated memories, relationships, and material comforts were gone in an instant — forever! When I think of all the resources that were used up in his lifetime to make him what he was, those that are used up to make every human life what it is, it greatly compounds the final tragedy of death.

Of course, the gnawing question continues to plague me, why didn't Oz enroll? What could I have done that I didn't do which might have saved his life? For these reasons, I wouldn't go to the funeral. It was too final. While others were grieving his "early" demise, I would have been grieving his "demise". Had Oz opted for a cryonic suspension, I would have gone to his memorial service to say good-bye to an old friend whom I would hope to see again someday. It would have been more like seeing someone off on a very long trip than saying a final good-bye. I suppose some other reasons for not going were guilt that I did not do more to convince Oz and the futility of attending an out-dated ceremonial ritual. And, as much as I hate to admit it, I felt somewhat resentful towards Oz for letting me down. I'm resentful towards him for not having enough confidence in my judgment or being a good enough friend to have simply followed my lead in joining Alcor, especially when he saw how committed I was.

A month has gone by since his death, and life does go on. It's just not as much fun. This month has given me time to try to understand why he didn't enroll. Even as I write, I don't know if I have any real answers. Money was certainly not the problem. He understood the technology well enough to admit that it had a chance of working. He did have a serious concern about whether or not Alcor could survive financially in the long term, but he also understood that we survived during the twelve years that I was in touch

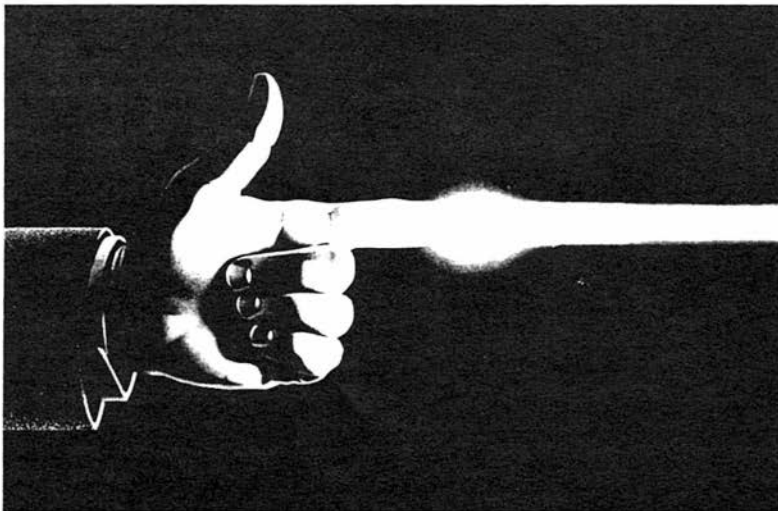
with Alcor and that we have much more financial support now than we had twelve years ago. Maybe he didn't have the imagination that the typical Alcor member has. He was conventional and very traditional. That's certainly the way he went out. He most definitely was a procrastinator in many aspects of his life. I think it was a combination of these things. Was he merely placating me with his promises to enroll, or did he really just put it off until it was too late? It's critical that we at least learn some hard lessons from Oz's death, so the next loved one might be saved.

First, we have to learn to overcome procrastination. Alcor and Arel Lucas have made a complicated and time-consuming signing-up process relatively painless. What's left? We all should learn some basic principles of salesmanship if we want to increase enrollment substantially.

Although we're not selling encyclopedias door to door or doing any other "wham, bam, thank you ma'am" type of hard sale, the basic sales principles are the same for selling anything from beans to airplanes to ideas. All require finding and qualifying prospects, telling a story, answering objections, and closing the sale. In order to be successful at selling anything, you must be knowledgeable and motivated, and in order to excel, you must practice, drill, and rehearse your presentation. Although the purpose of this article is not to turn us all into super salesmen, it is important to know what separates the successful salesmen (the minority) from the failures.

The basics of all sales are; prospecting, making contacts, qualifying those contacts, making the presentation, handling objections, and closing the sale. It's all too easy to forget or ignore these fundamentals as I'm afraid I did with Oz. It might have cost him his life. I'll never really know, since I did not do my professional best to convince him.

There is a natural aversion to salesmen. We cryonicists sometimes consider ourselves an elite and enlightened group, possibly above such practices as common salesmanship. However, we should adopt the opposite attitude. If we are to survive in this highly commercialized society, we have to successfully compete with other ideas and products. We're competing with traditional values, conventional ideas, religious dogma, and alternative uses of the money that we expect people to spend on cryonics. Cryonics is a radical product which necessitates people thinking differently. As we all know, they



won't do that on their own. They have to be urged, educated, and sometimes gently pushed into making their decision. Americans like being sold. If you ever doubt that, pick up any popular magazine or newspaper, turn on network television, or just drive down a busy street. All the ads, commercials, and signs you see are proof that marketing works. People expect and demand to be sold. They are accustomed to it. If we're not prepared to compete in a professional manner, it will be years before real consumer demand for cryonics is generated. Without it, we're skating on thin financial ice and are much more prone to successful attack by regulatory agencies.

