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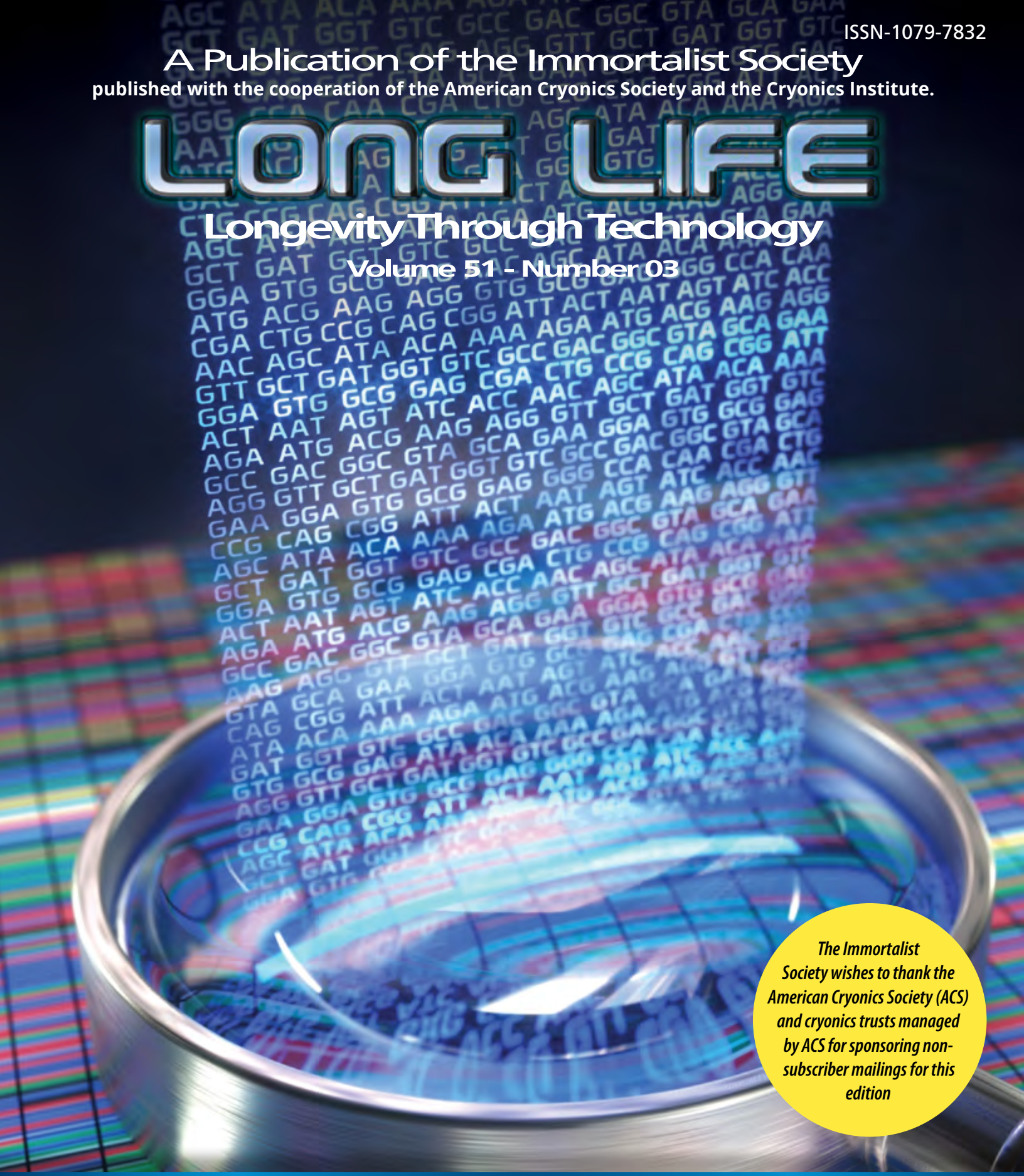
LONG LIFE

Longevity Through Technology

Volume 51 - Number 03



The Immortalist Society wishes to thank the American Cryonics Society (ACS) and cryonics trusts managed by ACS for sponsoring non-subscriber mailings for this edition

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CRYONICS INSTITUTE
Technology for Life

Why should You join the Cryonics Institute?

The Cryonics Institute is the world's leading non-profit cryonics organization bringing state of the art cryonic suspensions to the public at the most affordable price. CI was founded by the "father of cryonics," Robert C.W. Ettinger in 1976 as a means to preserve life at liquid nitrogen temperatures. It is hoped that as the future unveils newer and more sophisticated medical nanotechnology, people preserved by CI may be restored to youth and health.

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Membership qualifies you to arrange and fund a vitrification (anti-crystallization) perfusion and cooling upon legal death, followed by long-term storage in liquid nitrogen. Instead of certain death, you and your loved ones could have a chance at rejuvenated, healthy physical revival.

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The Cryonics Institute (CI) offers full-body cryopreservation for as little as $28,000.

3) Affordable Membership

Become a Lifetime Member for a one-time payment of only $1,250, with no dues to pay. Or join as a Yearly Member with a $75 initiation fee and dues of just $120 per year, payable by check, credit card or PayPal.

4) Lower Prices for Spouses and Children

The cost of a Lifetime Membership for a spouse of a Lifetime Member is half-price and minor children of a Lifetime Member receive membership free of charge until the child turns 18 years of age.

5) Quality of Treatment

CI employed a Ph.D. level cryobiologist to develop CI-VM-1, CI's vitrification mixture which can help prevent crystalline formation at cryogenic temperatures.

6) Locally-Trained Funeral Directors

CI's use of Locally-Trained Funeral Directors means that our members can get knowledgeable, licensed care. Or members can arrange for professional cryonics standby and transport by subcontracting with Suspended Animation, Inc.

7) Funding Programs

Cryopreservation with CI can be funded through approved life insurance policies issued in the USA or other countries. Prepayment and other options for funding are also available to CI members.

8) Cutting-Edge Cryonics Information

Members currently receive free access to Long Life Magazine online or an optional paid print subscription, as well as access to our exclusive members-only email discussion forum.

9) Additional Preservation Services

CI offers a sampling kit, shipping and long-term liquid nitrogen storage of tissues and DNA from members, their families or pets for just $98.

10) Support Education and Research

Membership fees help CI, among other things, to fund important cryonics research and public outreach, education and information programs to advance the science of cryonics.

11) Member Ownership and Control

CI Members are the ultimate authority in the organization and own all CI assets. They elect the Board of Directors, from whom are chosen our officers. CI members also can change the Bylaws of the organization (except for corporate purposes).

The choice is clear: Irreversible physical death, dissolution and decay, or the possibility of a vibrant and joyful renewed life. Don't you want that chance for yourself, your spouse, parents and children?

To get started, contact us at:

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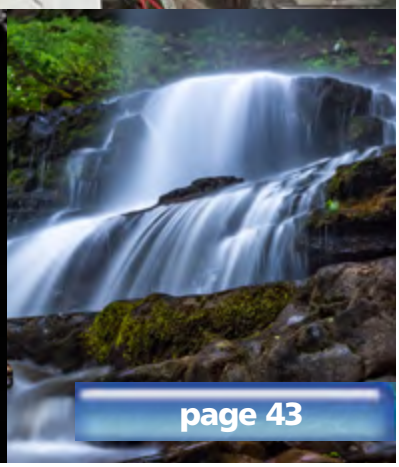

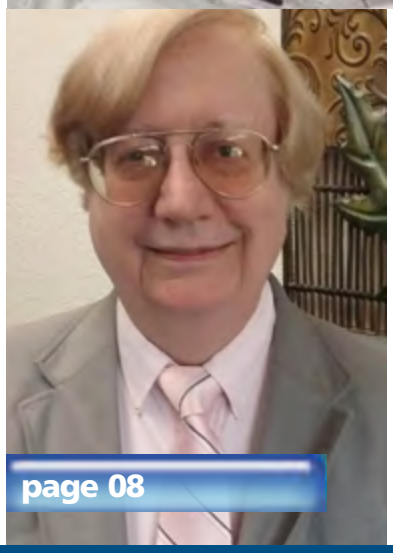

LONG LIFE MAGAZINE

A publication of the Immortalist Society

ORGANIZATION NEWS

FEATURE STORIES

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4. Try a different browser (especially if you're using Internet Explorer.) We recommend Google Chrome.

You've signed up for Cryonics Now what should you do?

Welcome Aboard! You have taken the first critical step in preparing for the future and possibly ensuring your own survival. Now what should you do? People often ask "What can I do to make sure I have an optimal suspension?" Here's a checklist of important steps to consider.

- ☐ Become a fully funded member through life insurance or easy pre-payments

  Some members use term life and invest or pay off the difference at regular intervals. Some use whole life or just prepay the costs outright. You have to decide what is best for you, but it is best to act sooner rather then later as insurance prices tend to rise as you get older and some people become uninsurable because of unforeseen health issues. You may even consider making CI the owner of your life insurance policy.

- ☐ Keep CI informed on a regular basis about your health status or address changes. Make sure your CI paperwork and funding are always up to date. CI cannot help you if we do not know you need help.

- ☐ Keep your family and friends up to date on your wishes to be cryopreserved. Being reclusive about cryonics can be costly and cause catastrophic results.

- ☐ Keep your doctor, lawyer, and funeral director up to date on your wishes to be cryopreserved. The right approach to the right professionals can be an asset.

- ☐ Prepare and execute a Living Will and Power of Attorney for Health Care that reflects your cryonics-related wishes. Make sure that CI is updated at regular intervals as well.

- ☐ Consider joining or forming a local standby group to support your cryonics wishes. This may be one of the most important decisions you can make after you are fully funded. As they say-"Failing to plan is planning to fail".

- ☐ Always wear your cryonics bracelet or necklace identifying your wishes should you become incapacitated. Keep a wallet card as well. If aren't around people who support your wishes and you can't speak for yourself a medical bracelet can help save you.

- ☐ Get involved! If you can, donate time and money. Cryonics is not a turnkey operation. Pay attention and look for further tips and advice to make both your personal arrangements and cryonics as a whole a success.

CRYONICS INSTITUTE
Technology for Life

LONG LIFE

A quarterly publication of the

Immortalist Society

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CI EXECUTIVE REPORT

Dennis Kowalski - President, Cryonics Institute

Hello Everyone,

I'm happy to report that we had another very successful AGM at the Cryonics Institute this past September. This year's meeting featured great speakers discussing topics relevant to the past, present and future of cryonics. For more on the 2019 AGM listen to our podcast of the meeting on **YouTube**.

2019 BOARD OF DIRECTORS

One of the signature announcements at every AGM is the Board of Directors election results. I take great pleasure in congratulating our re-elected directors Alan Mole, Debbie Fleming and Kevin Doyle and our newest director Nick VanDerMuelen. Sincere thanks to everyone for stepping up to serve the interests of our membership and our organization. Being a CI director is an honor and a privilege and I am confident that you will all work very hard to defend and advance CI and its mission during your terms.

One of the first jobs of the board following elections is the annual vote for our Board of Directors Officers, including the President's position. All incumbent officers were re-elected to another one-year term to serve in their designated roles, including myself as President. I would like to personally thank the directors for entrusting me with the leadership role of serving another year in this important position. I believe we have made some great strides during my tenure thus far, and pledge to do my very best to see that CI continues to head down the right path moving forward. Thank you for your continued confidence in me and the other officers on the board. We will not let you down.

CI'S NEW FACILITY

One of our major projects moving forward will be retrofitting our new location and getting it ready to accept patients as we continue expanding our operations. A lot of work and overhead goes into preparing a new facility for cryonics, from the basics of improving an existing building with new paint, lights and other structural renovations, as well as installing the more specific and unique infrastructure needed for a functioning cryonics facility. These specialized requirements include a liquid nitrogen delivery system and cryostat maintenance, considerations like climate control, bay doors, flooring and more that probably couldn't be done properly without experienced people on board. I am very proud of our staff and the work that they are doing to get our new facility up and running to CI's quality control standards. Special thanks to Andy Zawacki, Hillary Martenson, and Michael McCauley for the hard work, attention to detail and dedication they're bringing to this milestone project as well as to CI and our membership every day. We are truly blessed to have the outstanding and talented staff we have. It is not always easy to find great workers with a great work ethic and talent, so I am extremely pleased with and proud of our Facility Team.

On the subject of talented individuals and CI, I would also like to take a moment to recognize Douglas Golner who is largely responsible for the professional appearance of the magazine you are reading now as well as the operation and maintenance of the Cryonics Institute website among other less high-profile but important contributions. Doug is a talented technical person, wordsmith and artist, and he really helps to iron out many technical issues as well as helping manage our digital presence and other collateral which serve as the front door and face of CI in many ways.

DEDICATION AND TEAMWORK

I could go on and on thanking the many volunteers and donors that have helped us grow into what we have become,

but the list is just too long and some of our best helpers prefer to keep a very low profile away from the spot light. To each and every one of you, whether publicly recognized or not, please know we really appreciate what you do and recognize that your efforts are a big part of where CI is today. Keeping an organization like CI vital and strong for over 40 years takes a big team effort, and I am proud to say our team of members, Board Members, employees, volunteers and donors are the ones who make that happen. Thank you again - I consider myself very fortunate to have such a great team to rely on in carrying through on our founder Robert Ettinger's vision and goals.

THE CI FAMILY

I consider CI to be an extremely professional and well-run organization but we have sometimes been characterized as a "mom and pop" operation as if that is a bad thing. To tell you the truth, we are proud of that dynamic in our organization's culture. To me, the term "mom and pop" is synonymous with "family business" and "family culture" where people care deeply about the business and one another rather than the term being some kind of insult. CI is truly a family and we care about each and every member with the deepest sincerity, which is not something you find very often dealing with many companies today. Sure, members may quarrel at times like brothers and sisters do, but in the end we are always united and ready to help one another when it matters most. We are all in the big cryonics life raft together and our very lives depend on our mission unity.

YOUR FUTURE STARTS NOW

As always, I must reiterate the extreme importance of all cryonicists taking action now by re-examining and acting on CI 's To Do lists and Standby Preparation materials available when they appear here in the magazine as well as in the resources section of our website.

It is not enough to just sign up for cryonics. It is crucial that each and every cryonicist examine his or her unique individual situation and planning. We will help you, and that is what the guides are for, but unfortunately CI cannot do everything for everyone. We just don't have the resources or the intimate knowledge that each member has about their own lives and changing circumstances. When the variables begin to mount up, as they inevitably do in Standby situations, a certain level of decentralization and individual initiative is necessary to effectively address those challenges. Simply put, no matter how much CI tries to stay on top of every member's status, no one knows your own situation and needs better than you do. So as much as you depend on CI in a Standby emergency, remember we are also depending on you and your advance planning, communications and preparation to help the process go as smoothly as possible.

We all know that a lot can go wrong in cryonics and time and time again we see that those who plan and ask questions in advance have better success rates than those who simply sign up and then hope for the best. But isn't that the way it is with everything in life? There are no shortcuts to success, so please don't just read this and neglect to take action. Take the time right now to review the resources we provide and start running through scenarios of problems you might face if you get sick or worse. Print the information at the following web addressses, and put them on your refrigerator and begin reviewing, addressing and checking off each item listed.

https://www.cryonics.org/resources/member-readiness-suspension-checklist

https://www.cryonics.org/resources/10-worst-mistakes-in-cryonics

Download and review the CI Standby Manual

(*https://www.cryonics.org/resources/ci-standby-kits-and-instructions*)
for even more information, tips and advice on how to best prepare yourself, and CI, for your eventual suspension. And if you have additonal questions, don't hesitate to contact us for more help.

You will be glad you did as you empower yourself with the peace of mind in knowing that you will have the best odds of suspension success when the time comes. Good luck and best of wishes in your task. I have faith in all cryonicists that if they set their mind to it they will prevail.

Respectfully

Dennis Kowalski

President - Cryonics Institute

Cryonics Symposium International

Church of Perpetual Life

1855 McKinley Street - Hollywood, FL 33021

Foreword by York W. Porter, President, Immortalist Society

In July of this year, the Church of Perpetual Life held an excellent Cryonics Symposium International. Numerous speakers representing various areas of the globe and various areas of expertise appeared. Over the next several issues, Long Life will be reprinting those presentations. We will, however, vary the presentation order somewhat to either correlate with other topics in each issue or just for the sake of available space in each issue. We encourage you to continue to follow each issue for a wealth of information available from these outstanding individuals who represent many viewpoints and areas of expertise in the field of cryonics.

We start this coverage off with one of our regular magazine contributors, Mr. Jim Yount. My long time friend Jim is the President of the American Cryonics Society and has especial expertise in the financing of cryonics arrangements. He is also quite knowledgeable about cryonics in general having been involved in the field since around 1972. Please note that Rudi Hoffman gives a brief introduction of Jim. Rudi served as the Masters of Ceremonies for the event and is a long time cryonicist whose expertise, among other things, is in using life insurance to fund cryonics. Rudi's book The Affordable Immortal is being published in installments in this magazine.

(Readers should note that the article here has been lightly edited. It should still reflect, however, the original talk with some very minor corrections and/or deletions to reflect the difference between an audio and a written presentation.)

Rudi Hoffman: Let's talk about Jim Yount. Jim Yount is the President of the American Cryonics Society. He has been active in cryonics since, again, guess what, 1972 which sounds like a pretty big year. Well known in cryonics circles, creative at work, he does enormous and great writing. You may have read some of his work in Long Life magazine. His emphasis is also on long term planning. I love what Jim Yount brings to the table and he's also a great personal friend. By the time he gets his jacket on, we'll be ready to roll.

Ladies and gentlemen, Mr. Jim Yount.

Jim: Thank you and thank you for having me. It is a pleasure to be able to address you today.

Jim Yount

When I was first invited to address you, I tried to think of a topic that would be of interest to everyone and although we are in various cryonics organizations, one thing we're all interested in is money! Money to be able to fund cryopreservation research, and money to provide us with a new life fund and reanimation if that time comes.

The American Cryonics Society is a 501c3 California nonprofit organization. The purpose: cryonics and cryobiological research. We've sponsored a cryopreservation program since 1972. Our first suspensions/cryopreservations--1974. Donations are certainly welcome and we also welcome your membership.

Another commercial, Long Life Magazine. Long Life Magazine is the longest running of all the cryonics organizations publications and the organization of the Immortalist Society is a 501c3 charity and they also, as Joe told you, are the sponsor for the Cryoprize. Thirty five dollars will get you a subscription, forty dollars if you live outside the United States. You get four issues per year, and there are some examples in the lobby and please pick one up. If they are not available there, we'll mail you one.

Ok, so, topic is "How to Be Cold and Rich and Financially Support Cryonics Evidence Based Science". How to be cold and rich and financially support evidence based science.

So, the little guy says, one, remove head, freeze head, and three, keep head cold. Easy. But there are a number of things that a person needs to consider when they are setting up a trust or making other kinds of arrangements to try to take some of the money with you when you go. One of them is "Will I be able to work for wages?" I think that is highly doubtful but I have talked to many people who say "Sure, I'll be able to work for wages so I don't need a whole lot of money when I go to the future". What kind of ...Will there will a kind of cryonics reservation, a place that is not with the rest of the society where they put all of us? I hope not.

Other things, can you actually leave workable instructions to be able to diversify your investment after you go into cold care to be activated at that time? I think the answer is "Yes" but it's not all that easy.

Will money even have any value when you reanimate? I think so but I have certainly heard arguments against that. Can you diversify the money by who controls management over your investment or the type of investment or who owns the asset?

Personhood. What makes us a person? What is the "self". Robert Ettinger had a whole chapter that he devoted in *The Prospect of Immortality*. And if you haven't read that book or don't remember that chapter, go back and read it because I think it's an eye opener.

How long will you live. If you're going to live a long time, you might not need as much money. If you're like me and probably going to be going into deanimation much sooner then maybe you better have some.

Relatives. How do your relatives view cryonics. Should you pay for other people being cryopreserved?. We had one of our members that set up a fund and he said "This is for my brother. My brother has been a fence sitter but should he choose to be cryopreserved, then I want this money to be available to him."

One of the things is scanning and archiving. I think that is important. We have such a project of scanning going on right now at the American Cryonics Society for one of our members.

Setting up a webpage in a way so that you're not forgotten. People can always look at your web page and know about you and remember you.

The last part, which I think is something not just people need to ask but people in the cryonics community need to give some thought. Does the cryonics society have an obligation to provide for care and comfort of its reanimated patients?

To be cold and sign up for cryopreservation, you provide funding through life insurance or other means...I've always liked this picture because I think we all feel like that sometimes when we've worked through the cryonics paperwork. But I think it's the choice, you're either buried by the paperwork or you're buried!

To be a rich, cold guy, you have to first be a rich warm guy and then make arrangements to take some of your money with you. And you follow the frozen path. We can ask the people that have gone that way before and we're also going to throw in some warm people that are on that path as well.

Fictional characters will play the part except for one and you'll see that one as you go through it.

Now, contrary to public opinion I am not a cartoon character. My mother named me Jim but you can call me Felix because I always wanted to be a cartoon character.

I've got a degree in insurance risk management and I've been signed up since 72. For many years, I worked for Trans Time and helped other people to make arrangements to be frozen and to set up trusts and so on. It's interesting they actually paid me to do that. Currently I am the President of the American Cryonics Society and working for free doing the same thing.

Anyone can do it. Now we're not going to consider the cryonicist who has gotten rich through inventions or starting companies because I don't think that's necessarily something that can be repeated.

Bur rather these are the butcher, the baker, the candlestick maker who have become cryomillionaires just like the "millionaire next door". There are basically, I have divided this, at least for our examples, there will be at least three types of cryomillionaires. Stock market, real estate, and diversified that includes gold, second deeds of trust, CD's, life insurance, annuities, and, of course, life insurance and annuities would also apply to one and two as well.

So, meet cryomillionaire number one. This is Mrs. Peggotty and her secret is to hire a stock market....somebody to manage her funds for her. Her story starts with a tragedy. She was

widowed and had a daughter to raise by herself but her husband had thoughtfully provided a life insurance policy to give her something, her and her daughter, something to start with. So, with that situation, and I'm sure Rudi has seen this in some examples, people often very quickly go through the funds that they've provided through their...that they've received through life insurance and they are back where they started from. But not this lady.

So here were her goals. She wanted to raise and educate her daughter. She wanted to live without hardship, and she wanted to have enough money that she would never run out no matter how old she lived. And I think that is something that most of us would like. However, she hired an expert then, put her money with a guy that was an expert at making stock market investments and she considered that her job was to live frugally so that more money could then go for her expert to manage.

Now, although those were her plans, long life was not likely for our hero. Her goals then changed when there was a diagnosis that she wasn't going to live very long in early old age. Her goals changed to be cryopreserved and to take her fortune with her to the future. Then she had about three million dollars she had built up by having someone invest her money that knew what they were doing and her living frugally.

So she achieved her goal. She was cryopreserved. By that time she had about four million dollars in a trust and she provided for continued funding of cryonics to a stipend of five percent per year from the principal that would go to support research and of the cryonics projects.

Now reviewing her strategies, hire an expert and live frugally.

Now we meet our second cryomillionare which is Buzzy the Crow. He's a guy that is very independent and he always manages his own money. He started very early, right out of college. And his strategy was to find beaten down stocks, put money into it, wait til the stocks recovered and then become rich. And he diversified his investment.

Something very lucky happened to our crow. That is he bought a house in Silicon Valley for 24,000 dollars that is now worth about 2 million dollars. Though you can't count on that but Buzzy also then used leverage by borrowing against the equity in his home and buying more stock. He didn't do this in a huge, huge way but he did it in a way that he could magnify his investment.

So here is where Buzzy sits right now. And he's a fellow my age and he probably has another fifty to sixty years no doubt to live. Five million dollars in stock investments. Two million dollar house. Some of his wealth will be shared with his wife and he has a trust to be administered by Crow cryonics family members and there are provisions in the trust to fund research.

Reviewing his strategy, well paying job, assuring wealth with wife, self-directed stock purchases, a world of good fortune and ready to take advantage of them and leverage his investments. And he is a term life insurance buyer.

Summary of our stock market investing people: Miss Peggotty, hired an expert. Buzzy the Crow, self directed, frugality and, of these people we're looking at, almost all of them, followed the strategy of being very tight with the buck.

Let's see, to get started in the stock market, as an example, Acorn Investment has no minimum investment to start and it will allow you to buy stocks on margin with two to three thousand dollars. We have experts here and a number of people in that area and they can tell you more about that I'm sure.

OK, so we now we go to Flip the Frog. Now Flip is a nice guy and being a nice guy is one of the reasons that led to his wealth. I had a chance to talk with Flip and ask him just how is it that he had become a rich guy because there was nothing very obvious and he seemed very ordinary and I found out that there wasn't any single strategy that he had used to build his wealth. Now often people will find a formula and then they just stick to it like buying houses and renting them out. But with Flip, he had done lots of different things to build up his wealth. So what was it that made this guy rich?

I think this tells you. So Flip's a nice guy and Flipetta's a nice gal and they don't always get along and they got a divorce. But they have a nice house as you can plainly see. So what to do? Keep the house, rent it out and divide the profits and then maybe later sell the house and sell the proceeds. How would that work out? Very well.

So they did. They agreed to keep the house. And rent it out and then, some time in the future, it would be sold, and that one single fact, I think, led to the success of Flip and Flipette. It shows Flip's attitude toward life and wealth. Besides that, if you just take that one single fact, they'd be keeping the house itself, that can make quite a difference between rental income, appreciation on the house and if any of you have gone through a divorce, you know how this can be debilitating. Suddenly your credit is no good, you have lots of expenses you

weren't intending and lots of times it really sets people back on their haunches.

Now here's an example of what may well have been a house that Flip and Flipette had. One hundred thousand dollars, ten percent down, payment of 90000 dollars as a finance amount, 8 percent mortgage, in this day and age it would be more like a five percent mortgage and 20 percent down. But just looking at that, the profit that would come each year from rent that they would divide and be built up with equity. If we look at over a 20 year period, there would have been 191,000 in rent income come in and 186,000 in appreciation. So it really did pay to be a nice guy.

Now we've looked at the nice guy with one house but here's a cryoncist that owns many house and he is Tom Swift. He lives in the Silicon Valley, he's got a nice salary, he's got a cryowife and cryokids. In his early fifties, he's a hands-on active cryonicist and my hat is really out to guys that do that. I think we need more guys like Tom.

So, he now owns six homes in Northern California. They were purchased outright with no mortgage. Now the usual formula is to leverage to the max; to buy homes with a little money down and to use other people's money to pay for them. Tom said he didn't want to do that. He said the homes that he bought had actually belonged to other people and that he tried that and that it didn't work out too well for him.

So he paid for them outright. His wife manages them. He used self directed IRA's for the purchase of two of his homes. This shows an example of one home after the closing costs of 297,000, almost 278,000 invested, rental income of 31,000 per year, expenses of 4,000, so he has 27,000 right off the bat of income. And this shows projected values of a one, five, and ten years of one house.

And here is what his present estate looks like and remember he is still a young guy and it may well be that he is one of our supermillionaires of the future if he keeps doing what he is doing. So right now he has about a million dollars over 5 years in rental income, a value of about 3 million dollars, his personal residence is worth about a million and he has cash and cash equivalents of 200,000 to give him a five point two million dollars not including life insurance.

OK, let's look at his strategy. High paying job, working with the wife so they have mutual goals, invest in single family homes managed by wife, one quarter of his estate will go to cryonics as a free and clear gift. They're the last of the couples to be young.

Now let's look at two cryomillionaires, husband and wife. This is the one that's a real person……Professor Freud and Jill. Here's Jill. I love this that she's taken from a 1930's cartoon and she says "I'm busy Daisy doing science!!"

Professor taught for five additional years in order to be able to pass on what he wanted to to his relatives and other commitments that he had made but still do cryonics. Now, this made a big difference with Jill because he made this very unselfish commitment and I think it says that if you want something, you need to give something.

Jill is also signed up. She had retirement funds through her teacher plans, she taught high school and she was cryopreserved before the professor and some of her income went on to the professor and after Jill was cryopreserved, her remaining assets were managed by the professor. They were both cryopreserved Both contributed capital and they had a "last to die" provision in their trust. The trust is now funding cryonics research.

OK our final cryomillionaire is Scrooge. Very thrifty. He created the trust in 1985. He didn't like the stock market and he bought and sold second deeds of trust as a method of wealth building. I think his insurance plan is worth looking at. He had term insurance and company insurance up til February of 2003 when he retired early from IBM and at the time that he was cryopreserved he had three hundred and fifty two thousand in insurance or single life premium policies which had cost a hundred and forty three thousand but most important was the fact that any time that he would have deanimated during any of that period he would have been covered by this insurance program.

So, here is what his post deanimation funds look like. Sixty one thousand went to CI, double what they usually require. He's got a hundred and forty thousand with the Reanimation Foundation. Net insurance proceeds after paying all the costs of cryopreservation and there's some research, goal of a 100,000 and 1.75 in real estate so he's very well diversified. So, frugal life, second deeds of trust, insurance annuities to build wealth and create an immediate estate and he created a cryonics trust to memorialize his wishes, diversified during wealth building and diversified after he was cryopreserved.

And that's how our people did it. Here are our heroes out for a curtain call. And that, ladies and gentlemen, is my presentation. Thank you very much.

Cryonics Institute Membership Statistics:

As of February 2020 the Cryonics Institute has 1,830 members, up 211 from our last 2019 report. Of the 1,830 Members, 267 have arrangements for Suspended Animation Standby and Transport.

There are 183 human patients and 182 pet patients in cryopreservation at CI's Michigan facility.

CI continues to be an industry leader in terms of both membership and practical affordability for all.

CI MEMBERSHIP

FEBRUARY 2020

* New Members = Increase in Membership since last issue

Members	1,647	Pets	182	TOTAL
Patients	183	DNA/Tissue	301	1,830
		SA	267	

For the Record

Cryonics Newsletters: Some Historical Highlights, Part 4a

Our multipart series on cryonics newsletters here focuses on the newsletters of the Cryonics Society of Michigan, 1970 – 1972.

R. Michael Perry

R. Michael Perry

Introduction by York W. Porter, Immortalist Society President:

My friends at Alcor occasionally help out with useful suggestions and contributions to Long Life Magazine. In this particular case, Mike Perry, who is known for his interest in cryonics past events and happenings, provides a lengthy article on some of the history of this magazine. It is, for this reader at least, quite fascinating to learn (and in some cases, since I've been around the old barnyard for a while, relearn) bits of information about how cryonics proceeded, especially in its early years. It is interesting to note that, of course, the particular endeavor of cryonics had never been tried before and, as Mike indicates below, there are lessons to be learned from reviewing the efforts of the participants early on as they tried to bring the field to fruition in as rapid a fashion as reasonably possible.

Having personally come across cryonics in the mid 1960s, I can testify that, teenager though I was, it seemed to many as if the endeavor would take off in a similar fashion to the space program. Cryonics came along during a time period in human history in which numerous awe-inspiring technological advances had already been, or seemed to be, right on the cusp of development and routine use. Just as a look at technology in the 1800's can provide one with the antecedents to the technology of the following century, it seemed, in my mind at least, that cryonics was going to be an up and going concern by the time I reached adulthood due to the numerous technological advances that had already occurred and that were in the process of development. Alas, that was not the case and those of us interested in this revolutionary proposal by Robert Ettinger are still working to make this rational and sensible concept a matter of everyday life.

My thanks to Mike Perry, Aschwin de Wolf, and the folks at Alcor for allowing this republication of an excellent and informative article about how the magazine you are reading at the moment ultimately came to be.

(P.S. Going through the article, I was pleasantly surprised to read the writings of a young college freshman who was pontificating on a subject that was so dear to his heart, although his knowledge base of much of anything in the world, let alone cryonics, left much to be desired. That young freshman was, of course, myself. Life has turned out much differently than I had hoped back in those days. Still though, I have been blessed in a number of ways, not the least of which was the deep honor of succeeding the "father of cryonics" in my present position as the President of the Immortalist Society. Reading those words of mine from decades ago, in spite of the intervening years, I had to humbly (or maybe not so humbly) say "Not too bad, young man, not too bad").

Cryonics Newsletters: Some Historical Highlights
Part 4a, Cryonics Society of Michigan, 1970-72.

For part 4 of our multipart series on cryonics newsletters we look at the Cryonics Society of Michigan. Their newsletter, first simply titled *Cryonics Society of Michigan Newsletter*, started in January 1970. With the third issue, March 1970, the title changed to *The Outlook*, where it remained through February 1976. All issues during this time were letter-sized pages with upper-left corner stapling. With the March 1976 issue, the title changed to *The Immortalist*, where

it remained until Nov.-Dec. 2006, when it became *Long Life* magazine, where it continues today. Now in its 50th year, the publication has enjoyed a record "long life" of its own among cryonics periodicals. Such a long history is a lot of ground to cover, and part 4 of our series is limited to the first few years, extending only through the issues of *The Outlook*. That in turn, though, is still a bit much for one article, so again the coverage is subdivided. The present installment, 4a, will cover the issues of the first three years 1970-72, with 4b reserved for the remainder of the *Outlook* issues, extending into 1976. Lengthy quotations here are in (condensed) courier new font. Ellipses, indicating material omitted, are of two sorts. Those in the original are indicated by the usual three dots ..., while omissions by editorial decision of what was originally present have the dots in square brackets [...]. Otherwise square brackets are used for the usual editorial insertions. In one instance there is an editorial insertion in the original, enclosed in slanting square brackets which the typist, working with a keyboard that lacked these characters, simulated with overstrikes of slashes and raised and lowered hyphens. This in turn is here approximated in italics (uncondensed) square brackets in courier new font: *[ ]* and should be distinct from insertions by the writer. Spelling corrections in a few places have been silently made, notably in the case of variant, incorrect spellings of proper names.

Cryonics newsletters are important for the history they record with the lessons it teaches, granted the inevitable imperfections as in any human endeavor. In the time period covered here, the primitive cryonics movement would experience some of its greatest challenges. From its optimistic sendoff in the 1960s, the movement would falter in the first half of the following decade as freezings were abandoned to burial and few additional among the dying were preserved. Through this troubled time the CSM publication bravely continued, doggedly supported by Robert Ettinger and others determined to make cryonics succeed, and in the process, relating a history we would do well to study.

Startup

CSM was founded in October 1966 with Robert C. W. Ettinger, the principal founder of the cryonics movement, as president.[1] For a few years CSM had no newsletter of its own. The two leading cryonics publications of the time were *Freeze-Wait-Reanimate* of the Life Extension Society in Washington, D.C., and *Cryonics Reports* of the Cryonics Society of New York (title changed in 1970 to *Immortality*). By 1970 some major changes had occurred or were about to occur. The LES publication would cease with the September 1969 issue. CSNY's newsletter would similarly end with Spring 1971. The Cryonics Society of California (CSC) was also producing newsletters, but by 1972 these too had virtually ceased.[2] The appearance in 1970 of the CSM newsletter was timely, though no particular concern is voiced early on; cryonics seemed vigorous and progressing, with a conference upcoming in May, and numerous activities to report.

Cryonics Society of Michigan Newsletter

January, 1970 Vol. 1, No. 1

The Cryonics Society of Michigan Initiates News Organ

Co-editors

Pat Dewey Mae Junod

CSM Van Refurbished (Story p. 2)

CRYONICS

Other Items

Letter from Editors p.1
New Officers, Directors 2
Pub. Membership Seminar 2
Toxic Rows 3
Miscellaneous

Walter Henkel and Van

First issue of the CSM newsletter, cover page, showing co-editors Pat Dewey and Mae Junod

The first issue of the CSM newsletter opens with an article "from the editors," who in this case were Patrick Dewey and Mae Junod (later Mrs. Robert Ettinger), encouraging readers to take part in the new endeavor:[3]

As co-editors of the Newsletter we want you to know that this is not only a source of news related to CSM but an opportunity as well to express your views and to add anything you think would lend interest or information to these pages. We will appreciate suggestions, interesting items we may have missed in other publications, humor, poetry, tales, anything and everything that might both stimulate and inform our readers.

As for goals: we regard this organ as a force to promote greater commitment and involvement on the part of members as well as a promotional instrument to interest non-members and induce them to join us in our efforts to bring about the establishment of cryonic interment as one of the predominant ways of modern life. Essentially the most important aspect of this entire endeavor is you. You are a part of the total effort. So don't leave us off in a corner toiling away with pencil and paper. Give us of your inspiration, your knowledge and your creativity.

The rest of the issue is taken up with such matters as the recent refurbishing of the CSM Rescue Van, the recent election of officers and directors of the CSM, arranging for speakers at your desired location, and recommended books. Robert Ettinger receives special notice for his speaking activities in his home state and is said to stand "second only to [civil rights leader] Julian Bond in the minds and hearts of Michigan community college students. At least that is what a recent survey revealed when students indicated preferred speakers for the Association of Community Colleges of Michigan."