Most of us are intellectually oriented and might not understand that people seldom buy logically, but buy emotionally. If we expect to swell our ranks (I realize that some of us are opposed to this anyway), then we have to sell cryonics on emotion. We have to sell benefits. "Sell the sizzle and not the steak". Once we have their attention, once we sell the benefits of cryonics, we can then back up the emotion with logic. Since most cryonicists have a scientific bent, we might be guilty of doing the opposite.

In reviewing the fundamentals of sales, we will skip prospecting and making contacts for these purposes. We are not concerned with mass marketing or cold calling on strangers at this time. We are interested in how to most effectively enroll those whom we already know or those to whom we are referred.

The next step then is qualification. We can save a lot of time and effort by concentrating on qualified prospects only. In desperation, we have a normal tendency to try to persuade people whom, deep in our hearts, we know will not be convinced. We most likely do this out of love or affection for those to whom we are close but whose minds are closed towards cryonics. We try to enroll them out of general concern and warmth when our efforts can be better utilized and rewarded by concentrating on real prospects. This will also make us each more effective by receiving more positive reinforcement from our prospects.

First, find out what your prospect likes most about his or her present arrangements for disposition of their remains. Find out a little about their general philosophy by asking about their opinions on death, life thereafter, general likes and dislikes, and primary motivators. Discuss their views on aging and technology, love, relationships, opinions on how they would enjoy an open ended lifespan, and what they might do if that were possible. Discuss an extended lifespan in a young healthy body, space travel, etc. While you are discussing these matters, try to keep your own views to yourself except to elaborate on some of the possibilities. Without getting too personal and in general terms, find out a little about the condition of their health and finances.

If you don't know the person well, you might get more accurate information from the person who referred him or her. People often will not open up, especially if they suspect that you are there to sell them something.

The purpose of this interview is to find their emotional hot button. Find out what benefits to sell them when it comes time to discuss cryonics. Although this might seem to be time-consuming, it will not only save you a lot of time in the long run, but it will help to greatly increase Alcor's enrollment rate and to save loved ones.

When you decide to make a presentation, be sure you control the situation. Make sure you will not be interrupted, and make sure your prospect is in a relaxed frame of mind. Remember the AIDA formula. All successful presentations will first get their prospect's Attention, then stimulate their Interest, generate Desire for your product and finally prompt your prospect to take Action. Every good one will also utilize the seed of selling, repetition. Your introduction will tell your prospect what you're going to tell



him, your presentation will tell what you're there to tell, and your summary will tell what you just told. Keep these guidelines in mind when making all presentations.

Most sales presentations address the issue of identifying solutions to already identified problems and offer sources of supply of solutions to these problems. In selling new ideas such as cryonics, we are in the difficult position of identifying problems of which people are not generally aware and are creating a demand for a solution to those problems. Therefore, ours is also the difficult job of education. If we do our job successfully, the day might soon come

that the public recognizes death as a solvable problem rather than a final inevitability. Because of Alcor's size, this becomes a grass roots level job for the present. Nevertheless, the sales format is still the same. Closing the sale is just more difficult.

When presenting cryonics, it is important to come on softly, perhaps by asking opening involvement questions to reinforce already established wants and desires or to draw them out if these issues are not already established. Ask artful questions. Seek out objections. When you have established their wants and desires, don't sell what you want. Sell what they want. Speak from their points of view. Show them how cryonics will satisfy their wants.

When you have given enough structured presentations, you will have heard the most common objections. As suggested, these objections should be welcomed, since you should have intelligent answers to them by this time, and it usually demonstrates that your prospect has an interest. If you expect certain objections to be raised, incorporate them into your presentation, bringing them up yourself before they are raised. They can often be turned into advantages when you anticipate them.

Your formal presentation should be limited to fifteen minutes at most. Hopefully, a question and answer discussion period will take longer. If you really want to become professional, you should put your presentation into writing. Winging it is hardly ever effective in sales. It is recommended that a visual aid such as Alcor's brochure be used. You might want to Hi-Lite or circle some of the more important points, and leave the brochure with your prospect. If you have a similar situation story to which your prospect can relate, this can be a very powerful tool. You won't have a "canned pitch", since you will most likely be personalizing each approach and presentation, but you should always follow the same general format. This will allow you to cover all important points and in the proper and most convincing sequence.

Salesmen cannot be very successful unless and until they learn to handle objections and close the sale effectively. An objection is usually an indication that your prospect is serious and wants to know more. This presents you with a golden opportunity to turn your prospect into a member. It is also the time when many of us let our egos get in the way of closing the sale. There is a common tendency to attack the prospect, who suddenly turned into an opponent. Don't alienate your prospect by proving them wrong on issues at

hand. If handled properly, these issues can often be turned into closing opportunities.

The next time you hear objections, use this proven objection answering system. First, hear them out. Do not interrupt. Once you completely hear and completely understand the objection, feed it back to them. Repeat it, prefaced by a question such as "In other words, what you're asking is...?" or "Do I understand that...?". Hearing it themselves will usually diminish the importance of their objection. Then, question the objection. Ask them to elaborate. This will usually further weaken their argument. Then ask them if this is the only reason they are opposed to cryonics. People have a tendency not to vent their true or major objection unless pressed. If they don't tell you what it is, you cannot answer it, and they will probably never join Alcor. Say something like "I understand. If it weren't for..., would you (agree that cryonics would work, be interested in making suspension arrangements, etc.)?"

Now you are ready to answer the objection. Hopefully you have a ready answer. It would be helpful to us all if each of us would send to Alcor the objections we most commonly hear. If so, perhaps we could publish honest answers to these questions. If there is enough interest, we could put together a written presentation, sort of like a sales guide or training manual such as those used by major direct marketing companies like IBM.

When answering the objection, admit the disadvantage or validity of it if one exists, and then compare it to an advantage or at least a lesser alternative. You must know your answers. Then, confirm the answer. Get their agreement that you answered it to their satisfaction. What's left? You are now set up for the close. You qualified them as to their interest in cryonics or at least their interest in the benefits it will offer them. You know they can afford it. They understand how and why cryonics can solve their problem. You answered their questions and objections to cryonics. If you got this far, they want and need cryonics. Now it's up to you to close them. Remember, *there are lots of people ready to be signed up who will wait years until someone is strong enough to help them enroll. They could, and do, die in the meantime!*

Now we are ready for the final step in our sales model, the close. Closing is simply a process of helping people make decisions. In this case, the decision is a chance for an open ended lifespan. This is your product. How strongly do you believe in it?

When you close, do it through your prospect's eyes, not yours. Remember, see the benefits from their viewpoint. Also, don't be afraid to close prematurely whenever your prospect shows any indication of wanting to enroll. If you fail, you might apologize for being pushy, explain that you are simply enthusiastic about cryonics and honestly believe that you can save their life, care about them and want desperately to do so. Now, summarize some of the benefits they agreed to, getting their agreement again and close again.







Most professional salespersons don't close the sale until their fifth attempt on average. Don't give up prematurely.

We can use several common closes for cryonics. One is the higher authority close. This is when someone they respect or admire has signed up, and we can use their endorsement. Hopefully, this will be you. Another is a similar situation close. Use this if they can relate to a person in a situation similar to theirs who opted for cryonics. They don't have to know this person. People just like to have someone else make decisions for them whenever possible, or at least, be the first one to commit. Most don't like being pioneers.

What do we hear more often than "I'll think it over"? Nobody wants to say "no" and hurt our feelings. They try to get rid of us and all salesmen with this convenient escape. Once you leave, will they think it over? Cryonics will be the last thing on their minds as soon as you are out the door. Remember, they do not share your values. They will not think it over. Cryonics is important to you, but you are part of a very tiny minority. If you want to save their lives, you must sell them your values. It is your vital job to show them how your values will benefit them more than their ideas regarding disposition of their remains. You have to show them how your product has a chance of trivializing the benefits of all their other products combined without interrupting their lives to any great degree. They must clearly understand the upside and the downside of either choice.

When they say they'll think it over, agree with them. Tell them that you are sure they wouldn't think about it if they weren't interested. Thank them, and confirm that they will think it over. Say something like "May I assume that you'll give this very careful consideration?". Then, act slightly defeated and good naturedly say something like "John, you're not just saying that to get rid of me, are you?". At this point, clarify what they are going to consider. "Is it...? Is it...? etc. Keep asking until you get to the real objection. The buyer is a liar. You will seldom get to the real objection without some digging. Remember, you will never have a better opportunity to close than when you are face to face with your prospect. If you think otherwise, you are kidding yourself and jeopardizing your prospect's life.

There are several other excellent, proven closes which are very easy to apply to our product. If there is a demand from our readership, I will collaborate with Alcor personnel to write a sales manual, complete with a model presentation, more closes, common objections, and answers to these objections. If you are interested in having a copy, write to Alcor with your request, and we will put it together. If you are having trouble with any particular objections, please include these with your request, and we will provide you with some answers.

One of the most vital skills in sales is to shut up after asking a closing question. Wait for a response before speaking. This can be very difficult. If you don't believe it, try it sometime. If you speak first, as we have a tendency to do after some silence, you will let your prospect off the hook and lose your sale.