Mary Ruwart

The second issue features a young Mary Ruwart on the cover and reports on her activities as a student in cryobiology:[4]

MARY RUWART IN DOCTORAL PROGRAM

Mary Ruwart, who has been a member of CSM since September of 1969, is planning to embark upon a doctoral program in cryobiology at Michigan State University (where she is now a student) either this summer or fall. She will be working at first in the broad field of biophysics under Dr. E. M. Eisenstein, but will eventually work under some other person in the more specific field of cryobiology related to cryoprotection

One of the big roadblocks in development of the cryonics program is the lack of full knowledge about effective cryoprotective methods. Complete control of damaging cell reactions to freezing has not yet been accomplished. It is in some aspect of this area that Mary will eventually specialize.

She reports that there is at present no Cryonics Club at Michigan State and she has encountered some hostility to the concept. She hopes to initiate a club at some future time. Her efforts in the scientific field will undoubtedly make those in


Cryonics Society of Michigan Newsletter
February, 1970 Vol. 1, No. 2

Editors: Pat Dewey, Mae Junod

Mary Ruwart to be in doctoral program in cryobiology at MSU (Story p. 2)

Dr. Stanley W. Mayer to speak at National Conference (p. 2)

Mary Ruwart

Hope Knoll Cemetery Association formed (p. 2)

Student speakers active (p. 2)

...other items

Building at Hope Knoll

Second issue cover of the CSM newsletter features Mary Ruwart, who showed interest early in cryonics and eventually became prominent in the libertarian movement. Also shown is Joe Cannon's "Hope Knoll" facility in Wisconsin, a brave if unsuccessful attempt to establish a cryonics service in that state.

the social field easier.

(Ms. Ruwart went on to become prominent in the libertarian movement, and was a presidential contender in 2008, losing in the primary to Bob Barr.[5] But, we wonder, is she still interested in cryonics?)

Also noted in this second issue are the efforts of one activist to establish a cryonics operation in Minnesota:[6]

Joe Cannon tells us that on January 13 the Hope Knoll Cryogenic Cemetery Association was formed, with nine trustees, in Wisconsin. This is the first cemetery association in the world formally incorporated for this purpose. (The California and New York facilities are portions of previously existing cemeteries). The building, near Appleton, has yet to be approved for vault use.

(This brave attempt would later have to be abandoned, in

large part because of a hostile regulatory environment in the state of Wisconsin. Joe Cannon eventually became an Alcor member, along with his wife, Theresa; both are now patients at Alcor.[7])

Name Change; "No Party Line"

The third issue (March 1970) reports a change of title. Henceforth the newsletter becomes *The Outlook*, a title it would keep until further change to *The Immortalist* in March 1976. A short note near the beginning announces some new policies:[8]

The scope of the news organ has been expanded to included world wide as well as local news, and in line with this expanded coverage the content is being changed from less to more formal. The editorial staff has been enlarged and now includes Robert Ettinger.

It is felt that the new format and style will be better suited to general readership. Two copies will be sent to each CSM member, along with brochures. It is urged that the extra copy, and brochure, be given to someone who might join the Society or provide some other type of help or cooperation.

The editors intend to work for continuous improvement and have a number of interesting projects for future development.

Submissions for possible publication are welcome.

In this issue there is an interesting, short editorial by the new staff member, Robert Ettinger, with good-natured criticism of the recently-expressed views of another prominent cryonicist, here quoted in full:[9]

NO PARTY LINE

In the January issue of the Cryonics Society of New York newsletter there is an article by Saul Kent dealing with a certain religious conference and religious questions. Saul saw fit to attribute to "cryonics" certain views that not all of us possess, and to make statements of a very dubious kind.

Among other things, he said, "Cryonics has grown out of the realization that death ends all meaning, and that the continuity of consciousness is essential to existence. ...Life after death is an impossibility and any line of thought that accepts death is nihilistic."

In fact, these views are not shared by everyone in cryonics. Nicholas DeBlasio, for example, who froze his wife, Ann, is a devout Christian and would not have proceeded if his priest and bishop had not approved. Furthermore, the "impossibility" of life after death has not been proven; it is at most, for the scientist, a tentative conclusion. These questions are extremely subtle and complex, and to be dogmatic--on either side--is unreasonable.

Even disregarding religion entirely, there are many ways in which one might conceivably live after total destruction of the body. For example, according to one school of thought, information is never irretrievable, and in some distant future it might be possible to reconstitute an individual's personality, and thus--they say--the individual. Again, it is conceivable that mind is not just an aspect of brain; possibly there is a material, although very elusive "soul", which might bear the same relation to the body, in very rough analogy, that the neutrino bears to the neutron. It took a long time, remember, for the existence of the hypothetical neutrino to be experimentally verified, and many scientists thought there was no such thing.

Since these questions remain open, we should not be dogmatic, and we should not gratuitously offend religious people who might otherwise join with us. It is not necessary that everyone in cryonics have "religious fervor". We do not demand total allegiance, and we do not make people toe any ideological line. Our success to date--modest though it is--has been based on a balanced, reasonable, non-dogmatic, non-fanatic approach.

Of course, tactics are debatable. Many organizations and movements have had considerable success based on conviction amounting to dogmatism and zeal amounting to fanaticism. Perhaps one perfervid worker is better than a dozen lazy, though friendly, kibitzers. But I see no evidence that this approach would work for cryonics, even if we were cynical enough to adopt it.

In cryonics there is no dogma and no heresy. Like the Republican and Democratic parties, in our house are many mansions. We are practical people, cooperating for a practical purpose--to save and extend our lives. We are not opposed to philosophical discussions--far from it--but no one can establish cryonics orthodoxy.

"Freeze the Living"

In April 1970 there is another interesting Ettinger editorial, "Freeze the Living?", dealing with the prospect of premortem cryopreservation.[10] Ettinger notes that by cryopreserving "only those whose death certificates have been signed, we have escaped most legal problems and we have set up a kind of Pascal's wager, a situation in which there is nothing to lose, physically, since a failure merely means that the patient remains dead." Nevertheless, he continues, "we have lost many potential advantages which may be crucial to the cryonics program." For example, a terminal illness could be better addressed before nature runs its full course, and better preparations would be feasible for a predictable chain of events. (Otherwise it can be very difficult to guess when cardiac arrest is likely to occur, and much time and resources can be wasted on false alarms.)

Noting that starting cryopreservation before legal death "would raise serious problems, both in law and public relations", Ettinger nonetheless is optimistic that "these may not be as formidable as we have assumed." Suda's cat brains "showed nearly normal brain wave tracings when thawed after several months in frozen storage. Since experts believe brain waves represent the best single criterion of life, we could make a fairly good case for saying that these cats survived freezing and thawing, and that human patients similarly frozen might also remain alive." So "it is not certain that freezing with present techniques is lethal, even by present standards". Ettinger notes that heart transplants, which by then were legal and accepted by the medical mainstream, nonetheless were far from a guaranteed success. Might premortem cryopreservation be treated in a similar way, as a possible route to survival and recovery, even though success is uncertain? To summarize some main points:

There are many secondary benefits in freezing the terminally ill, both to the patient and the program. Much suffering could be avoided, and much expense; the money needed to prolong the agony of dying could be applied, instead toward freezing. There would be tremendous psychological advantage in "treating the ill" rather than "scavenging the dead". "Suspended animation" is enormously more appealing than "cryogenic interment". And while it would open a new legal can of worms, there are great potential advantages in not having to treat the patients as corpses.

Ettinger concludes by suggesting a legal judgment be sought granting permission for premortem freezing "under certain specified conditions". (Nearly half a century later, no such permission has been granted and cryopreserved patients are still considered legally dead, though progress in choosing "death with dignity" continues.)

1970 Conference

The June 1970 *Outlook* devotes several pages to the cryonics conference held the previous month, starting with a summary by Ettinger:[11]

The Third Annual National Cryonics Conference--May 15 and 16 in Los Angeles--was stimulating, enjoyable and productive, with a good mix of scientific papers, cryonics polemics, interpretation, and entertainment. All this was topped off on Sunday, May 17, by a visit to the permanent storage facility of Cryonic Interment, Inc. in a cemetery [near Los Angeles].

CSM representatives included Conley Hall, John Erfurt, Robert Ettinger, George Lantos (now a student at Cal. Tech.), and Neil Lucas (now an Air Force test pilot in California).

Other delegations from out of town included John Bull and family from New York; Mr. and Mrs. Loren Fitzgerald from San Diego; Mr. and Mrs. Joseph Cannon from Appleton, Wisconsin; Dr. M. Coleman Harris, Roy Yates, Ashley Hendrix, Michele Navarette, Jerry White and Art Quaife from San Francisco; and a number of speakers.

At one of the informal gatherings during the week-end, it was proposed by Dr. Harris, and tentatively approved by the others present (subject to ratification by the directors of the various Cryonics Societies) that the Fourth Annual Cryonics Conference and Scientific Congress would be held in San Francisco, perhaps the first week-end of May, 1971.

At the Friday evening banquet there was professional entertainment by the television comedy team of Clair and McMahon, and by countrymusic singer and composer Dorsey Burnette.

Dick Clair (actually Richard Jones) has been a longtime member of the Cryonics Society of California, and a tireless worker for cryonics. Mr. Burnette recently joined CSC. One of his songs, "Suspended Animation", delighted the audience. (We have a copy of the record. The song may be used in the film version of Robert Nel-

son's and Sandra Stanley's book, We Froze the First Man.)

The conference was concluded late Saturday afternoon. [...]

Ettinger's article continues with summaries of the main presentations at the conference; prominence is given to the talk of Dr. Peter Gouras who describes his work in restoring functionality to neural tissue after long ischemia:[12]

Among other things Dr. Gouras' work shows that the cat retina--a part of the central nervous system, an extension of the brain--even though an extremely sensitive and rapidly metabolizing subsystem is much hardier than previously thought; it can stand at least one hour without blood supply (ischemia). [...] Dr. Gouras--who is a research physician at the National Institutes of Health and a member of the Scientific Advisory Council, CSA [Cryonics Societies of America]--reminded us that almost every scientist and physician has believed that 10 minutes of ischemia means irreversible damage to the mammalian brain and ultimate death. Now we see this was a myth.

Joseph Klockgether speaks at the 1970 Cryonics Conference

Among the other speakers mentioned is mortician Joseph Klockgether, who would work on many cryonics cases over a long career, including some with Alcor, and whose talk has survived and is included in this issue.

Mildred Harris Case

In September 1970 there was a cryopreservation, reported at some length by Ettinger in the October issue:[13]

MRS. MILDRED HARRIS

Mrs. Mildred Harris, the first patient to be frozen in Iowa, "died", Sunday, Sep. 20 in Des Moines, creating another emergency situation and emphasizing some old lessons.

Mrs. Harris' sons, Terry and Dennis, had been in touch with the Cryonics Societies of New York, Michigan, and California for about a week. I had warned them immediately that, in our experience, death almost always comes sooner than expected, often much sooner. (Mrs. Harris was terminally ill with bone cancer.) Arrangements were under way; Mrs. Harris had signed legal documents including a codicil to her will, in the presence of her attorney, and Robert F. Nelson had arrived in Des Moines Friday, representing CSC and Cryonic Interment, Inc., with whom the Harris family had decided to make their arrangements. But on Sunday Mrs. Harris began sinking rapidly--even though several weeks more had been predicted by her physician--and the physical arrangements were incomplete, with no perfusion chemicals on hand.

Bob Nelson called me from Des Moines about 11:00 A.M. to report this, and to ask if we could send the chemicals CSM had on hand--DMSO and Ringer's solution. It turned out that air freight was not available until the next day, so I agreed to fly there myself and bring the chemicals as baggage.

While preparations were being made, the call came that Mrs. Harris had died, and had been immediately packed in ice. (She died at home, and the registered nurse in attendance was given permission to make the determination of death; apparently the physician can delegate this authority in appropriate situations, at least in Iowa.)

Walter Runkel and family had pitched in with their usual reliability and efficiency, and packed most of the chemicals in six suitcases. By 4:00 P.M. I was on the way, and arrived in Des Moines about 8:00. Last to arrive was Joseph Klockgether of the Renaker Mortuary in Buena Park, California, one of the two most experienced men in cryonic perfusion. The perfu-

sion was done by him, with the help of Mr. Nelson and myself, taking most of the night. By about 4:00 A.M. the patient was packed in dry ice. This was in the embalming room of Arnold's Highland Park Funeral Home, with the cooperation of its director, Mr. Robert Major.

On Monday there was a funeral service, with the casket closed to protect the patient against warmth and to avoid upsetting relatives. Several relatives were strongly opposed to cryonic suspension, and the sons, Terry and Dennis, had to cope with them in trying circumstances including great fatigue, since they and Bob Nelson had had little sleep for three days while they tried to complete the arrangements. But the sons held firm, speaking patiently and reasonably with the relatives; and they had the backing of Mrs. Harris' attorney that this was indeed her wish. (She had not mentioned it to any relatives but her sons, thinking to spare them disturbance.) In a letter dated two days later, I am glad to say, Terry Harris tells me that some of the relatives have become more understanding and sympathetic.

Tuesday morning the patient was sent to California, where she is being kept in the facility of Cryonic Interment, Inc. in a cemetery near Los Angeles. At a press conference that morning--to which the Harris sons had agreed to help further the program--information was given to the Des Moines Tribune and the Des Moines Register, which ran extensive and generally objective articles, although many of the usual inaccuracies were present. There was also an Associated Press story on the wires.

Among the lessons to be learned by the general public from this case, and by Society members, is the very simple but still largely ignored one of advance preparation. Mrs. Harris had known of cryonics for some time, but no steps had been taken until it was clear she was dying; fortunately, she and her sons were strong enough to carry it off under these circumstances, but most people are not.

Among lessons to be learned by the leaders of the Societies are several technical ones involving preparation and perfusion, most of which cannot be detailed here. But it is clear, for example, that we should have at least enough chemicals for one perfusion always packed and ready for air shipment. This is not easy, even in terms of expense, but we should soon have this, in addition to our local stand-by stock.

At any rate, another potential immortal is waiting her chance, and we salute her courage and her sons', as well as the skill and strength, demonstrated yet again, of Bob Nelson and Joe Klockgether. On another pleasant note, we hear that Terry and Dennis Harris may organize a Cryonics Society in Des Moines. Much success!

(Unfortunately, a few years later, with funds running low, Mildred Harris would be among those lost at the facility in Chatsworth, California.[14])

Scientific Reasons for Optimism

The next issue (November 1970) has an interesting editorial by Ettinger where he reports on some recent speculations in physics involving the Everett many-worlds formulation of quantum mechanics. According to this thinking, our reality is constantly splitting so that near-copies of ourselves experience different possible event sequences. While saying the theory is "probably wrong," Ettinger notes that reality is mind-boggling and incredible in its vastness, whatever theories might apply, and finds the thought not at all unsettling but comforting:[15]

For the cryonicist, an old lesson is reinforced, a lesson left implicit (and probably unrecognized) by Shakespeare, when he said, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy", and by J.B.S. Haldane when he said, "The world is not only queerer than we realize, but queerer than we can realize." It is simply that, if there are so many things, and if the world is so queer, then opportunity is multiplied, and the apparent traps of destiny and doom are illusions. In all this strangeness, in all this confused complexity, surely there is room for us to live and grow--indefinitely.

Cryonics Humor

Cryonics is a serious enough subject, and a bit of humor now and then is a welcome relief. The following is excerpted from "25 REASONS WHY YOU SHOULD NOT BE FROZEN" by Editor Patrick R. Dewey, in the January 1971 issue. (In the interests of readability, I've added bullets • and omitted ellipses [...] in this reformatting of the original.)[16]

•It costs money, which your relatives could use to buy

a yacht.

• It might not work.

• Someone might drop your frozen body, with shattering consequences.

• You might be taken for a popsicle.

• Your neighbors might think you're frigid.

• You've already done and seen everything, so why come back?

• It hasn't been approved by the AMA. • You haven't yet seen anybody who's been frozen, and revived, and rejuvenated, and lived forever.

• It isn't natural like TV and cars.

• You could use your insurance premiums for something important, like booze.

• You heard a rumor it's a racket, so it's better to play safe and spend the money on a bronze conventional casket and a mountain of lilies.

• When you're revived, you might crowd somebody.

• It will put trocar manufacturers out of business.

• The world will end next week (or at least by the first Monday of next month).

The following month (February 1971) there is also a funny piece by Mae Junod, about how the media do not always treat cryonics fairly, but sometimes the results are a good belly laugh anyway. "FRENCH COMIC EPIC" starts off with Bob Ettinger in January receiving a telegram from Paris with a message in French but translating proved to be too much for Ettinger and family so they had to judge for themselves what was coming. Meanwhile a package has arrived at the Metropolitan Airport in Chicago. After paying $123.70 in customs charges for three large caps of film and an additional $17.00 to transfer the film to a format viewable on available equipment, Ettinger invited Mae to join him in watching it. The film, it turned out, had been made the previous June (1970) by Claude Otzenberger for the French Television System.[17]

[At this time] Otzenberger and crew visited Bob Nelson and other CSC members in California, Curt Henderson and his group in New York, and Bob in Michigan. Shots were taken of the van and Walter Runkel and a visit to Joe Oskin's home was made as well.

[...]

We had received very bad reports on the film, which was run on French television sometime in July. Anatole Dolinoff [a French cryonics activist] has been thinking seriously of suing Otzenberger. So we expected something derogatory, but nothing as devastating as the films we viewed. The most difficult aspect is the subtlety with which the cryonics concept and movement is denigrated.

Personally I would like to get in on the suing. On the other hand, I have never seen anything any funnier than Curt Henderson in his little white truck scurrying to and fro with three dewars of liquid nitrogen standing upright in the open bed of the truck.

The film is the greatest comedy since silent films. It has a Mack Sennett quality about it that has to be intentional. The effect was achieved by the way shots were interspersed more than anything else. For instance, there is an interesting sequence where Walter and Bob rush up (to Walter's house) in the van, leap out and quickly wrestle a wheeled stretcher out of the back. They double time to the door of the house and disappear inside.

Shortly they hurry out with a body (Walter's daughter) under a blanket and stow her in the van then take off in an unseen cloud of exhaust vapor. The van scuds down the road with as much vigor as Curt's truck.

Now that we were all hepped up to see what happens next we were suddenly presented with Dorsey Burnette singing "Suspended Animation" in all its twangy folksiness.

Then Curt's truck speeded across the scene (for about the third time). Next we are pulling up to what looks like a garage mortuary and Fred Horn raises the overhead door. We advance with the camera and Curt, Diane and Fred (in a white coat) go to work on the patient.

One of the most damaging parts of the film is the music. It is weird; and an adenoidal chanter, either a deep voiced woman or a tenor male, keeps intoning at the most inopportune moments--and most lugubriously, in English:

LORD HAVE MERCY! LORD HAVE MERCY! CHRIST HAVE MERCY!

I laughed so hard I had tears in my eyes. (This coupled with an incipient cold caused me to somewhat deplete Bob's supply of tissues).

It's a shame to ruin this masterpiece of comic editing. However--to show it anywhere to the public would be to denigrate an honest and sincere effort on the part of many people who were genuinely courteous and cooperative as well as hospitable to Otzenberger, et al.

In my opinion Otzenberger is a nasty man. He took unfair advantage of people who trusted him. But revenge cannot be ours. All we can do is re-edit the film and put the parts back into context in the way they were intended. We should be able to salvage perhaps as much as a half hour of good action shots--maybe less. (Not Bob Nelson climbing up the ladder from the Cryonic Interment vault and telling his son, John, to hold the ladder because he slipped once before when there was no one to hold it, or Curt's bomb shelter, or Bob's basement desk, which looks like after the bomb).

However, before we take apart this epic I believe all the directors of CSM should have the opportunity to view the film as it was received from Otzenberger. Such titillation of the risibilities should not be denied them in this grim age. The problems are finding a convenient projector and a place to use it. Any suggestions?

"For a Better Tomorrow"

In the March 1971 issue, a reader, York Porter, offers advice on how to strengthen the cryonics movement and present a better image to the public:[18]

FOR A BETTER TOMORROW

To the editors:

I have for some time been an interested reader of THE OUTLOOK and find that my interest has led to the desire to express some opinions.

I feel strongly that the cryonics societies of America must bind together, work together and grow strong together. I think this can be most effectively accomplished through the medium of a national newsletter, one highly organized and widely distributed, not only to subscribing members but to newsstands and to people in general at a non-profit price. Perhaps a few introductory or "feeler" issues would increase awareness.

The point I wish to make is that to gain the support of the people we must first reach them, not as a commercial effort but in a person to person rapport. We must present our arguments in as logical a way as possible and then we must get people to realize (as we must realize ourselves) that in order to succeed we need their personal involvement, their time and their talents. I do not feel that such phrases and terms as the following will accomplish such involvement:

"the average citizen who doesn't even have the prudence to save his money against an uncertain future...." (THE OUTLOOK, Dec., 1970, p.7)

"the mindless masses" (THE OUTLOOK, Jan., 1971, p.1.)

No one like to think of himself as an "average citizen" or a member of "the mindless masses". Each person believes (and rightfully so) that he or she is unique, someone special in the world. It is to this sense of uniqueness that we should appeal.

In developing a national newsletter we must approach the questions of expense, control, sponsorship, etc. with an attitude of giving rather than taking. Perhaps a plan of proportional ownership and control would be the solution with financial support as the criterion.

In the December, 1970 issue of THE OUTLOOK Mr. Robert Ettinger asks the following questions on how we may influence people in favor of cryonic suspension:

"Precisely how do we convey a sense of reality? By what artistry do we make the citizen yearn to transcend his mortality and humanity? How do we translate superficial understanding to a passion? How do we make the worm perceive his lowliness, and strive to outgrow it?"

I think the answers to his questions have already been provided in a previous issue, that of July, 1970. In stating a new policy, the editorial board of THE OUTLOOK made the following statement:

"In examining the goals (and efforts to achieve them) of the cryonics movement, a salient fact has appeared: While some people are satisfied merely to hope that they will continue to live, through cryonics, many others need the reassurance of being able to look forward to an improved life in a better world." (Underlining my own.)

This statement hits the very crux of the matter; that is, the

fact that the majority, of people are not merely content to be told that cryonics is the key to an infinity of life span. Living is not enough in itself. They need to be reassured that the "tomorrow" that cryonics will bring holds something for them personally. It is not enough for them to read "In a simplified, representational sense, then, one may picture the Golden Age society in which every citizen owns a tremendous, intelligent machine which will scoop up earth, or air, or water, and spew forth whatever is desired, in any required amounts--whether caviar, gold bricks, hernia operations... ." (THE PROSPECT OF IMMORTALITY, MacFadden-Bartell edition, p. 100).

Such a view is too abstract and too far-removed from the "now" world to attract potential immortalists. It is not enough to speculate about "sports on the Moon". It is not enough to say, "Those of us who have committed our lives to the pursuit of immortality have seen before our eyes the stupidity, apathy, and incompetence of most of the world's people, and we have been amazed at the powerful irrational forces that motivate people." (THE OUTLOOK, December, 1970). We must offer the people of the world a logical, well planned alternative to the "today" that they are compelled to exist in.

In short, the cryonics societies of America must become not only an organization of scientifically based philosophy but it must be sociologically oriented as well. We must formulate and stand for a social philosophy that is as logical as our goal of immortality. In doing this we will further clarify the goals of the cryonics program and thereby give potential immortalists something concrete to grasp. In the words of Saul Kent:

"Ultimately the responsibility for our fate lies entirely in our own hands. If we are to be immortal, we must raise the money required for our purposes, discover new concepts and invent new machines; ...."

Discover new concepts, invent new machines, perhaps fight political battles; these are the challenges that stand before us. We must rise to meet them with new vigor. In this endeavor YOUR help and YOUR time and talents are needed. Each of us has something to contribute. Our destiny, our posterity and our immortality stand beckoning us. We live now, we work and we hope for a better tomorrow.

Editor Mae Junod responds:[19]

Mr. Porter certainly practices what he preaches. His interesting article, which was included as a communication to the editors, was accompanied by a contribution check of $5.00. There are over two million people in the United States. [Actually, over two hundred million by the 1970 Census--RMP.] It is fascinating to contemplate the wonders that could be achieved in cryonic research and perhaps even a national non-profit facility--to say nothing of a national newsletter--if even half the people in the United States sent in such contributions.

The editors also are pleased to hear from Mr. Porter and hope we will again--also from any others who would like to contribute of their talents to our pages.

There has been quite a bit of activity of late surrounding the matter of a national newsletter. The primary obstacle has been financial. No society has, at present, the means of financing such a venture, nor are many societies in a position to support a national newsletter along with organs already being published. This is true of CSM. We do not want to discontinue THE OUTLOOK, which now circulates on a national basis. We cannot support two publications. This is my view.

York Porter

(Today York Porter is editor-in-chief of *The Outlook's* current incarnation, *Long Life Magazine*, now published by The Immortalist Society, a descendant of CSM.[20])

Skeptical "Expert" Answered

The April 1971 issue has an interesting article, "A Biologist's Opinions", with skeptical comments interspersed with editorial commentary. Prof. Keith Wittenstrom, of the Biology Department at Oakland Community College, had mainly negative thoughts on cryonics, but pessimistic rather than unfriendly. He acknowledges that cryonics might work, though is doubtful about it, while urging that he has no desire himself "to live a thousand years". In the evolutionary process which created us, he notes, individuals are replaced by others rather than living indefinitely themselves. "Death to the individual is a fact of life" and over time things change. Bringing back someone or some creature from the past to a world they were not familiar with might be a cruel mistake.[21]

[...] Let's say that some Australopithecus had been frozen by some miracle and we revived him, I don't think he will overly enjoy his new environment. He's going to be structurally dif-

ferent and he's not going to be able to function the way the other organisms are functioning now. Structurally he'll have a smaller cranial capacity, his brain and behavioral patterns won't be so well developed. The poor guy is sitting there with possibly longer arms, different physique. I don't think that it's going to be that enjoyable.

To this the editors respond that in the future we expect to gain control of our biology and will be able to direct our own evolution to adapt to whatever conditions might be present. Moreover, the period of our cryopreservation should not be so long as that envisioned by Prof. Wittenstrom, far less in fact! Wittenstrom also questions whether people of the future would want to revive the cryopreserved.

What would be the impetus of people a thousand years from now for reviving you? If I had the chance to revive my great, great, great, great grandfather would I do it? Would I spend the money to revive him if I had to choose between him and having a daughter or a son? That's why I don't think it's practical. If you had four million people or so frozen I don't see why there would be any hope that people would choose to bring them back. Why bring back four million people? You'd cause problems in doing so. You'd have to house them, clothe them, cure them and everything else. I don't think they'd elect to bring you back.

The editorial response notes that anticipated revivals will not be haphazard or whimsical but by prior arrangement:

The "impetus" is that contracts will continue to be honored and every citizen's right to life upheld, we hope. The money is not out of the descendant's pocket, but the suspendee's trust fund. Population pressures will result much more from life extension than from cryonic suspension; and if, at a certain period, in history, there really isn't room for more people, the frozen can remain in storage until there is room, resulting from new discoveries or space colonization...And storage should not demand too much space. [...]

I would add that humanitarian concerns would demand that those who can be revived be revived, irrespective of whether "contracts" to do so are still in force, though having such contracts, as at present, is additional assurance. But if you can rescue someone from coma you do it. Resources should become available in a world of greater abundance than we have today, so hopefully this problem will be a minor one at worst.

One of Prof. Wittenstrom's stated concerns is whether it would be appropriate, if we could do so, to revive a specimen of Australopithecus. It would be a stretch to think that such a creature would be frozen so long, awaiting rescue as it were, but more generally we can ask about nonhuman (non-*homo-sapiens*) sentient life forms. What should be our thinking and policies in the future regarding animals both domestic and wild, which are subject to our intervention in some way? Another article in the same (April 1971) issue, this by Robert Ettinger, addresses this matter, in a slightly humorous but still serious way.[22]

SUPERMAN AND THE LOWER ORDERS

If the cryonicist's optimism proves justified, there will be biological improvements for ourselves as well as our descendants, including expanded mental faculties. The future is not just one of better gadgetry (although we must never belittle gadgetry), but of different relations between people--and doubtless between people and the lower orders.

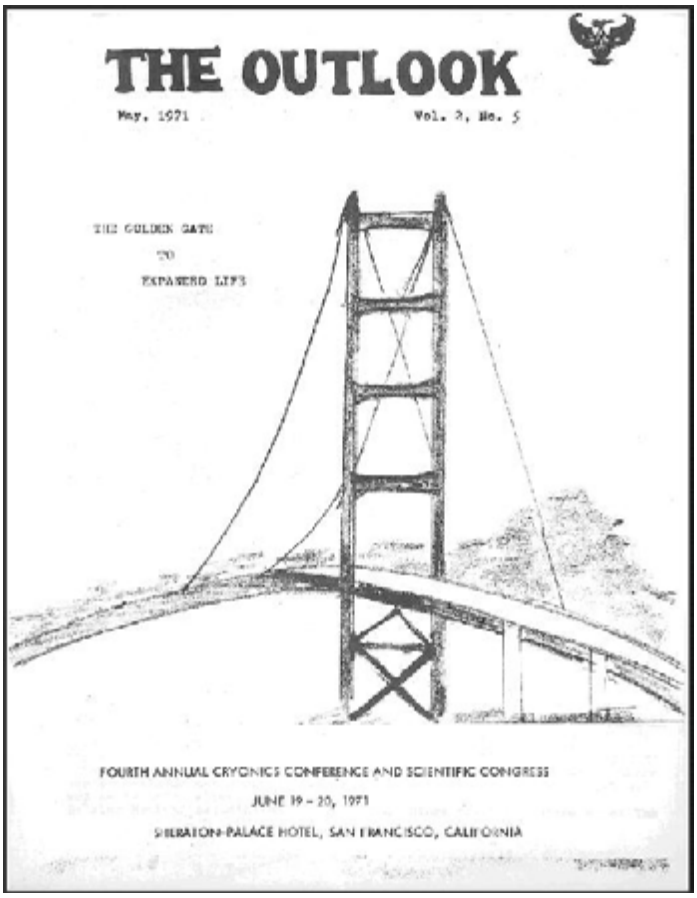
While some people feel that the absence of "soul" distinguishes the beast, it is clear that many of them have thoughts and feelings somewhat like our own. An ape can show courage, a dog can exhibit loyalty, and a bird can feel pain. Who has not occasionally felt uneasy about the misery we allow these creatures, or even inflict? Is anyone completely unaffected by the howling of a dog in a medical laboratory?

Most of us do not allow such qualms to disturb us much, or often; we simply can't afford it. We have other troubles, more urgent worries, and custom insulates us from too much sympathy. But is not this callousness a remnant of savagery? As our wealth and power increase, will we not be faced with the duty of strictly justifying everything we do, and everything we allow? Will not a humane ethic be required for our own mental health?

We can "justify" our treatment of the lower orders in any number of ways, e.g. by the ledger argument: since our cattle and sheep, say, are alive in the first place only because we breed and raise them, we are entitled to cut off their lives at any time. But we do not allow favors to humans to justify later abuse, and perhaps in 2287 some lawyer will successfully plead his case before the Supreme Court on behalf of his client, a pig, and win a permanent stay of execution, at which point we shall all be vegetarians, and the last ham sandwich will be enshrined in the Smithsonian Museum. (I re-

fuse to look forward to the time when people start to worry about the feelings of spinach.)

There is also the matter of wild animals: can we forever wash our hands of their sufferings? Are we not our cousins' keepers? When we can afford it, shall we not have the obligation of imposing civilization on the


THE OUTLOOK

May, 1971 Vol. 2, No. 5

THE GOLDEN GATE TO EXPANDED LIFE

FOURTH ANNUAL CRYONICS CONFERENCE AND SCIENTIFIC CONGRESS

JUNE 19 - 20, 1971

SHERATON-PALACE HOTEL, SAN FRANCISCO, CALIFORNIA

May 1971 Outlook Cover Announces Upcoming Cryonics Conference

remaining pythons, crocodiles and hyenas? And along this road, where can we stop? Must we, indeed, eventually join the Jains in holding all life sacred?

Or will the ultimate rationality dismiss all compassion as maudlin sentimentality, making a piker of Nietzsche? Surely no one can yet say; but the decisions will have to be made, and it is not too soon to start thinking about them. Abrupt transitions are painful.

Well, let's hope the suggested scenario of greater callousness does not materialize. Greater compassion, not less, should hallmark the future. When the relative cost of being compassionate goes down, as we may hope it will with the anticipated advances (a world of abundance in particular), the amount of compassion should naturally increase. Having more should make life more worthwhile and may be essential if our future civilization is to survive and thrive, and each individual achieve maximum benefit.

1971 Conference

The exuberance and optimism that invigorated the early years of cryonics would continue through 1971. In June that year there was another cryonics conference, continuing a long tradition, by the standards of the fledgling movement. Ev Cooper's annual Life Extension Society conferences had started in 1963 and extended through 1968 with one omission; that year the Cryonics Society of New York started the namesaked "Cryonics Conferences" which continued annually. 1971 would be the last year of this tradition, however. (After this there were no more cryonics-related conferences until Alcor's first conference, in 1978.)[23]

The 1971 conference was held in San Francisco, June 19-20, hosted by the Bay Area Cryonics Society (BACS, now American Cryonics Society, ACS). This is reported in the July *Outlook*, with later followup; Mae Junod offers an enthusiastic appraisal:[24]

FOURTH ANNUAL CRYONICS CONFERENCE INSPIRATIONAL

The Fourth Annual Cryonics Conference in San Francisco was one of the most inspiring experiences I have been lucky enough to encounter.

A sense of solidarity and an even greater awareness of really solid progress in the cryonics movement sent me away, as I'm sure they did others, with a feeling that at last we are on the brink of something prodigious, some simultaneous and enormous surge forward of events that will more than fulfill the hopes we have so long cherished that the future is indeed ours. Reports of and ideas for outstanding advances in perfusion techniques, perfusion equipment, public relations and graphic representation kept audiences intensely occupied.

Along with kudos to the excellent speakers and presentations should go great praise to the Program Committee: M. Coleman Harris, Chairman; Roy R. Yates, Co-Chairman; Ashley Hendrix, Photographer; Donna J. Allison, John Bear, Lucius Cooper, Judy Geiwitz, Fred K. Martin, Holly Martin, Michele Navarette, Art Quaife and Grace Talbot.

The timing and style of the entire production were impeccable.

It was a joy, as well, to meet again with friends encountered only seldom, but still warmly appreciated. There were members of cryonics societies from almost every state in the union. CSM members attending were: Robert Ettinger, Conley Hall, who took the conference photos for this issue, Pat Dewey, Mae Junod, James Pesagno, Hugh Hart and Paul Landrum, who has moved to California and is in the process of transferring to CSC.

There was also a good turnout from both CSNY and CSC--and, of course, BACS.

Because they involve two of the most vital issues, perfusion technique and equipment, we present first the new information and advances reported by Dr. Peter Gouras and Fred and Linda Chamberlain. [...]

Dr. Peter Gouras discussed the new procedure for cryonic suspension, not yet reduced to written form, on which he has been working for some months, with advice and help from Art Quaife, Fred Chamberlain, Prof. Armand Karow, Prof. James A. Miller Jr., Dr. L.O. Pilgeram, and others. Gouras' procedure, a preliminary to cooling the patient to cryogenic temperature, is in two steps, like modern practice. First is body washout, replacement of blood and body fluids with "base perfusate" containing no cryoprotectant; then, the base perfusate is replaced with cryoprotectant. Details are given; the main ingredient of the cryoprotectant is DMSO (dimethylsulfoxide), which is still in use today, though concentrations and other details have changed. Gouras' research is also noted; he has recovered cat retinas after 2 hours at body temperature and 45 minutes at -20°C, in the latter case using a cryoprotectant mixture of 40% DMSO.

One of the biggest attractions and sensations of the meeting was the prototype perfusion machine built and exhibited by Fred Chamberlain. It is a response to the many problems already encountered and to be encountered in perfusing patients in a carefully controlled and measured way under changing conditions and with different requirements at different stages of the perfusion process and in different parts of the body. [Fred himself coments:]

The system block diagram shown presents a 'two loop'

From left: Linda and Fred Chamberlain with perfusion machine, from cover of The Outlook, Jan. 1972; Fred Chamberlain's perfusion circuit, The Outlook, Jun. 1971.