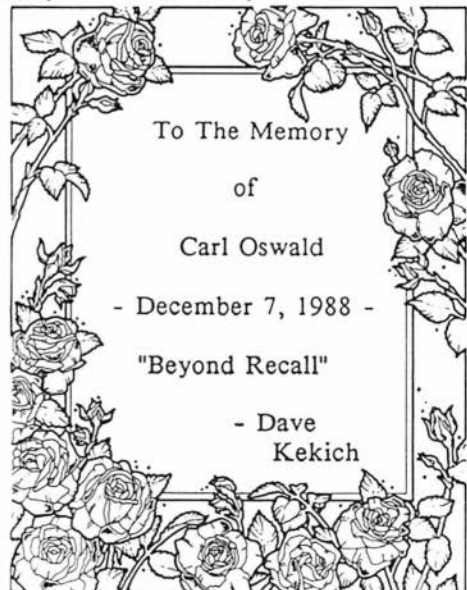
What are we looking for at the close? Obviously, we can't enroll someone on the spot. We can, however, get a check for \$300 as a non-refundable deposit for their paperwork. The check should be made out to "Alcor". If they won't do this, at least get a check or Visa or Mastercard authorization for their subscription to *Cryonics*. Checks are made out to "Alcor" in the amount of \$20, a paltry sum if they have even the slightest interest. For credit card orders, get their correct name, mailing address, telephone number, credit card number, and expiration date. Finally, if all else fails, get their permission to have an Alcor coordinator call them. Please don't take this as the easy way out though. The coordinator will have to almost start from scratch without the benefit of the personal relationship you might have with your prospect. We will be delighted for the opportunity for a chance at a serious prospect, however.

In most cases, the top salesmen in every field are the biggest failures in terms of numbers of lost sales. They don't get discouraged. They learn from their failures and rejections and talk to more people than those who don't make it. They don't give up. The number of new suspension members will be in direct proportion to the number of people we educate. Eventually, more and more "nos" will be converted to "yesses" as the public begins to accept cryonics. Twelve disciples spread Christianity and changed the world. They sold the same benefit we are selling, except I am convinced our product has a better chance of delivering it, and we have the printing press.

Since the day of Christ and beyond, people were influenced by motivators such as acceptance by others and the pain of change. These are motivators we must overcome if we are to sell cryonics successfully. If they were overcome by those twelve disciples, under the threat of death, is there any reason we can't be more successful selling cryonics? If you were absolutely certain that a devastating earthquake would hit your area and claim hundreds of thousands of lives, do you think you would have any trouble in one way or another, convincing your loved ones to leave town? You would be enthusiastic in your endeavor to say the least. Well, that earthquake is coming for each and every one of us, but at different times. Although we won't sign up everyone we love, we owe it to them and to ourselves to give them the best opportunity possible for survival.

We can all be much more effective at promoting cryonics by following these guidelines, by becoming more knowledgeable and enthusiastic and by becoming more committed to the emotional sides of our product. We will help you do this if enough of you request it.

Finally, what did I do wrong when it came to saving Oz's life? Would he have been suspended if I had tried harder? I'll never know, because I didn't do the best job I could have. I didn't think he'd die that soon.



## Good-by Doubter

by David Pizer

You poor, presumptuous, pompous doubter  
 Well-meaning sufferer and doom-shouter  
 You say, "Me fear death? Ha!"  
 Oh, you won't admit it in public  
 But you fear death!  
 So you wrap yourself with comforting, ancient asylum  
 Makes you feel so safe  
 And respectable!  
 But perhaps a fatal gratification  
 Dream on, doubter  
 If only you had the boldness and bravery to see options  
 And, the ability to consider all the possible meanings of life  
 But no  
 You hide your head in sand  
 Too proud, righteous, (and perhaps lazy) to seek the truth  
 Pompous and blind, and (shame on you), leading others too  
 Perhaps, to eternal death  
 Wake, doubter!  
 Open your eyes!  
 I shriek  
 But in vain  
 You ignore me  
 You march illustriously, though irrationally, to oblivion  
 Leading innocent others!  
 Stop doubter!  
 Stop!  
 Blind! Are you also deaf?  
 I scream to you and you quietly nod  
 In politeness  
 Or you scorn me  
 Or occasionally you try to harm me  
 I should hate you, you doubter  
 I should hate you  
 But I pity you  
 And I will miss you, doubter  
 For billions of years  
 For all eternity  
 I will miss you, doubter  
 Aside from all your expansive narrow-mindedness  
 Aside from all your hard-earned ignorance  
 Aside from all your memorized sightlessness  
 You ain't so bad  
 Hell, at times I even like you  
 So long doubter  
 So long, my doubting friend  
 I will miss you, doubter  
 Perhaps, forever

## DOWNLOADING AND UPLOADING

by Ralph C. Merkle

Robert Ettinger recently wrote an article titled *The Turing Tape and Clockwork People* in *The Immortalist* (Vol. 19(7) (July, 1988). Ettinger's conclusion was: "If even a few of those very bright downloaders will realize that work should come before play, maybe real immortalism will get some much needed help."

There followed a spirited series of letters. The next paragraph is a brief plug for two books that introduce and clarify many of the philosophical issues involved. This article was originally sent to *The Immortalist*, hopefully to clarify some of the issues being debated so vigorously; I thought it might be of interest to *Cryonics* readers.