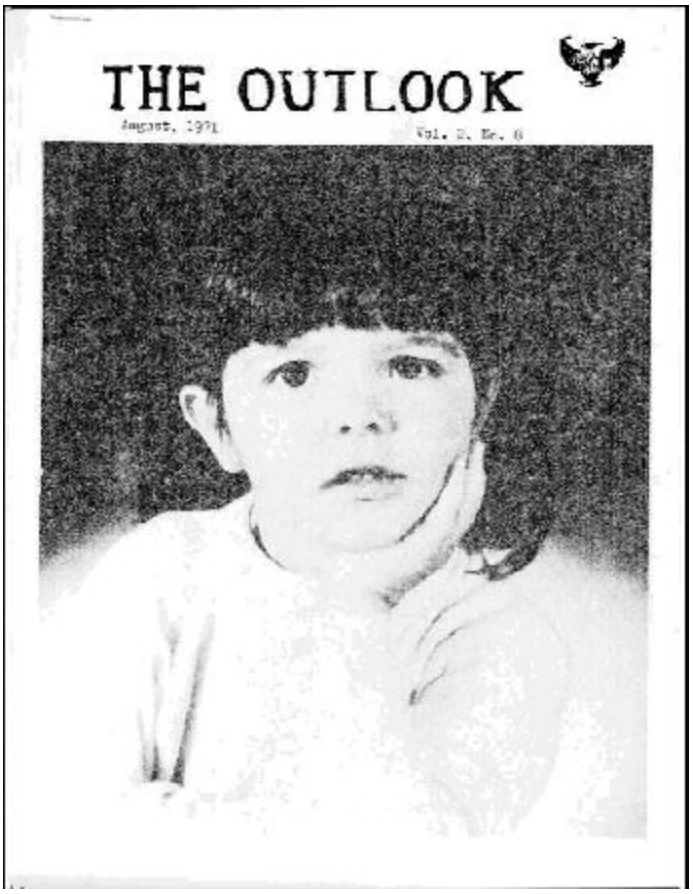
system with perfusion and heat exchanger circuits driven through a common pump. The perfusion circuit embodies a flow meter, perfusion flow valve, pressure gauges, and return filter, while the heat exchanger with bypass and a main reservoir are located in a second loop. Instrumentation currently installed includes a thermometer. Projections for future improvements include a thermistor sampling network and device measuring pH, specific gravity, and refractive index. In future models, a drip chamber and isolation reservoir will be added, as well as other improvements.

Genevieve de la Poterie

In the August 1971 issue there was a first report of a pending case that would tug at heartstrings and ultimately have a tragic conclusion, like most other cryonics cases in this early era. A French-Canadian child living in Montreal, the seven-year-old Genevieve de la Poterie (pronounced, approximately, *Zhahn-vee-ev duh lah poh-TRAY*) was dying of kidney cancer when her father heard about cryonics. Ettinger was contacted, then Robert Nelson of the CSC. The report concludes on an optimistic note:[25]

DEATH TO LIFE, MONTREAL TO L.A.

Genevieve de la P. is our cover girl for this issue. (For the time being, we prefer not to identify the parties involved.) She is alive today because of the love and initiative of her parents and the help of the Cryonics Societies, particularly that of California.


THE OUTLOOK

August, 1971 Vol. 2, No. 8

Genevieve de la Poterie, 8-year-old cancer patient, cover of The Outlook, August 1971

In the middle of July a Montreal hospital decided Genevieve was doomed to die, her second kidney succumbing to cancer which (they said) was spread too far to check. But her father remembered seeing a Canadian TV program on cryonics, particularly the mobile emergency unit with "Cryonics Society of Michigan" identifying it; he got our number from Detroit Information and asked for help in arranging cryonic suspension.

After a review of available facilities, he was put in touch with CSC. Robert F. Nelson, President of CSC, and mortician Joseph Klockgether flew to Montreal, wasting no time; our experience proves that death often comes sooner than expected, and Genevieve had been given only weeks at the most. They brought equipment and chemicals with them; additional DMSO needed was sent from CSM's stock--again in Walter Runkel's suitcases, as in the case of Mrs. Harris in Iowa, but this time in Conley Hall's plastic jugs instead of glass bottles.

Events thereafter appear to include false information given, and false promises made, by physicians and administrators at the Montreal hospital. We omit the details until we can be more nearly certain of the facts. In any event, Genevieve was apparently near death when she was taken to Los Angeles by her father the last week in July.

In L.A., emergency action was coordinated by CSC members including Fred and Linda Chamberlain, Paul Porcasi, Marce Johnson, Holly Martin, and others--not only to prepare for a quick freezing if necessary, but to get the child into a good hospital immediately, and this seems to have been decisive.

In the L.A. hospital the picture brightened dramatically, physicians there expressing the opinion that Genevieve could be saved through dialysis (use of a kidney machine) followed by a kidney transplant when a suitable donor could be found. The first week in August, dialysis having already been started, her second kidney was removed, and the surgeons' findings seemed to confirm their previous optimism.

At this writing (Aug. 9) the picture is not entirely clarified, but Genevieve will probably be brought back to Montreal, to one of the hospitals with a dialysis and transplant program. Local standby arrangements for cryonic suspension will have to be made, but with luck the gift of life Genevieve received in L.A. for her 8th birthday will be hers to keep for a long, long time.

The following month there was more to report:[26]

GENEVIEVE BETTER: GOING HOME

Last month we reported on Genevieve de la P., the eight year old Canadian child who was taken from Montreal to Los Angeles, apparently terminally ill. The intention was to provide cryonic suspension; but new hope was given by California physicians. Genevieve was put on a kidney machine while awaiting a transplant opportunity.

There were ups and downs. Her second kidney was removed, and for a while her chances appeared slim. It seemed she might have to be frozen after all. However, she rallied and is feeling and looking much better. At this writing the picture is still not completely clear. There is not absolute assurance that the malignancy destroying her young life has been conquered, but everything medically possible to conquer it is being done.

She was able to enjoy a trip to Disneyland and to attend a going away (returning home) party given for her by the Cryonics Society of California in Santa Monica on September 11. The party was held at the Fox and Hounds restaurant. Genevieve sparkled despite her difficulties.

The child is on a special diet and may have only 13 oz. of water per day. She will spend most of her time at home after her return to Montreal to await a suitable kidney donor but must visit a hospital regularly for dialysis.

It is a source of joy to cryonics workers that this child's chances for a longer and healthier life have been enhanced through the help of the cryonics program, most especially the operations of the Cryonics Society of California and its dynamic leader Robert Nelson and other members.

The most dramatic evidence produced by this entire episode is that there is a place for cryonics in the life saving efforts of our society, for it is true that Genevieve had been adjudged beyond medical help at the time her father contacted Robert Ettinger, president of CSM. Mr. Ettinger has many times stated that cryonics is a holding program. Robert Nelson, at the San Francisco conference, expressed the cryonics goals of saving lives, slowing down, and perhaps stopping the dying process. Genevieve is at this moment living proof of the sincerity and truth of these statements.

A further report in the December issue, referencing a writeup in the CSC newsletter, notes the child had been doing well, but now has returned to the hospital.[27]

REPORT ON GENEVIEVE DE LA POTERIE

In its October/November issue, Cryonics Review (Cryonics Society of California) has published the story--and the full name, which we had previously kept confidential--of the Canadian child who had appeared to be dying of cancer, and who so far has been saved through the determined efforts of her parents and the Cryonics Society of California.

At the date of the Cryonics Review story, Genevieve was doing fairly well on a kidney dialysis machine and spending most of her time at home, with a kidney transplant ex-pected within a few months. (Both kidneys have been lost.) We are sorry to report, however, that since then she has had to go back to the hospital, and the prognosis is guarded. This lovely child and her brave parents still face a difficult struggle.

Finally, the struggle is too much and the little girl succumbs, still leaving the hope of cryonics, as reported in February 1972:[28]

GENEVIEVE DE LA POTERIE SUSPENDED

Genevieve de la Poterie, the eight year old cancer victim from Montreal, whose continuing story we have carried in past issues, passed into clinical death on Jan. 25 at 6:50 A.M. in Los Angeles. She was immediately prepared for cryonic suspension--the 15th patient known to have been frozen in hope of future rescue. She is also the first child frozen, and the first patient from outside the U.S.A.

Earlier hopes were dashed when it became clear that removal of her diseased kidneys did not halt the spread of the cancer, and at last dialysis had to be terminated. Her last weeks were spent in a private hospital, watched over by her parents, Guy and Pierrette, and by members and associates of the Cryonics Society of California under the direction of its President, Robert F. Nelson.

Cryonic suspension was primarily in the hands of Joseph Klockgether, the California mortician who has frozen several previous patients. This time new and improved tech-niques were used, after consultation with Art Quaife, Fred and Linda Chamberlain, Paul Segall, and others. It is assumed she will be kept in the permanent storage facility near Los Angeles operated by Cryonic Interment Inc.

Because of her youth, and because she seems to have

been frozen under the best conditions to date, our optimism for her eventual rescue is much encouraged. We mourn the present loss of this plucky child, but we share with her courageous parents the hope that one day she will be with them again, alive and whole.

Sadly, if this outcome is to happen, it will have to happen outside the bounds of cryonics. Little Genevieve, as we have noted, was one of the patients lost at the Cemetery in Chatsworth (the "permanent storage facility near Los Angeles", above). (It is worth noting that the parents of the little girl did not sue Nelson or Klockgether for malpractice, unlike some of the other patients' relatives.[29])

The Chamberlains: Freezing Manual and Formation of Alcor

Meanwhile, as they say, "life must go on," and this applies in the world of cryonics. Backtracking slightly, the January 1972 newsletter reports on the energetic efforts of Fred and Linda Chamberlain to create a better cryonics movement all around by documenting the best available procedures for doing cryopreservations. (Not in the report: the Chamberlains had recently founded an organization, Manrise Corporation, which was devoted to the technical problems of cryonics and how best to resolve them.[30] They published a journal, *Manrise Technical Review*, inviting contributions from all in the movement.) The report notes that the Chamberlains "have published on schedule the first 33 sections of their promised freezing manual, *Instructions for the Induction of Solid State Hypothermia in Humans*", and continues:[31]

The manual represents Herculean labor and fills an acute need, long felt, for a summary in print of up-to-date procedures and alternatives to guide those involved in cryonic suspension.

The pages come in loose-leaf form, with a special binder, and careful arrangements have been made to allow continuous updating and to prevent the distribution of outdated material. Technical references are given, but the writing style is intended to make the information accessible to the layman as well as to physicians, morticians, and other professionals. The suggestions include not only procedures leading to freezing, but also first aid measures and resuscitation techniques that in some cases might revive patients apparently dying or dead. Alternative procedures are given for many different situations, depending on the condition of the patient, the availability of equipment and professional assistance, etc.

The 33 sections now ready cover procedures to the point of certification of death; those upcoming relate to the details of cooling, perfusion in different phases, transportation of the patient, record-keeping, and the equipment and teamwork advised for these and other facets of the protocol.

Every Society, and every individual seriously interested in cryonics and willing to assume some degree of responsibility, should have the manual. Price for members of a Cryonics Society in North America is $15 including binder, plus $6 annual subscription to MANRISE TECHNICAL REVIEW, which will contain the new sections as they become available

The following month reports an additional 24 sections printed (nos. 34-56):[32]

These deal with procedures and alternatives at the site of death after the finding of medical death, beginning with strategies to avoid autopsy or minimize its effects and continuing with detailed techniques for external cooling and transportation in a variety of circumstances, medical tests and record keeping, assignment of duties to the task force, preparation for internal cooling and perfusion, and directions for cannulation or intubation of the patient, among other things.

The instructions include not only verbal directions but careful drawings showing: the anatomy involved and the instruments needed; thus the instructions can be easily followed by professionals (surgeons or morticians) after a little study, or by apt laymen after much study and practice. The drawings and directions can also serve as memory refreshers for those who once knew what to do but may have become rusty. Sources of supply for instruments and chemicals are also listed in an appendix.

Fred and Linda Chamberlain deserve our renewed thanks for taking on this vital task that no one else, until now, has been willing and competent to shoulder. [...]

The Chamberlains, meanwhile, were making another, very important contribution, the formation of a new cryonics organization, as reported in the August 1972 *Outlook*:[33]

NEW CALIFORNIA ORGANIZATION

The Alcor Society for Solid State Hypothermia [...], Verdugo City, California, [...] is a new nonprofit corporation, apparently somewhat along the lines of the cryonics societies, and sharing personnel with Manrise Corporation. Its brochure does not provide details of membership requirements and fees, but indicates that it will provide physical services in freezing patients at death and will sponsor or carry on cryonics-related research, including the viability-assay work with frozen animals, according to the proposal renewed recently by Fred Chamberlain and reported in last month's OUTLOOK. [Quoting from the previous month's OUTLOOK, July 1972: "Fred Chamberlain has now revived an idea that we have considered, off and on, for years: to concentrate on experiments with large mammals, freezing them whole by the methods we envision for human patients, and then by taking tissue samples assay the viability of cells from all parts of the body."]

As usual, one cannot be sure whether the disadvantages of fragmentation will be offset by the advantages of diversified efforts. Perhaps the new organization, with its emphasis on high standards and currency in technology, will strengthen the movement in certain areas

Present plans call for efforts to obtain tax-exempt grants and donations, with whole-organ viability research to be initiated in the 1975-1980 period. The time-scale is sobering indeed, and reflects considerable pessimism about other aspects of the cryonics program, based on the extremely limited success of recent years. But this reminder should serve to renew and redouble the efforts of the Societies to accelerate progress.

(After nearly half a century, the Chamberlains' organization continues as Alcor Life Extension Foundation, its present title having been adopted in 1977.[34])

Man into Superman

Robert Ettinger is noted for having largely started the cryonics movement with his first book, *The Prospect of Immortality* (Doubleday, 1964). Eight years later, St. Martin's Press brought out his second book, *Man into Superman: The Startling Potential of Human Evolution ... And How To Be Part of It*, as reported in the *Outlook* (June 1972):[35]

Although Ettinger's latest is indeed another effort to invigorate the cryonics program, it is not only that, and the book is not just a warmed-over and updated Prospect of Immortality. It includes a review of the history and status of cryonics, but the bulk of it represents an ambitious fusion of fun and philosophy, an overview of the human agenda from an individual standpoint, with details likely to provide both amusement and outrage. Some hints may be conveyed by the following excerpts and comments:

The Preface is called "Superman in the First and Second Person," and it begins: "By working hard and saving my money, I intend to become an immortal superman."

In Chapter 1, "The Sculptor Sculpted" we read: "To be born human is an affliction. It shouldn't happen to a dog ... To what extent, and in what way, can man design superman?"

Chapter 2, "The Deficiencies of Natural Man." A savage attack on human complacency leads to the conclusion that "... man ... can be considered only a beginning and a dubious compromise, in both mind and body."

Chapter 3, "From Gilgamesh to Olaf Stapledon." A lively look at previous insights and failures in the effort to envision superman.

Chapter 4, "Changes in the Chassis." Options in the physical form of superman, from the near to the distant future, self-modifications trivial and profound.

Chapter 5. "Transsex and Supersex." So you think you've heard everything?

Chapter 6, "Growing Pains." What will it feel like to be a superhuman, especially of the transitional variety? How will our mental and emotional lives change; how will our personalities be affected?

Chapter 7, "Morality for Immortals." Superman--ourselves if we become immortal--will have different values. Something to offend everyone.

Chapter 8, "The Penultimate Trump." "It's no disgrace to be poor, but it's no great honor either." Fun and games again, including glimpses of everyday life among ordinary billionaires of the near future.

Chapter 9, "Tuesday in Eternity." The cryogenized

Christian and the gelid Jew, the future of religion.

Chapter 10, "Copouts and Dropouts; The Threat of Immortality." Dissecting the critics of cryonics and the apologists of humanity. Lots of fun.

Chapter 11, "Cryonics and the New Meliorism." The hard sell.

Appendix, References & Notes, Index. [...]

Bedford Wins Lawsuit, Stays Frozen

From the August 1972 *Outlook*:[36]

Prof. James H. Bedford, the first male patient to undergo cryonic suspension, and the first publicized freezing case, will not have to submit to thawing (murder?) by relatives who wanted his money and claimed he never intended to be frozen.

According to UPI reports, and prior conversations during the course of the suit between Norman Bedford (the patient's son) and Robert Ettinger, this is what happened:

Thirteen days before his "death" from cancer on Jan. 12, 1967, the 73-Year old Dr. Bedford revoked a trust set up for his 12 grandchildren and instead bequeathed the money, $100,000, to the International Foundation for Cryonics Research Inc., for the benefit of himself and other frozen patients. His action was bitterly opposed by the grandchildren and by Dr. Bedford's attorney, who was the trustee of the original trust.

The lawsuit developed during the process of probating the will, with the defense devolving on Norman Bedford and his mother, the professor's "widow". Plaintiffs apparently claimed (1) that Dr. Bedford never intended to be frozen, and that it was all the idea of the son and widow, and (2) that in any case Dr. Bedford was incompetent at the time and improperly influenced by his wife and son. Plaintiffs also attempted to disparage and ridicule the cryonics concept.

The defense included testimony by the proprietors of the nursing home where Prof. Bedford "died", to the effect that he was of sound mind and wanted to be frozen. Ettinger sent a deposition and correspondence from Dr. Bedford, proving that both his desire to be frozen and his intention to finance it with $100,000 dated back at least as far as July 28, 1966, when he had read The Prospect of Immortality and knew he had terminal cancer.

During the trial, Norman Bedford went through two attorneys, who apparently only succeeded in antagonizing the judge, and finished by acting as his own counsel. Judge Julius M. Title (Superior Court) seems to have remained unfriendly, but ruled on the evidence that Prof. Bedford was mentally sound and had made a decision that the court could not set aside.

Thus, the heroic efforts of Robert Nelson and the Cryonics Society of California, and of James Bedford himself and his wife and son, continue to bear fruit,

Art Quaife from the December 1971 Outlook cover, photo by Ashley Hendrix.

and the intrepid chrononaut has weathered another storm. It is still a long way to port, but if the cryonics program grows sufficiently in the next few years, the rest may be smoother sailing.

(James Bedford, the longest surviving cryonics patient, is presently at Alcor, having been committed to their custody by relatives in 1987. At that time, he was in an old-style, horizontal capsule he had been transferred to – from an earlier capsule of the same type – in 1970. In 1991 Bedford's capsule was opened, which required the talents of an expert welder and the careful use of a cutting torch, keeping the interior cold, and he was transferred to his present, upright, "Bigfoot" con-

tainer. The presence of cube ice on his chest in this 1991 viewing, with the corners sharp and unmelted, was good evidence that Dr. Bedford had remained frozen since the day he was cryopreserved in January 1967, when the ice had been placed around his body during the initial cooling.[37])

Art Quaife and Trans Time

From time to time in the pages of the *Outlook* the name of Art Quaife comes up. Art was an early cryonics activist (now retired, still in cryonics) who lived in the San Francisco Bay area and majored in mathematics at the University of California, Berkeley. (He received a Ph.D. there in 1990, with a dissertation on automated proofs of Gödel's results and other foundational theorems of mathematics[38]). The December 1971 *Outlook* carried this report:[39]

As most of our readers know, work has been going on for many months, based on the recommendations of Dr. Peter Gouras and others, to update and formalize the protocol for cryonic suspension, including the makeup of the cryoprotective solution and of the solution used for perfusion in the hypothermic phase.

This work is still in progress, being coordinated mainly by Arthur Quaife of the Bay Area Cryonics Society and Fred Chamberlain of the Cryonics Society of California. It is expected that early in 1972 Manrise Corporation (headed by Fred and Linda Chamberlain [...]) will publish the detailed recommendations with full notes and references. Meanwhile, Art Quaife has summarized his recommendations regarding perfusion solutions, and the reasoning and experiments on which they are based, in an article to be published in Manrise Technical Review. [...]

In the April 1972 issue we hear of Quaife's mathematical studies regarding perfusion procedures in cryonics, along with mention of the newly formed organization, Trans Time:[40]

NEW PERFUSION STUDIES BY QUAIFE

Art Quaife, of the Bay Area Cryonics Society and Trans-Time Corp., has written an important new paper on the Mathematics of Perfusion.

Cryonicists insist that imperfect freezing procedures are better than none, and that it is irrational to set arbitrary limits on the repair and rescue capabilities of scientists of the indefinite future. Yet we realize, better than the shrillest of our critics, the difficulty of finding optimal freezing methods for a large organism, and the urgency of improving our techniques. So far, in common with the cryobiological "establishment", we lack the resources for laboratory work with large organisms on a substantial scale. We hope this situation will soon improve. Meanwhile, Mr. Quaife has gone well beyond any known previous work in applying detailed analysis to the problems involved, including the major questions of cooling rates and control of concentration of perfusate and its ingredients, and the related questions of temperature gradients, concentration gradients, minimizing of times and costs, etc.

The degree of sophistication, both biological and mathematical, is considerable. Differences between organs and tissues are considered, and formulation of some problems leads to differential equations to be solved by the method of the Laplace transform. Nevertheless, it is hoped that as many as possible will read the paper, get what they can out of it, and feed back any useful comments. A revised draft will be published in an early issue of Manrise Technical Review. (Write Manrise Corporation, P.O. Box 731, La Canada, California 91011.)

A report in the November 1972 *Outlook* offers some further glimpses of long-ago efforts that, it is fair to say, helped save the cryonics movement when others failed:[41]

TRANS TIME INC.

Art Quaife, president of Trans Time, Inc., a commercial Cryonics organization, has sent us news from their California base that is bound to be of interest to all cryonicists. Following are quotes from Mr. Quaife's communication:

"... the current status of the Modular Perfusion Apparatus being manufactured by Manrise Corp. for Trans Time. Their original prototype has been completely reworked, and a new prototype is largely finished. Trans Time has requested that Manrise deliver sufficient equipment to be able to perform emergency suspensions by the end of this year, and Manrise hopes to comply. As further development of the system takes place, they will continually supply us with upgraded versions. The total cost we pay will be just their charge for the final system, with no price penalty for having

traded in intermediate models.

.... The possible purchase of a step van to be used as a mobile rescue vehicle was discussed.

.... Art has talked with three Berkeley morticians concerning their possible cooperation with us. [One has since definitely agreed to assist.] .... two morticians pointed out that we should purchase our own cannulation instruments, since theirs are not kept in a sufficient state of sterility. These will cost us approximately $180.

.... Art was recently contacted by William Koreski, an engineer who has been working with Dr. Lillehei's group at the University of Minnesota. They have recently successfully frozen two (out of five) dog kidneys to -40°C and -70°C; the kidneys sustained life after reimplantation and contralateral nephrectomy.

In the same issue there is a report of someone just frozen by CSC:[42]

Another cancer victim, this patient is a 51 year old woman from Westwood, California. [...] Arrangements had been made well in advance at the request of her husband, a doctor, and her son, an attorney. The patient was packed in ice within seconds of clinical death, as the first step in the cryonic suspension procedure used. She is expected very soon to be in permanent storage in liquid nitrogen (indefinite storage, that is, until the means for her rescue become available), presumably at the California facility of Cryonic Interment Inc.

The family apparently learned about cryonics, or was reminded, through the publicity attending the suspension of Genevieve de la Poterie, the Canadian child who was frozen earlier this year.

Because of lack of time to gather more details, and to determine the degree of privacy requested, we defer a lengthier report until a later time. Again we salute CSC, Bob Nelson, and an intelligent and courageous family.

(As if to underscore the need for better policies and organization in cryonics, this person also was later lost, not at the Chatsworth facility but a "sister" facility that Nelson had helped set up in Butler, NJ.[43])

The World at Large

There are many other items of interest in the early *Outlook* which must be omitted due to limitations of space. One thing to note briefly is the important role played by the *Outlook* in documenting cryonics activities outside the U.S. in the early 1970s, notably England, Spain, and France, covered in a previous article.[44] Overall, *The Outlook* under its capable editorship became the steadiest source of information as well as inspiration during the difficult decade of the 1970s, when many cryonics organizations failed and most of the early patients were lost.[45] .....***To be continued.***

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The Affordable Immortal

By: Rudi Hoffman

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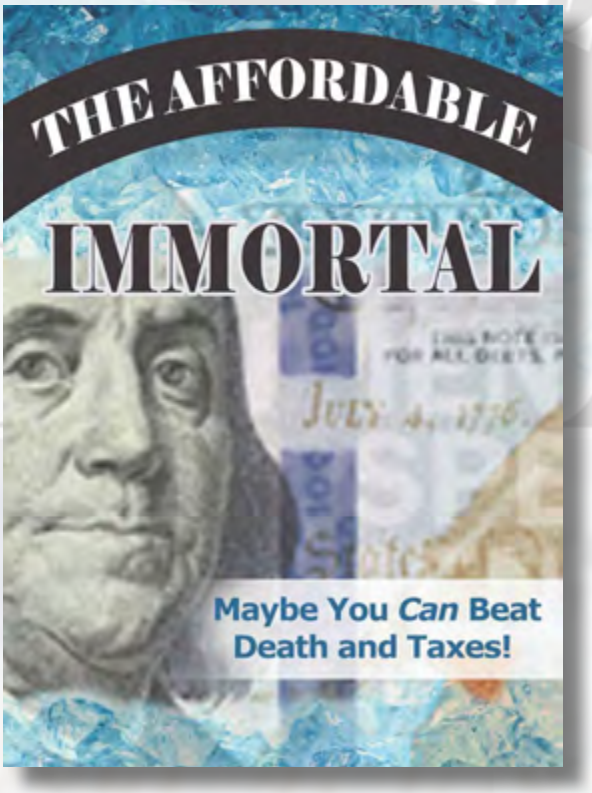
Website with "Quote Request" form and short cryonics video can be found at www.rudihoffman.com

Introduction by York W. Porter, President of the Immortalist Society and Executive Editor, Long Life Magazine

My long time friend, Rudi Hoffman, continues in this chapter to lay out the "nuts and bolts" of how one can go about being prepared to pay the necessary costs associated with cryonics. In what I think of as a particularly interesting chapter, Rudi goes into how life insurance is constructed, the different general types of life insurance products that are available, and how they may be used to help insure that you don't find yourself coming up short in taking advantage of the promise that cryonics offers. In the next issue, Rudi will continue explaining how you and most readers of this publication, can make sure the promise of cryonics is an affordable option to them.



Chapter 5

A Non-Boring Chapter on Life Insurance

By Rudi Hoffman

The first recorded life insurance policy was issued in London on June 18, 1536, on the life of William Gybbons. It was a one-year policy.

And Gybbons died within that year! On May 29, 1537, Gybbons died, although there is no written cause of death. Perhaps you will not be surprised that even back then, there were unscrupulous companies. The insurance company refused to pay the death benefit! The position the insurance company took was this: by their reckoning, Mr. Gybbons had life insurance for a year. They insisted that Gybbons had lived a full year by their calculations, using a year as defined by twelve months of four weeks each.

Fortunately, the court ruled against the insurance company, and they were forced to pay.

Perhaps with such an inauspicious, or should we say suspicious?, beginning, the institution of life insurance is viewed with wariness by many (okay, perhaps most!) people.

But the insurance industry continued to grow and eventually became extremely regulated.

And, due to the competitive pressures of both the free market and greater regulation, the policies that are available today are exponentially better for the consumer than policies issued in the past.

As an example of how things have improved for the consumer, the life insurance policies issued after 1995, which accumulate so called "cash value" or "living value," have cash accounts growing at dramatically better rates of return than older policies.

Types of Life Insurance Policies

Basically, there are two types of life insurance policies.

Broadly, these are "term" and "permanent" policies.

Included in the "permanent" policy category are policies which are designed to have level premiums in the later years. These policies have a cash value which enable the premiums to stay at the original cost or even to stop altogether. Permanent policies go by names like Whole Life, Universal Life, and Index Universal Life.

Term Insurance

But let's start with the first and easiest to explain coverage, "term" life insurance. As the name would suggest, in term life insurance both premiums and coverage are level for a "term" or period of time. Pretty straightforward so far, don't you think?

Let's say you are a banker, and a real estate developer comes to you and borrows $10,000,000. As a banker, you have reason to believe that the developer will be able to pay debt service on the loan. But, if Mr. Developer dies, his project could fold, and the loan could default.

It is prudent (and most bankers will require) that a life insurance policy be taken out on the life of Mr. Developer. Because the period of liability is known in advance, the loan will be paid off over a specific period of years (for example 30 years), and the face amount is very large, a term policy may be appropriate in this situation.

It is not that the insurance company thinks that the risk of your dying is actually going to be level for the next 30 years! According to insurance company statistics, your actual odds of dying are about ten times as high at 55 as they are at your age 25.

So, what the insurance company does is "level" out the premiums, so that the premium cost and the insurance stay level for the term period.

Because the term policies are for a limited period of time, the insurance company has accepted the risk of paying a death benefit should death occur during the period of coverage. So, a term policy may provide coverage for a 20-year term, but if the policy is not *renewable* and death does not occur during that 20-year period, then the company has no risk of paying a death claim at the older ages when death is more likely to occur.

The good news is that most term insurance today is guaranteed renewable. This means that the policy can be renewed as term insurance at the end of the term. However, the rate, or premium, will go up substantially. In some cases, the premium will increase 15 or 20 times, or 1,500% to 2,000%. This increase in the later years is why life industry statistics document that only about 3% of term policies result in the face amount of the policy being paid out in a death claim.

Many companies offer term insurance that is also *upgradeable*. This means that the policy can be "upgraded" to a Universal Life or a Limited Pay Whole Life policy with no evidence of insurability (no health checkup required).

One major concern with term life insurance is that, upon the end of the initial level period, the rate will go up. And not just go up a little bit but could increase 20, 30 or 50 times the initial rate. This explains why 97% of term policies do *not* result in a death claim. The increasing cost in the later years when people tend to die people don't renew the policies. And the life insurance company is off the hook altogether!

Permanent Policies

So far, we have covered term policies.

You are doing great; I'm sure everything has been crystal clear so far, and you might even think that you won't really have to put your thinking cap on to learn all you need to know about life insurance.

Well, I apologize in advance for this, but I must tell you modern policies have morphed and evolved and improved. In doing this, however, they have become more complicated, and you almost certainly will need to put that thinking cap on to understand the state of the art of permanent policies.

Please hang tough with me as we magically fly through a basic tutorial on permanent policies. These policies are designed and solidly engineered to actually be in place on the very day you absolutely need your policy to be in place. That would be day your faithful heart stops beating. (And, hopefully, there are cryonics technicians by your side to send you on your ambulance ride to the future.)

In general, permanent policies stay in place until you die.

This is done by charging you a higher premium than the term insurance we learned about earlier. The extra premium allows the insurance company to build a cash value in the policy and keep the premium cost level your whole life - even though statistically, you are more likely to die in your later years.

The cash value also enables a *living* benefit to the policy, in

other words, *a part you don't have to die to access.* This cash value can be accessed one of two ways: 1. You can surrender the policy and give up the coverage, or 2. You can borrow against the cash value, keeping the policy in place.

Traditional Whole Life: Many people (yes, including the author's sister) still use the term "Whole Life" insurance synonymously with "Permanent Life" insurance to describe any policy designed to stay in place till death. This is no longer technically accurate, since "Permanent Life" now includes a much wider range of insurance policy types.

Traditional Whole Life insurance was designed to stay in place your entire life without a premium increase. It was the first iteration of life insurance that didn't have the problem of the policy dying *before the client did!* The problems it DID have, however, included being very expensive and paying low returns.

Traditional whole life was vilified by consumer advocates as a terrible investment and as being ridiculously expensive. The life insurance industry has always been competitive and rose to the challenge. It responded by evolving more affordable, more interest-sensitive products with greater flexibility for clients.

The newer forms of policies pay a higher growth on the cash value part of the policies. Some policies, called *variable life policies,* enable the cash value to be directly invested in mutual funds. Others, like Universal LIfe and Index Universal LIfe are tied to markets, allowing consumers greater chances for substantial growth.

Universal Life: Universal Life is an innovation that functions in some ways like "buy term and invest the difference," but in a single agreement that means the "invest the difference" part in the cost between term and Whole Life actually does get saved. And the structure of the policy enables a lower cost of insurance component than term purchased separately.

In a Universal Life policy, the buyer has more flexibility of payment than in traditional Whole Life policies, and the cash value grows at rates determined by a prevailing fixed rate indicator. The cash value growth rates generally track a bit higher than those available in bank Certificates of Deposit rates.

Index Universal Life: Relating to cryonics, Index Universal Life has combined the most beneficial components of all its predecessors. ***This is the king of the jungle!*** Here's why: In Index Universal Life the interest rate credited to the policyholder can be tied to the growth of a stock market index. Unlike with variable life, however, a loss in the index does not reduce the cash value. Instead, the insurance company provides a guaranteed *floor* of 0 or maybe 1 percent

interest, even if the stock market index is negative. (!) Talk about a win-win!

How can an insurance company do this and still provide a sustainable program? There are always tradeoffs, and the tradeoff in the Index Universal Life is that there is a cap (or maximum) to the index amount which is credited to you. For instance, with a 14% cap you get 100% of what the Standard and Poor 500 index does in the year up to a maximum of 14%.

Quick bottom line? This kind of policy is really good for you as consumer (and potential cryonicist).

This design enables a very good growth rate to be credited, while providing greater safety of the cash accumulation in the policy.

I promised you I wouldn't be boring. The following two paragraph are only for those who want more details on this amazing innovation called Index Universal Life.)

The Index Universal Life illustrations which show what could happen in your policy also have at least one section showing a "quadruple worst case scenario" in which the market returns are continually negative in addition to a second rather unlikely scenario. This is briefly summarized as a situation in which everyone is dying of a worldwide pandemic, which is pretty much the only circumstance that would require the insurance company to go to a "fallback" rate of higher internal charges and internal costs of insurance.

The reasons behind why ULs and IULs have these ultra worst case higher internal cost sections has to do with required reserves and government regulations and goes beyond our attention span here, I promise. But suffice it to say the practical outcome of these variables is that we have this genuinely great improvement in what a policy can do for us as life insurance/investment consumers. But with the challenge that the illustrations showing what the policy will do for us are 18 to 50 pages long! Holy moly! Add to this the application paperwork of another 12 to 30 pages, and one begins to understand why even very smart and analytical people become resistant to much policy analysis.

All readers welcome back here!

The summary take home story here is that new policies like Index Universal Life are advantageous for long term affordability. But don't be surprised or intimidated by the many illustrations included with your proposed contract. Since the insurance companies can only project future returns, they are legally and ethically bound to give you information on different potential future financial scenarios, including possible worst cases.

A quick analogy: a car and a bicycle are both transportation tools, but a car has more moving parts and options. If you are traveling cross-country on a life or death mission, you're probably going to want the car over the bicycle even if it does have more parts and a different price point.

Common to Both Term and Permanent Policies

There are some features of life insurance which generally apply to both term and permanent types of policies. Two of the most important such provisions relate to contestability and suicide coverage.

Contestability Period

Nearly every life insurance policy has a clause called the Contestability Period. Here is exactly what the verbiage of the policy sitting on my desk says:

"Contestable Period. During, but not after, the contestable period, we can contest the validity of the new policy and reduce a claim for any misrepresentation or nondisclosure of a material fact in the application for exchange. The reduced amount will be that which the premiums paid on the new policy would have purchased on this policy had the exchange not occurred. The contestable period starts when the new policy goes into force and ends when the new policy has been in force during the Insured's lifetime for two years from its policy date."

"Whew!"

(Doesn't my writing read better compared to that ?)

Exactly what does this mean? It means pretty much this: If you lie on the application and die in the first two years the policy is in force, the company may pay a reduced amount or not at all on your claim.

Is this a big deal? Not really. First of all, the rather obvious solution is not to lie on your application. And, as it turns out, it is pretty difficult to make a major and significant misrepresentation that is not discovered during the underwriting process.

For instance, the most common misstatement on a life insur-

ance application, according to most underwriters surveyed in an informal poll, is "fibbing" about tobacco or nicotine usage. But, the life insurance company does not merely take your word on the life insurance application that you are not a user of nicotine products. They have a nurse come to your home or place of business and take a small blood and urine sample.

The tests run on these samples are very sensitive and will determine if any nicotine usage has occurred within a period of several weeks. These tests also serve as screens for AIDS and HIV virus, lipid (fats) and cholesterol levels, and protein and sugars in the urine. Even if you have seen a doctor or have had a checkup recently, most insurance companies will ask you to have the urine and blood tests on-site with the nurse that they hire. This way, they have more positive control of the "chain of custody" of the samples and are less likely to make an error in determining whom they will cover and at what rate.

So, we see that a "material misstatement" on an application is unlikely to cause a claim to be contested. While an intentional and fraudulent application might have the possibility of sneaking under the radar of the underwriters, causing a claim to be contested should death occur in the first two years, this "fine print" should not concern any of you good honest readers.

The Suicide Clause

Do you ever watch mysteries on television or at the movies? Or perhaps you are a fan of murder mystery novels, and like to figure out "who done it?"

In many of these plots, people go to great lengths to determine if the cause of death was suicide, and one of the plot points is that policies do not pay in the event of suicide.

Well, guess what? We can add this to the list of popular culture assumptions that are incorrect! In most cases, life insurance *will* pay, even in the event of suicide.

To be fair and accurate, this was not *always* the case, and some older policies, written before 1970, still have provisions against paying the death benefit in the event of suicide.

But nearly all large and reputable companies now have what is called the Suicide and Contestable Period. This is a period of time, generally two years, in which the company can contest or legally not pay a death benefit if they determine you made major misstatements or if you commit suicide.

But, after the policy has been in force for two years, the insurance company will pay even if you kill yourself! How remarkable is that?