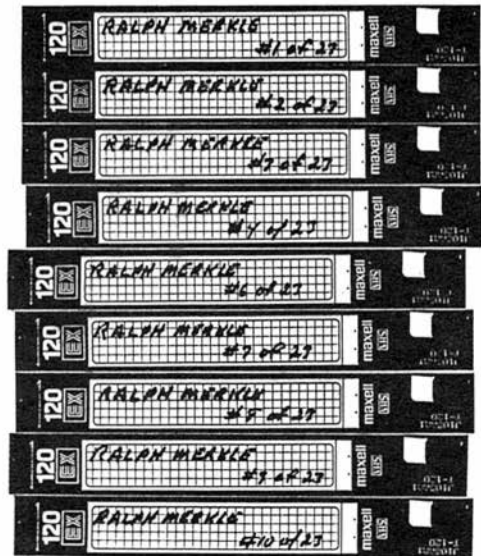
There are infinitely many philosophical works discussing almost every aspect of consciousness, two of which I have read and enjoyed. *The Mind's I* (by Douglas R. Hofstadter and Daniel C. Dennett, Bantam Books, 1981) is a very entertaining introduction to many of the puzzles and issues involved. It has been highly acclaimed by the *New York Times Book Review*, the *Washington Post*, and many others. *Kirkus Review* accurately described it as "philosophical fun and games of a very high order". The second book, *Consciousness and Matter* (by Paul M. Churchland, MIT Press, 1988), is an upper division undergraduate level introduction to the philosophy of the mind. It provides broad and even coverage of the many theories and ideas about how the mind and brain interact, in a well written and readable format.

What follows is a series of questions that will hopefully reduce the heat and increase the light in future discussions of uploading.

The first question deals broadly with the relationship between the laws of physics and the human brain. It is:

- 1) *Are the ultimate laws of physics the same both inside and outside the human brain? Or, is there something special about the human brain that makes its behavior fundamentally different from the rest of the universe?*

This question carefully refers to "the ultimate laws of physics" rather than the currently accepted laws. This avoids tedious digressions about their completeness and accuracy, and focuses instead on the fundamental question -- is there something unique about the human brain that makes it forever unpredictable in terms of *any* laws of physics? While Q.E.D. (Quantum Electro Dynamics) is a remarkably accurate theory that fully accounts for all the known behavior of matter under the conditions that hold in the human brain (and a wide variety of other circumstances) it is still possible to argue that current physical theories are incomplete (a statement that most physicists will support) and that a new unified theory might somehow shed new light on the behavior of the human brain (A remarkably tenuous claim. How the behavior of particles in a high-energy accelerator will alter our understanding of the basic biochemistry that



governs the human brain is at best unclear).

This question also completely avoids any reference to consciousness. Whether or not physical law does or does not explain consciousness is simply not considered. All that is addressed is whether or not physical law explains the observed behavior of the human brain. This avoids a second fertile area for misunderstanding and confusion.

A "no" answer to this question almost completely blocks further discussion based on the use of physical law. Essentially, it is a declaration that modern Western science is fundamentally inadequate in dealing with the human brain and so makes it difficult to draw any further conclusions that will be generally accepted.

It is safe to say that almost all scientists studying consciousness, awareness, or neuroscience will answer "yes" to this question.

The second and more difficult question is:

2) *Is it possible to computationally model the physical behavior of the brain without any significant deviation between the computational model and the physical reality, given sufficiently large computational resources?*

Again, we carefully avoid questions of "consciousness". We also don't say how much computer power is "sufficiently large". Finally, we introduce the tricky idea of a "significant deviation".

A computational model of a physical system will fail to precisely predict the behavior of that system down to the motion of the last electron for two reasons: quantum mechanics is fundamentally random in nature, and any computational model has an inherent limit to its precision. The former implies that we can at best predict the *probable* future course of events, not the *actual* future course of events. The latter is even worse -- we cannot precisely predict even the probable course of future events. A good example of this second point is the weather -- weather prediction more than a week or two into the future might well be inherently impossible given *any* error in the initial conditions or computations. Any error at all (rounding off to a mere million digits of accuracy) will eventually result in gross errors between the actual events and the events predicted by the computational model. The model predicts sunshine next Tuesday, and we get rain. This kind of error cannot be avoided.

Any computational model of the human brain will almost certainly deviate from the behavior of the original -- eventually in some gross and detectable fashion. If I decide that it doesn't matter which of two courses of action to follow and allow myself to decide on whim, then it seems plausible that some slight influence might cause a computational model of my brain to select the opposite course. But is this difference "significant"? Given that our model is highly accurate for short periods of time and that any deviations are either random or represent the accumulation of slight errors, does it matter that the behavior of the model and of the original eventually deviate in some gross and obvious fashion? We can view this another way: the human brain, as a physical system, is already subject to a variety of outside and essentially random influences caused by (among other things: temperature fluctuations in the environment; microwaves, light, and other electromagnetic radiation; cosmic rays; neutrinos; gravitational forces; last night's dinner; the humidity of the air; thermal noise; etc.) If the errors in our computational model are smaller than these influences, and if in particular they are smaller than random thermal fluctuations, do we really care about the difference? Is it "significant"? The human brain can and does continue to function reasonably well in the presence of gross perturbations (the death of many neurons, for example) yet this does not detract from our



consciousness or life -- I don't die even if tens of thousands of neurons do. In fact, I usually don't even notice the loss. The rather small errors that we are in principle required to tolerate in a computational model seem small by contrast.