A Heartbreaking Personal Story: How the Suicide Clause Worked in Real Life

As a personal aside, one of my first death claims several decades ago remains forever etched in my mind. The phone rang, and it was one of my clients. He had referred me some time earlier to his daughter, who had purchased a fairly large life insurance policy on her own life. His daughter, 28, was an attractive waitress in vibrantly good health who had qualified at the preferred rating category.

Here is how the conversation went.

"Rudi. I can hardly say these words. My daughter is dead."

"Oh, my goodness, Mr. Smith! I am SO sorry. What happened?"

"She killed herself. She left a short note apologizing to us and to her 3-year-old daughter. Then she went into the garage and turned on the car with the garage door shut. We found her yesterday morning."

"Rudi, will that life insurance policy you sold her pay the claim? You will recall that her mother and I are the beneficiaries, because her ex husband was such a scoundrel. But now, besides losing our beautiful daughter, we suddenly find we are going to be raising our granddaughter; and we are desperate to figure out what resources we can put together to make it work for that wonderful little girl."

When you are a life insurance broker and you get a call like this, you have to be very careful about what you say to the bereaved family. You don't want to say the company *won't* pay if it turns out they will pay. Conversely, you don't want to say the company *will* pay the claim if later investigation and research determine the claim will not be paid. There was a long and pregnant pause in the phone conversation.

"Mr. Smith, let me make a call and find out the status of her policy so I can answer your question properly. I will call you back in about fifteen minutes."

I immediately called the insurance company. It turned out the policy was 28 months old. This is four months past the suicide and contestability period. And, yes, the policy was in force, and yes, the death claim would be paid.

So, because I was indeed able to deliver this claim, the parents had the financial resources to provide for their granddaughter. While this is far from a "happily ever after" story, it does have the benefit of being absolutely true and deeply meaningful to me personally.

The story dramatizes the remarkable fact that life insurance policies from reputable companies do indeed pay claims, even for suicides, after the policy has been in force for two years.

"Yes, but how might that affect me?" you might ask. "I have no plans to kill myself."

One reason this two-year suicide and contestable period might be especially important if using life insurance as the funding vehicle for cryonics is this: what if you get a terminal and debilitating disease that will corrupt your brain and mind?

It is not impossible that you may want to maintain the option of some sort of intentional or assisted "death." While the current legal and regulatory climate makes this action difficult to actually carry out, the attitudes and the laws surrounding suicide or assisted suicide may change in the future.

It should also be noted here that cryonics organizations have *no* desire to become embroiled in a potential controversy associated with suicide. Consequently, the cryonics organizations have rather strict protocols and internal controls designed to minimize legal and ethical problems that could arise in the event of an intentional self-inflicted death.

Meanwhile, it is good to know that your insurance policy has suicide and contestability clauses that specify they do not contest claims for those reasons after the policy has been in force for two years.

Back to Our Story

If you have read this far, you have already learned a lot about the exciting world of life insurance. And now you deserve a break. Let's rejoin our hero, Jerry, as he continues his odyssey of researching the cryonics option.

You will recall he has filled out a website form and will be getting some quotes. We join him as he is getting ready for the Christmas holiday.

Closing note by York W. Porter, Immortalist Society President:

It can easily be detected that my long time friend, Rudi Hoffman, is quite accomplished in the area he writes about. Not only that, but his exposition here is clear and concise as he explains the basic facts of life insurance and its great benefit to cryonicists. Whether you use Rudi or someone else in order to purchase a needed policy, Rudi is a very fine individual and a very dedicated cryonicist. You can use him, within reasonable limits of course, as a source of good information on how to proceed in making sure that the financing necessary in cryonics is readily available to you and your loved ones. With just a little planning such as Rudi outlines, the wonderful life and world-changing concept of Robert Ettinger is indeed within the reach of the overwhelming majority of readers of this publication.

Next time, Rudi continues his excellent exposition of making cryonics affordable to yourself and those you love. Don't miss it!!

Teens & Twenties 11 2020

Getting to Know You - You Getting to Know Each Other - All While Being Updated* on *the Latest Scientific Research

Fri-Sun; May 15-17, 2020 Fort Lauderdale, FL

Host: Biomedical Research & Longevity Society: Director - Bill Faloon

!!!!!!!!!! SCHOLARSHIPS AVAILABLE !!!!!!!!!!

!!Greetings to All Young Cryonicists!!

This invitation is specifically for you! Back when he was a young man, Mr. Bill Faloon attended a meeting of life extension/cryonics pioneers. Years later, during his attendance at another gathering that also involved life extension and cryonics advocates, Bill spoke of his appreciation to those who had helped him in that earlier meeting. He further noted the resulting payback benefits that both the cryonics and the life extension movements have received from his subsequent involvement, leadership and financial contributions to both these important areas.

Now Bill Faloon would like to help present day young cryonicists benefit from contact with each other and with some long standing cryonics members. Several years ago, after Cairn Idun proposed her long held idea for a "Teens and Twenties" gathering, not only did Bill agree to host the gathering through the Biomedical Research and Longevity Society but, in addition, BRLS would also provide a certain number of travel, lodging and registration scholarships! Forty (40) scholarships are available on a "first received-first granted" basis to cover your round trip U.S. air fare (or up to $1000 for flights originating outside of the USA with $1350 available for Australia). These scholarships also cover two nights lodging (4 nights for those scholarship recipients willing to room together) plus registration fees and meals. This meeting should help enable young cryonicists to interact with each other and to further have contact with long standing cryonics members. All attention will be focused on attendees on our getting to know you and attendees getting to know each other and beginning to form supportive bonds.

Note that fully signed up young cryonicists from all cryonics organizations -ages 18-30 (or 13-17 if accompanied by a parent or guardian) as of May 16, 2020 -may apply to attend. All who meet our designated requirements (i.e. timely application, age and funded cryonics contract) will be accepted and notified no later than April 15, 2020 (generally within 1 to 2 weeks of receipt of your application).You MUST be registered IN ADVANCE to attend. There will be NO "drop in" participants. As noted above scholarships are granted on a first received, first granted, basis so "don't delay, apply today". For more information contact Kathy Markell, Biomedical Research and Longevity Society, 3600 West Commerc ial Blvd.; Fort Lauderdale FL 33309

Phone: 954-202-7702 FAX: 954-202-7745 e-mail: kmarkell@lifeextension.com

I look forward to "getting to know you."

Cairn Idun
Founder/Director of Teens & Twenties Initiative

Advanced Neural Biosciences 2019 Update

Introduction

2019 has shaped up to be a special year for Advanced Neural Biosciences (ANB), the neural cryobiology company founded in 2008 by Aschwin de Wolf and Chana Phaedra. Thanks to the generous moral and financial assistance from our supporters we have added two full-time positions to our growing staff. ANB has also opened a small office in Brooklyn, New York, to engage in new projects, seek new opportunities for growth, and contribute to a robust and growing local cryonics infrastructure.

We would also like to take this chance to particularly thank the Immortalist Society, whose initial financial support several years ago helped ANB get established and become a fully operational entity. The Immortalist Society continues to utilize ANB as its research provider and the relationship between ANB and IS remains strong.

Laboratory

Temperature-controlled perfusion enclosure

For the first time since our inception we created a staff position solely aimed at refining and improving our surgical protocols to bring our experimental procedures in line with state-of-the-art cryonics procedures and we are working hard to push our models, concepts, and research efforts even further. We also have one person now working full-time on improving the physical infrastructure of our research models. Our cryoprotection experiments are now conducted in a temperature-controlled environment under precise software control. These advances will be instrumental in taking the next step towards our ultimate objective of reversible whole brain cryopreservation. This objective has been a guiding principle since we founded our company.

Screenshot of perfusion software

We now also have the capability to do rigorous large volume cryoprotectant studies in a special freezer. These studies will permit us to better understand the properties of vitrification solutions in the context of field cryoprotection (i.e. protection of the patient against ice formation prior to dry ice and/or other very low-temperature based shipping to the cryonics facility).

Left: Chiller for sub-zero perfusion | Right: "Dry ice" temperature freezer

Brain-Optimized Cryoprotectants

One of the advantages of vitrification (low temperature solidification without ice formation) is that, unlike conventional freezing protocols, different cell types or organs do not need different cryopreservation protocols and solutions to minimize damage. A gradual, low-temperature protocol to intro-

duce, cryopreserve, and remove the vitrification agent is, in principle, sufficient for all organs (or even the whole body). There are, however, a number of challenges that are unique to the brain. Since the brain is an organ with very high energy consumption (and limited energy storage), cryoprotectant exposure time needs to be minimized to keep the brain biologically viable. Our experiments indicate that the typical duration of a cryonics procedure exceeds that which is required to keep brain cells viable. This does not mean that identity-critical information is not preserved, but it would be even better to keep the brain cells biologically viable as well. To meet this challenge, we are investigating different cryoprotectants and delivery protocols to preserve as much brain cell viability as possible. This year we aim to complete a comparison between two major vitrification solutions and one formulation of our own (ANB-1) to determine which solution is optimal for cryonics as practiced today and for field cryoprotection applications.

Another distinct difference of the brain is the existence of the so-called blood brain barrier (BBB), an evolved, highly selective border to protect the brain against foreign and unwanted substances. One characteristic of today's vitrification solutions is that they have poor BBB permeability, resulting in severe brain shrinking even in "good" conditions. At ANB we have spent considerable effort in identifying cryoprotectants that can pass the blood brain barrier and prevent this kind of shrinking. While we discovered that there are a number of cryoprotectants that can pass the blood brain barrier, most of those are more toxic when used at the concentrations necessary for vitrification. Fortunately, there is another approach to preventing dehydration of the brain. Working for the *Cryonics Institute*, the late Russian cryobiologist Yuri Pichugin discovered a series of compounds that modify the BBB to allow cryoprotection of the brain without shrinking it. Using these "blood brain barrier modifiers" does require, however, scrupulous attention to dosage and introduction protocol. When these compounds are used at too low of a concentration they do not completely work and when used at higher concentrations they can cause severe swelling of the brain and body (generally referred to as "edema"). After conducting a large number of experiments, we have established a superior BBB modifying cryoprotection protocol that permits delivery and removal of vitrification solutions to the brain without the loss of viability that is usually seen when the brain shrinks.

Our aim for the end of this year is to establish a brain-optimized vitrification protocol that does not shrink the brain, improves cellular viability, and that can be used in field vitrification as well.

Cerebral Ischemia and Brain Repair

As we write this, ANB has completed a comprehensive journal study to investigate the nature of damage after prolonged circulatory arrest at normal body temperature and at hypothermic temperature (0°C). For the first time in the field, we also used emerging "deep learning" technologies to attempt to characterize the degree of this damage. We now hope to further expand on these studies by conducting the same experiments and reconstructing the results in 3D (so-called "connectomics). Our ultimate aim is to use these deep learning and machine learning technologies to reconstruct the original state of the brain from the damaged state, which, of course, will be an essential element for the revival of cryonics patients. A lot of this work is expected to be conducted at the *New York City* office, in addition to other non-experimental work, including computational biology and human cryopreservation R&D.

Optimization of Long-Distance Cryonics Cases

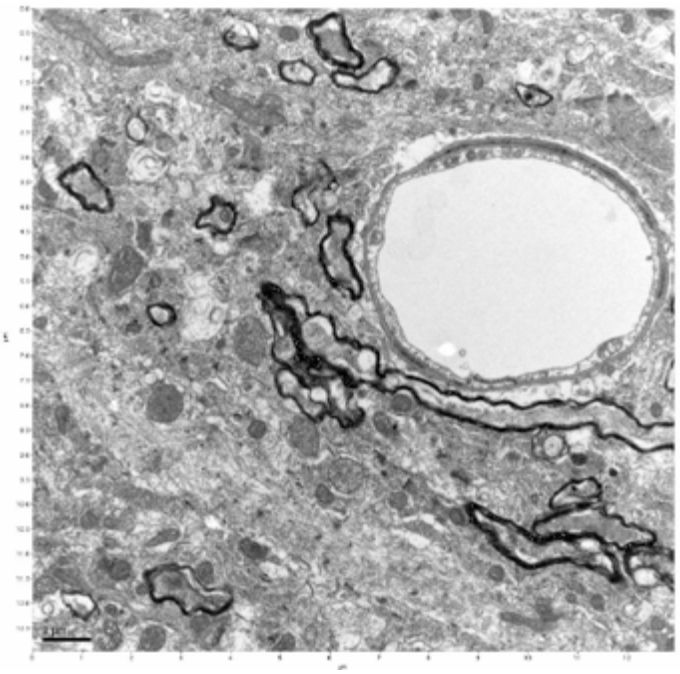
Research shows that if there are no delays, and the patient is immediately cooled and stabilized after death, cryopreservation of the brain without ice formation is possible. However, it is well recognized that not all cases follow this ideal path. In particular, many cryonics patients do not receive stabilization services and will be shipped on water ice to the facility where they will remain in long term storage. Under these circumstances ice-free cryopreservation will be compromised, or even impossible. In 2018 the *Immortalist Society* and the *American Cryonics Society* provided a grant to ANB to research if funeral directors can play a larger role in improving such outcomes than just preparing the patient for transport to CI.

There are basically two distinct options: (1) Funeral directors perform a so-called "field cryoprotection protocol" in which the patient is perfused with the cryoprotectant and shipped on dry ice to the CI facility, or (2) funeral directors circulate a chemical fixative to stabilize the patient against further deterioration during transport to CI.

If a funeral director conducts a cryoprotection protocol such as that used, for example, by the Cryonics Institute, and ships the patient on dry ice, in theory, the outcome would be substantially improved because prolonged periods of cold ischemia will be prevented. The challenges associated with this option are not so much scientific but logistical. How promptly

will funeral directors respond? What pumps do they use? Can they control pressure? Do they understand the dry ice shipping requirements? These are non-trivial concerns.

In a sense, the second option to stabilize the patient with a chemical fixative would seem to be more within the comfort zone of funeral directors. A seminal 2015 paper in the journal *Cryobiology* demonstrated that under ideal conditions, prior stabilization with aldehyde fixatives and modifying the blood brain barrier can produce a level of brain preservation indistinguishable from control brains. When we performed similar experiments, we found that this outcome is also possible with a slightly modified version of Cryonics Institute's VM-1 solution.



Electron micrograph of the brain after glutaraldehyde stabilization and VM-1 cryoprotection shows intact blood vessel, myelated axons, and synaptic connections.

Whether aldehyde-stabilized cryopreservation (ASC) is desirable for a select number of otherwise challenging cases (or whether it should even be a more widespread procedure in cryonics, as a few have proposed down through the years) can be partly answered through research, but ultimately it involves a broader (philosophical) question. This is because chemical stabilization constitutes a different kind of cryonics that will most probably require advanced molecular repairs to break those chemical cross-links caused by aldehydes. Those repair capabilities may be very, very distant in the future, although no one knows for sure. Those repairs may also exceed in complexity those required to revive cells that are either still viable or those cells that are somewhat damaged but that otherwise remain relatively close to viability. Both fully viable cells and/or cells that are minimally damaged but relatively close to viability are long standing goals of cryonics research and practice. And, of course, there are similar logistical and technical concerns. Can we expect funeral directors to comply with our protocols? Are the fixatives they generally use suitable for our purposes? What type of training might be necessary to be provided by cryonics organizations to willing funeral directors in these cases?

Chemical fixation of patients at risk for long delays and transport times is no panacea. For example, in our lab we found that if a patient is rapidly perfused with a fixative, normally within an hour or within several hours if the patient is rapidly cooled, cryoprotection is still possible after many days without compromise or weight gain (edema). But if the chemical fixation procedure itself is excessively delayed in being implemented, these advantages can no longer be obtained and the weight gain that is typically seen after long transport times is observed after delayed ASC as well. There might be innovative solutions to this, but as our research has often demonstrated, good cryopreservation is only possible if the patient is rapidly stabilized and cooled after pronouncement of legal death, even if we otherwise have a good solution to preventing the worse outcomes associated with long transport times to a cryonics facility.

Editor's Note: As mentioned at the beginning of this article, ANB and IS have had a very close working relationship since early in ANB's existence. Both founders of ANB are dedicated cryonicists and their efforts in ANB's research have been directed towards improving the procedures used by cryonics organizations and making sure those procedures are based on as good and solid research information as can reasonably be attained.

As both the editor of this publication and in my capacity as President of the Immortalist Society, I would like to deeply thank those contributors that have helped us keep the Immortalist Society's research efforts going. For those that haven't yet contributed, we would like to urge you to do so. In addition to the satisfaction you will get from knowing you are helping carry out very important research in the field of cryonics, you should also note that donations to IS are tax deductible under the federal income tax code.

Robert Ettinger: *The Legacy Continues*

Introduction by York W. Porter, President of the Immortalist Society and Executive Editor of Long Life Magazine

Robert Ettinger on "Determinism"

Introduction by York W. Porter, President Immortalist Society, Executive Editor, Long Life Magazine

A long time ago I came across a saying that went something like "If the universe were a willy-nilly place then scientists could go their willy-nilly ways". Wherever I read it or heard it, the saying expresses the belief that the universe is ultimately an understandable and, at least in some sense, orderly place that makes the pursuit of science so interesting and also so successful. I was born in 1952 and the seeming miracle of technological progress was self evident all around me. I observed long coal trains on steel rails pulled by super strong locomotives that had the ability to move massive weights behind them. Those same steel rails allowed passenger trains to move people, including at one point, my only sibling, hundreds of miles in relative safety to destinations far away. To a young boy of around ten or eleven, her trip to Washington, D.C. via the railroad for a summer job seemed amazing to me.

The further miracles of radio and television were also around. In addition, at least in some buildings, was one of my favorite developments in technology, that of air conditioning. Medical procedures that would have seemed incredible to citizens of just a century before my birth were routine sorts of things. Further developments of jet aircraft, helicopters, long distance telephonic and telegraphic communications and other amazing things were available as well and there were more things (such as moon rockets) yet to come. I was, and am, a technophile and while humans sometimes falter in their use of technology, the promise of its ability to be used for good is tremendous. The ultimate promise of fully developed nanotechnology at some point in human history, offers the possibility of a situation in human existence where every single individual will have access to goods and services beyond any level necessary for excellent health and human comfort. As far as I'm concerned, the more research funding put into this area, the better, given proper guidance by experts in the field.