It would seem, in principle, that computational models of the human brain can successfully model all the "significant" behavior -- where we tolerate a small amount of "insignificant" deviation between the model and the original. This "insignificant" deviation can be made smaller than the deviation caused by random thermal noise (at least in principle -- remember we assumed sufficient computational power). We continue to avoid any discussion of "consciousness" -- we are merely arguing that a computational model of the behavior of the human brain that is as accurate as a real brain subjected to random variations in particle behavior of the same magnitude as thermal variations is possible.

A "no" answer implies some basic mechanism in the brain is so sensitive that computational noise must inherently substantially disrupt it. This seems very unlikely, given the much greater physical noise that we already tolerate.

Finally, we turn to a question about consciousness!

3) *Given that the answer to both the first and second questions is "yes", is such a computational mode conscious?*

The question is largely unanswerable because we have no adequate definition of "consciousness". Even worse, many view consciousness as being inherently subjective and therefore an "objective" definition (verifiable by others) is impossible. We illustrate the quandary in the following paragraphs.

First, we imagine that a flesh-and-blood person and their computational model are both before us -- and that the computational model has been provided with a sufficiently realistic body that neither we nor the model know which is which. We do not ask "can we distinguish between the model and the original" for we already know the answer is no. Give that we have answered "yes" to both the first and second questions, then it is possible in principle to build a computational model that we cannot distinguish from the original by any test (assuming we cannot predict thermal noise). Therefore, it is necessarily completely futile to conduct any test, ask any question, or try in any fashion to "trick" the computational model into revealing its "true" nature - we know in advance this can't be done.

What, then, can we do? The subjective experience of the model is, by definition, not available for our examination. The objective data shows no significant behavioral deviation between the model and the original. Any definition of "consciousness" that rests on behavioral considerations will necessarily conclude that both the model and the original are conscious to the same degree. Any definition that depends solely on subjective experience has already postulated that the needed information is unavailable, and therefore that the subjective state of both the model and the original is unknowable by anyone else. We must know the definition of consciousness before we can answer the question -- and once we define it, the answer is either obviously "yes" or forever unknowable.

I have a very powerful subjective feeling that I'm "conscious" -- would a computer model feel the same? Would anyone (other than the model) know (or care) if it didn't? If it didn't have the same feeling of consciousness it wouldn't be able to tell anyone about this -- because it was programmed to faithfully imitate an original which *did* think it was conscious, and, as the model, could tell anyone who asked that it *was* conscious. By subjective standards I have no real reason to believe anyone else is conscious -- for I



have no first-hand experience of your consciousness. Although you claim to be conscious, such claims cannot be accepted as evidence of actual consciousness (unless we are then willing to accept the claims of our computational model). Yet I believe that other humans are conscious -- is this merely blind faith?

This topic is considered much more extensively in *Matter and Consciousness*, particularly in Chapter 4, "The Epistemological Problem", which considers both "The Problem of Other Minds" and "The Problem of Self-Consciousness".

Finally, we ask a question whose answer might actually affect the real world!

4) *Given that the answer to the first, second, and third questions is "yes", is it possible to construct such a computational model in practice?*

Modeling the behavior of every single electron in the human brain will take *lots* of computer power. It might even be impossible to build a big enough computer to do this. This, however, is not an answer but simply a statement that a particular method of modeling the brain might not work. An obvious question to ask is whether some *other* method *would* work -- for example a computational model based on the behavior of individual neurons and synapses might prove both satisfactory and feasible. There are roughly  $10^{11}$  neurons, and even more roughly  $10^{15}$  synapses. These are large numbers. However, when we consider that a single cubic centimeter can hold well over  $10^{18}$  molecular-size gates, then a computational model based on the behavior of neurons seems plausible.

Before using such a "simplified" model we must return to the question of what is a "significant difference". Clearly, such a model ignores a great deal of the chemistry and biology of the human brain -- can it still capture those elusive things we call "consciousness" and "self". If such a model walked up to us and struck up a conversation, what criteria would we use for deciding if it was conscious? Even if we decide the model is conscious, is it the "same" person as the original? If we use behavioral criteria, could we distinguish between the model's behavior and that of the original? Our model is now based on a host of assumptions about the behavior of individual neurons -- how they work, how they interact, how they change. Are these assumptions all correct? If we've made an error, would we be able to tell? If we could tell, would we care? Would the *model* care?

And even if the answers to all these questions were acceptable, many more questions would remain. Do these computer models break down a lot? Does society at large regard them as real people with real rights, or as funny computer programs that can be turned off when they start acting oddly? Has everyone else bought "Advanced Mark XXIII Quantum Brains", now available at discount prices? Or were the last three people who attempted uploading shot and killed for "crimes against nature"?

Fortunately, the utility of cryonic suspension does not depend on the answers to these questions. It sees highly probable that at least one method for reversing cryonic suspension will prove feasible and generally acceptable (an excellent candidate is molecular repair via nanomachines). It also seems clear that we have inadequate information at the present time to determine the "best" method, taking into account the broad range of technical, philosophical, and societal possibilities that confront us. At the moment, it seems prudent to delegate our choice to the best judgment of those

dedicated individuals who we sincerely hope will be tending our dewars when restoration becomes feasible.

Once we are again able to make our own decisions we will face a wide range of choices, and we will hopefully have both the means and the wisdom to make them successfully. At the very least we will know very much more than we do today.

\* \* \* \* \*

## IF WE CAN KEEP A SEVERED HEAD ALIVE

by "Chet Fleming", Polynym Press, 1987, 1988  
(available from Lompanics Unlimited)

Book review by Thomas Donaldson

This book is interesting from several angles. In a sense, it's even worth reading, although I'll say that I disagreed with the author on almost all points. I don't even think it's well written.

"Chet Fleming" (a pseudonym) is a lawyer who observed that it was within medical reach to put together a complete system which would keep alive a human (or animal) head for a certain time, perhaps days and with effort perhaps months and years. This possibility disturbed him so much he took out a patent on the basic device needed to do this. The aim of his patent was to force anyone who did this to talk to him about it first and also to apply to relevant bioethics committees at their institution.

This point alone is very useful. Alcor has made a point of publishing their results. Alcor therefore can't be stopped, up to now, by Chet Fleming's technique. But it remains important that someone could stop cryonics research, or cause trouble for us, merely by successfully getting a patent. The current countermeasure of publishing everything defeats that move, whether or not we publish it in a normal "scientific" periodical.

It's clear from reading his book that Chet Fleming feels uneasy with the idea of disembodied heads.

To be fair to him, I don't think he believes that his circuit, alone, will make possible survival of a disembodied head for a prolonged period. What he is implying is that if we can maintain disembodied heads even for a short time, it's in the course of science to find ways to maintain them for longer and longer. That is, he sees a way to *proceed* to disembodied heads rather than their immediate possibility.

His circuit for maintaining discorporated heads merely contains all the elements now known to be needed for sustaining a discorporated head. Other elements may be discovered.

Fleming's main purpose in writing the book is very clear in his Introduction. What he wants to do is to start an open debate about this technology, *before* it actually produces any discorporated heads. He's obviously concerned about what such a technology will do if it comes about. The book contains a draft of a law, "The Discorporation Control Act", to control production of discorporated (but still alive) heads of either animals or people.

This stratagem of the author (for that is what it is) deserves to be discussed. With very little actual technology, Chet Fleming proposes to obligate scientists to consult a

series of committees about the ethical feasibility of what they propose to do.

I have myself seen the spread of "bioethics committees" through the medical institutions of our society. In some abstract sense, for some abstract society (existing perhaps on a planet of the Andromeda Galaxy, or even farther away) this seems an innocent way to proceed. In the same abstract sense, it even seems a desirable way to proceed. But we do not live in this abstract society, but in our own. In our own society, bioethics committees have so far done no good and great harm. Why this is so is simple: who really sits on a bioethics committee? Why, people who are afraid of technologies and wish to suppress them. The tempest about recombinant DNA is the best example of what really happens with bioethics committees.

It follows that Chet Fleming's proposals are either duplicitous, or sick at their heart. Without doing the experiment, we don't know how it will affect the animal or ourselves.

United States Patent [19]		[11] Patent Number: 4,666,425
Fleming		[45] Date of Patent: May 19, 1987
[54] DEVICE FOR PERFUSING AN ANIMAL HEAD	Primary Examiner—John D. Yasko	
[75] Inventor: Chet Fleming, St. Louis, Mo.	[57] ABSTRACT	
[73] Assignee: The Dis Corporation, St. Louis, Mo.	This invention involves a device, referred to herein as a "cabinet," which provides physical and biochemical support for an animal's head which has been "discorporated" (i.e., severed from its body). This device can be used to supply a discorped head with oxygenated blood and nutrients, by means of tubes connected to arteries which pass through the neck. After circulating through the head, the deoxygenated blood returns to the cabinet by means of cannulae which are connected to veins that emerge from the neck. A series of processing components removes carbon dioxide and add oxygen to the blood. If desired, waste products and other metabolites may be removed from the blood, and nutrients, therapeutic or experimental drugs, anti-coagulants, and other substances may be added to the blood. The replenished blood is returned to the discorped head via cannulae attached to arteries. The cabinet provides physical support for the head, by means of a collar around the neck, pins attached to one or more vertebrae, or similar mechanical means.	
[21] Appl. No.: 809,949		
[22] Filed: Dec. 17, 1985		
[51] Int. Cl. <sup>4</sup> ..... A61M 37/00		
[52] U.S. Cl. .... 604/4; 128/1 R		
[58] Field of Search ..... 604/4, 5, 6; 128/1 R		
[56] References Cited		
U.S. PATENT DOCUMENTS		
4,116,589 9/1978 Rishon	604/4	
4,192,302 3/1980 Boddie	604/4	
4,540,399 9/1985 Litzie et al.	604/4	
4,583,969 4/1986 Mortensen	604/4	
OTHER PUBLICATIONS		
Robt. J. White, "Brain," pp. 655-674 in Organ Preservation for Transplantation, 2nd ed., Karon & Pegg, 1981.		
The Tomorrow File, by Lawrence Sanders (1975), pp. 430-432 and 459-466.		
Heads, by David Osborn (1985), pp. 108-110 and 146-147.		

20 Claims, 3 Drawing Figures

What the experiment does to *ourselves* is always at least as important as what it does to its "real" subject. Somewhere in Latin America or elsewhere the experiment will be done. Those who do it will be affected, well or badly. *We* will not get any benefit from this. Trying to control the outcome of an experiment isn't even desirable. It's no longer an experiment.

As cryonicists we can provide many experiments with far stronger effects on society than discorporated heads. Chet Fleming takes care to point out what discorporated heads are *not*. They aren't means to immortality. They aren't means to any special psychic powers, despite all the science fiction which tries to make out that they are.

In fact, the only thing they are is a new variety of paraplegic.

If we ignore all the medical/scientific apparatus sustaining a discorporated head, we have a situation no different from that of paraplegics today. The problems and opportunities discorporation presents are virtually identical to those of paraplegia. I find it hard to see a need for any special laws or regulations for this new variety of paraplegia. Yes, some people become eligible for this paraplegia who were not eligible for the other kind. So what?

As a cryonicist I also have a serious problem with a second, less basic, but still fundamental question. Just what is the real prospect of this technology, anyway?

First, we don't really see a body of citizens or patients urging discorporation. It hasn't even got the support of work on artificial hearts. There are (I kid you not) more people advocating research on immortality than people advocating discorporation. This fact should tell Chet Fleming something. As a technique for application to human beings, discorporation just doesn't have a real, serious following. And to provide a "discorporation technology" medically suitable for human patients isn't something a single researcher can do. It requires the concerted work of many people, spread over many years and millions of dollars. We look around us and see none of that.

Certainly we might see such an interest develop. Anything is possible. But one conclusion from current medical research is that almost everyone, scientists and lay people, have *already* decided the issue of discorporation research. Their answer is: they're not interested. It's not hard to see why....

In his discussion Chet Fleming puts forward several science fiction works in which human heads are kept alive for various reasons. Some of these are: David Osborne's book *Heads* (1985), C.S. Lewis's *That Hideous Strength*, Lawrence Sanders' *The Tomorrow File* and others. We do not live in science fiction. Many people who have been with cryonics for 10 years will know this very well.

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## Meeting Schedules

Alcor business meetings are usually held on the first Sunday of the month. Guests are welcome. Unless otherwise noted, meetings start at 1 PM. For meeting directions, or if you get lost, call Alcor at (714) 736-1703 and page the technician on call.

# ALCOR

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The APRIL meeting will be held at the home of:

(SUN, 2 APR, 1989)      Brenda Peters  
                                 8150 Rhea  
                                 Reseda, CA

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The MAY meeting will be held at the home of:

(SUN, 7 MAY, 1989) Simon Carter  
(PLEASE BRING CHAIRS) 419-F S. Chatham Circle\*  
Anaheim, CA

\* In the Oakwood apartment complex at Lincoln Ave. and Rio Vista St. (East on Lincoln off the 57 freeway. Please park in uncovered parking spaces.

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Alcor members in the San Francisco Bay area have recently formed an Alcor chapter, and are aggressively pursuing an improved rescue and suspension capability in that area. Meetings are generally held on the second Sunday of the month, at 4 PM. Meeting locations can be obtained by calling the chapter's Secretary-Treasurer, Thomas Donaldson, at (408) 732-4234 (home), or at work, (415) 593-3200 (ask for Thomas Donaldson).

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The APRIL meeting will be held at the home of:

(SUN, 9 APR, 1989) Frank and Geraldine Rothacker  
3017 Greer Rd.  
Palo Alto, CA

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The MAY meeting will be held at the home of:

(SUN, 14 MAY, 1989) Thomas Donaldson and Cathy Woof  
1410 Norman Drive  
Sunnyvale, CA

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The New York Cryonics Discussion Group of Alcor meets on the the third Saturday of each month at 6:30 PM, at the El Paso restaurant, in Manhattan's Greenwich Village. The address is 134 West Houston St., between McDougal and Sullivan. Telephone (212) 673-0828. Ask for the Alcor group at the rear of the restaurant. Subway stops: Houston St. on the 1 train; Spring St. on the C, E, or K trains.

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The meeting dates are as follows:

APRIL 15            MAY 20            JUNE 17            JULY 15

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If you live in the New York, Philadelphia, New Jersey, or Boston areas and would like to participate in the rebirth of New York cryonics please contact one or more of the following people:

Gerard Arthus            (516) 273-3201  
Al Roca                    (201) 352-5268  
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