Down through the years of my youth, I suppose it would be fair to conclude that I became a believer in what might be termed "Newton's clock". I loosely refer to this phrase as the generic view that, under Newtonian principles of physics, the universe resembled a giant multipart "clock" which ran according to well-known and determinable principles. Later in the history of physics came, of course, the advent of quantum mechanics. I don't pretend to even begin to understand this interesting and complex field. For years I just always went with the famous saying by Albert Einstein of "God does not play dice with the universe". I still use the phrase today when discussing the subject with a friend that seems to find quantum mechanics both fascinating and, if anything "the way God made the universe" (I guess "Al" and I have lost the argument with my friend).

In the following article Robert Ettinger talks about the interesting topic of "the way things work" mentioning both sides of the coin of physics/science. This article is from the August 1995 issue of this magazine and gets into some detail about this fascinating topic.

Determinism

By: R.C.W. Ettinger

Everything not forbidden is compulsory. This statement is sometimes called Gell-Mann's Totalitarian Principle, and it rules one possible version of our universe, which many people love to hate.

Determinism is the doctrine of the (strict) rule of law in the universe. This means that every successive state or configuration of the universe (or of any subsystem, such as you) is the inevitable and inexorable outcome of previous conditions as legislated by the rules of physics.

Some people like to say, "Anything is possible." Actually, almost nothing (out of all imaginable things or events) is possible because only an infinitesimally few things (compared to those imaginable) seem to be permitted by the laws of physics—and that is only the beginning. If the universe runs strictly by law, as the classical (Newtonian) physicists believed, then the only things that are possible are those that actually happen. Nothing is left to chance or whimsy—perhaps not even the whim of God, according to some of those scientists.

Adoption of the Newtonian view was a tremendous advance and triumph of the human mind. The primitive view of the world—dominant until very recent times, and still looming large in the thinking of many people—held that the world embodies large elements of magic, luck, or caprice; after all, this was common sense, since experience proved that predictions were hazardous and unexpected and mysterious things frequently occurred. If we can't understand it, are we not likely to conclude it isn't understandable?

But the great initial successes of Newtonian mechanics, including celestial mechanics, and other elements of classical physics and chemistry, tended to convince scientists that the universe is orderly, that events are not even partly haphazard but are determined in complete detail by preceding conditions and the operation of natural laws. (A simplified paradigm is that of the pool table: where a ball goes, and how fast,

is determined in precise detail by the direction and velocity of the impacting ball).

In astronomy, success appeared complete in the 19th Century: the motions of the planets could be predicted with accuracy equal to that of the original observations. Knowing the configuration of the Solar System at a given instant, one could apply Newton's laws of motion and gravitation and infer all past and future configurations in utmost detail (Or so they thought).

In terrestrial mechanics and chemistry there were similar successes. There is no guesswork in the operation of a steam engine; if its construction is accurately known, its behavior can be accurately predicted. Likewise in chemistry: a carefully prescribed procedure always yields the same results. Great strides in knowledge were eradicating vast areas of obscurity and ambiguity, and the trend seemed obvious. Pierre Simon de Laplace, the great French mathematician, summed up the classical view by likening the universe to a machine, its molecules, waves and other elements dancing in perfect harmony and scrupulous obedience to the laws of nature.

According to Laplace, if a brain of sufficient magnitude could be given complete information about the world at a given moment—precise positions and velocities of all its particles, and so on—that brain could infer the world's entire past and future history. The universe can be likened to a great machine, with all its parts—including people—cogs or smaller machines.

Conclusion or Premise?

The deterministic view was—and is—based partly on evidence and partly on predilection. If a classical scientist found that two apparently identical experiments gave different results, he assumed the presence of "hidden variables" or unrecognized factors affecting the results. That identical situations must evolve in identical ways is for many people an axiom: they cannot conceive of any alternative—certainly not in an understandable universe.

The Value Of Determinism

This attitude is extremely fruitful; the scientist keeps digging and digging, and is never satisfied with anything short of complete prediction and maximum control. Indeed, it is the application of this attitude—even by those who claim not to have it—that has produced virtually all of our science and technology.

For an immortalist and cryonicists, the value of a deterministic attitude is obvious. Taken to extremes, determinism implies that, in principle, nothing is ever irrevocably lost. Every smallest bit of information about the past is implicit in the present. When we become sufficiently like Laplace's superhuman observer, we will (with reservations noted below) be able to infer as much as necessary not just about frozen patients—that's relatively easy—but even about Nefertiti, even our many times removed grandfather Ugga Bugga, by studying the traces that their existence and actions imprinted on the universe. It will then be possible to reconstruct them (and fulfill the great moral imperative of Fyodorov).

Sadly, even if this is possible in principle, the more extreme applications may never become possible in practice. Tracing back lines of casuality quickly becomes !!!exceedingly!!! difficult, and we may never have enough time or computing power. But we can probably forgo the more extreme applications without too much hardship. It remains true that the deterministic viewpoint is an important buttress of optimism. It is by no means a prequisition of Immortalism but it helps. *Very broadly it suggests that—faced with any problem—we can figure it out, and we can fix it.*

Artful Dodgers

The "free will" people and other anti-mechanists and dualists seem to think that they have alternatives to offer, but as far as I can see this is not the case.

Dualism, for example, postulates two kinds of "stuff" or two different "realms" in the world, which are sometimes called material and spiritual. (Sometimes it is said that the mind is different from the brain or its aspects, the brain being material and the mind spiritual, the two interacting somehow.) Aside from any other arguments or evidence, the basic problem dualists face is that their hypothesis, even if true, *gains us nothing* and basically changes nothing. The spiritual aspects of life, if they exist in the sense intended, must still obey definite rules, or else...what?

Once more: the only alternative to rule of law (determinism) that has ever even been suggested, as far as I know, is the partial rule of "chance"—and that is essentially meaningless. To see this, just ask yourself what it might mean.

Conceivably, it might mean that certain effects arise in our (part of the) universe as a result of causes in another (part of the) universe, and this "other" is forever beyond our reach for investigation or influence. (For "other" one might substitute

"God.") This is perhaps not logically impossible, but if we are going to speculate in this manner, then we have to ask how events arise in this "higher" (lower?) (part of the) universe. Again, either there is a rule of law (determinism), or else one must postulate still another universe or another level of the universe; and so on.

The obvious riposte of the dualists and dice-throwers is that mainstream physics today does accept a degree of quantum randomness in the fabric of spacetime. That is indeed an effective debating point, but does not touch the merits of the argument. As far as I can see, a truly basic randomness is meaningless and cannot exist.

Quantum Dodges

Many modern scholars think quantum theory offers or requires a rejection of determinism. Events—especially at the level of elementary particles---seem partly "random" and predictable only in the statistical aggregate. More than that, they believe the wave/particle duality and "complementarity" of aspects, and Heisenberg's Uncertainty Principle, prevent us even from ascribing precisely defined classical state or configuration to a system. Still further, they say, recent experiment and theory have shown links between local and remote phenomena, so that all the universe may be intertwined in such a way that no part can be adequately described without describing the whole. (A few radicals even suggest that casuality can work backwards in time.) Reality—local reality, at any rate—is itself not fixed and sharp, but blurred, partly inchoate and potential. ...There are two responses to such notions.

Third, the last word is not yet in on either the facts or their interpretation. Much remains obscure, and much of the present theoretical structure may yet be replaced. There is an endless stream of new papers and books on the interpretation of quantum theory.

Second, even if the rules are much more complex than once thought—even if every particle in the universe simultaneously affects every other, and waves shimmer into particles at the drop of a hat—that only changes the details, not the principle.

First (continuing Second above), none of this—even if it stands up—changes the apparently fundamental necessity of a rule of law. Conceivably, perhaps, some parts or aspects of this universe may be forever inaccessible to us, even though they affect us, but one-way interactions have never been shown to exist. (Cf. Newton's Third Law.) The notion of any basic "randomness" in nature is not only incomprehensible, but-as far as I can see—meaningless.

Afterword by York W. Porter, President Immortalist Society, Executive Editor, Long Life Magazine

I expect that quantum mechanics will always remain "over my head", at least for the foreseeable future and probably for the time period I have left in this present existence before the cryostat awaits me. If cryonics is successful, perhaps I can figure things out "the second time around". In my younger days my lack of in depth knowledge of quantum mechanics would have been a source of concern to me and my perfectionist ways. At this point in life, I realize that, try though I might, there is much that I am unaware of, not only in quantum mechanics but in cryonics and about any other subject one can think of. This actually is one of the joys of life at this point because the wonderful experience of learning seems to be pretty much an endless albeit quite pleasurable task. An endless and enjoyable and wonderful experience for century upon century sounds just fine to me.

In the meantime, I do comfort myself in the realization that the success of cryonics and nanotechnology doesn't, thankfully, depend on my knowledge of quantum mechanics or rest on the full elaboration and understanding by anyone of the questions Robert Ettinger brought up in his excellent column that is above. Their success rests on the continuing improvement of more normal technological endeavors that use science that is pretty well known and grounded in available technology.

Cryonics and nanotechnology are, in many ways, more technological and engineering problems than they are problems of fundamental science. We humans are well aware of the basic laws and principles that govern chemical reactions and physical structures. Granted we need more research knowledge of the specifics of cryobiology and nanotechnology to the point that the combination of the two leads us to the successful outcome we are seeking. Still, though, the research and effort necessary to bring that success will be fundamentally based on knowledge in chemistry, physics, and biology that is very standard in its existence. While more knowledge of human beings and how they are structured and function is always useful, that knowledge will be gained by research work that doesn't involve the need to change traditional views of chemical, physical and biological sciences. It will be a real pleasure to learn about that information as well, whenever it becomes available. It will be a further pleasure to see that information applied to the end of making Robert Ettinger's amazing concept a day-to-day reality in the world.

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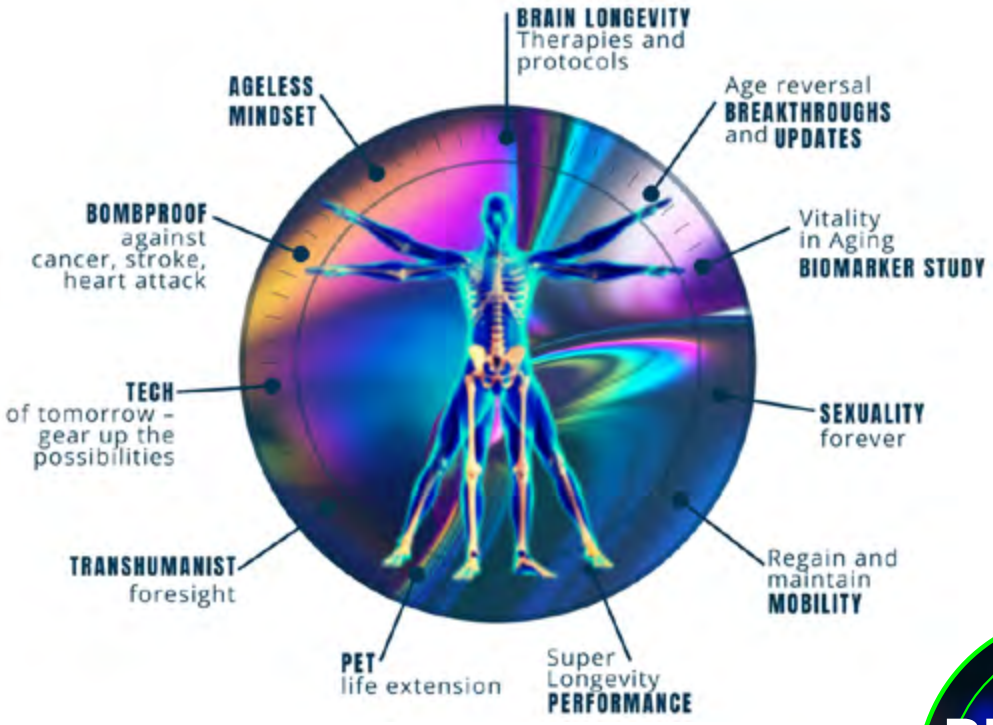

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the american cryonics society

cryonics society

Reasons to Join ACS

1) We have been in business a long time

We were incorporated in 1969; our first cryopreservations were in 1974. We are a Calilfornia nonprofit corporation formed to advance research into cryonics and cryobiology. Two well-known medical doctors, Dr. M. Coleman Harris and Dr. Grace Talbot, were among our founders which also included Jerry White and Edgar Swank. Jerry and Edgar are in cryopreservation at the CI facility.

2) We work closely with the Cryonics Institute (CI)

Starting with our first frozen patients, ACS has maintained funds to keep these patients frozen. This responsibility has required that we focus on a practical approach to managing our resources. By working closely with CI with it's ever increasing "patient load" we are able to keep long-term storage costs down while adding to the funds of both ACS and CI.

3) Initial Preparation by Suspended Animation, Inc and other Options

We don't have all the answers. Cryonics depends upon anticipating future technological developments, and taking action NOW to benefit from those breakthroughs. This means there is a speculative aspect to cryonics. We give our members a wide a choice of options which include initial preparation by Suspended Animation, Inc. We also offer less expensive options. See our website for all choices.

4) ACS Utilizes the Tools of Risk Management

The ACS program employs the tools and techniques of risk management, such as inspection and verification of good practices at facilities where ACS members are in cryostasis. Financial planning includes diversification and decentralization to help guard against adverse financial consequences for ACS assets..

5) ACS Sponsors Research

Some research programs of the American Cryonics Society have been very well publicized. The successful cool-down and recovery of Miles the Beagle led to appearances of ACS scientists on Good Morning America, The Sally Jessy Raphael Show, and The Phil Donahue Show.

6) ACS Maintains its Own Emergency Response

Long term storage should be centralized but stand-by and emergency response, by its very nature, is local. In that regard we maintain emergency response equipment and responders in the San Francisco Bay Area which can also can be deployed to most locations in the US.

7) ACS is a Democratic Society

One internal control, absent in some organizations, is the fact that ACS is a democratic organization. That is, our governors are elected from among the members, by the members. A number of procedures have evolved over the years, to help ensure that this electoral procedure is safeguarded.

8) ACS Patients have Live-Member Sponsors

To ensure that the obligation ACS has to people in suspension continue to be considered, ACS has a program whereby live members act as "Sponsors" on behalf of the people in suspension. Sponsors get reports of suspension facilities housing the patient, and information on investments used to benefit the continued suspension of that person. Whenever possible, a good friend or relative of the person in suspension is named as a Sponsor. We prefer that the Sponsor also be enrolled in our suspension program.

9) ACS Manages Growth

The strength of a cryonics society is not dependent upon how many people it has in suspension. There must be a reasonable allocation of resources to meet the obligation of those in suspension. Societies who accept underfunded or non-funded patients must then make up that deficit through raising membership dues or by receipt of an endowment. Both of these fund raising methods involve significant risk, with results considerably in doubt.

The American Cryonics Society is not a kingdom built on a house of cards. The balance between those enrolled in our pre-need suspension plan, those in suspension, and the allocation of resources between these two programs is balanced to ensure our survival and prosperity. We are not dependent upon luck, endowments, windfalls, or even growth to sustain us.

10) We Make use of Individual Trusts

While other societies have more recently begun using trusts, the American Cryonics Society adopted this technique as its primary recommended funding vehicle in 1982. The individual trust is a mechanism to isolate and manage risk, ensure some oversight, obtain acceptable tax treatment, and address various problems and requirements unique to each individual member.

11) "Freeze-Wait-Reanimate" is our Only Purpose

The American Cryonics Society is not a "Utopian" organization. We don't have a political agenda to transform our current political or social structure to make our version of a perfect world. That is far too ambitious an undertaking; and besides, we don't all agree on what political and social changes are desirable. We are a cryonics society: PERIOD. Our program is simple: freeze-waitreanimate. We support cryonics research, education, and information dissemination. That is what ACS is about. That is ALL ACS is about.

Website: americancryonics.org

Email: cryonics@americancryonics.org

Phone: (408) 530-9001 • Toll-free: 1-800-523-2001.

Mail: American Cryonics Society - P.O. Box 1509, Cupertino, CA 95015

The ACS office is located at 355 W. Olive, STE 210, Sunnyvale, CA 94086
Office hours are irregular.
An appointment is required for a personal visit or interview.

Final Thoughts

York W. Porter - Executive Editor

One of the things that acts as a source of amazement to me about critics of cryonics is that the principle that drives those of us interested in Robert Ettinger's world changing concept is the very same principle demonstrated time and again by human beings in many, many circumstances in life. It is the God-given/Nature-given (take your choice of either or a combination of the two) survival instinct that resonates in any biological organism that is sentient. Even in non-sentient biological beings, basic survival mechanisms involving, if nothing else, movement to try to escape the source of harm, are very prevalent in the biological realm. In the case of beings with consciousness, they will, within the limit of their intelligence level, work mightily to try to do nothing more than just continue to live. That, at bottom, is what cryonics is all about.

Thus we come to the interesting and inspiring tale of one Leonid Rogozov and his unusual and courageous effort to survive in conditions that were trying ones, to say the very least.

Rogozov was born in a village in Siberia. The village was so remote that it was just a short distance from the Soviet border with Mongolia and China. Around the time he was nine

or ten years old, his father lost his life as a soldier in World War II. In spite of these personal obstacles and to the younger Rogozov's great credit, he finished his basic medical education as a general practitioner in 1959 and then began an effort to secure training in surgery immediately thereafter. His training would come in personally handy in ways he would never imagine in his medical school days.

Shifting gears somewhat, as the last region of earth to be discovered in recorded history, having first been seen around 1820, Antarctica is of course, the absolute southernmost continent on the planet. Only in 1895 an initial confirmed landing of Norweigans occurred in this desolate place. At over five million square miles (just over 14 million square kilometers), it is, perhaps surprisingly, twice the area of Australia. With over 98 percent of the continent covered by ice that averages over a mile in thickness, it is, quite understandably, one of the most sparsely populated places on the planet.

Being one of the windiest, coldest, and driest places on the entire globe, population ranges from around a thousand persons to a few thousand folks, and virtually all are normally associated with various research stations on the continent. With temperatures in Antarctica that average a bone-chilling level of 63 degrees below zero Celsius (minus 81 degrees below zero Farenheit) in the coldest part of the year, only the brave of heart should apply. Rogozov, perhaps due to the rugged conditions of his upbringing, apparently was one of those. (And, for any readers that might be wondering, definitely count this writer out as an Antarctic researcher!)

The Sixth Annual Soviet Antarctic Expedition was part of a series of attempts by the Soviet Union to engage in geophysical research in the rugged conditions of the Antarctic. Working at the Novolazarevskaya Station, which was originally set up in mid-January 1961. Leonid Rogozov served as the doctor for the sparse research team of roughly a dozen individuals. It seems a safe bet that Rogozov's duties were similar to that of a medical officer dealing with crewmembers on a submarine. Once the crew of the submarine has been treated for any health problems early in the voyage, the rest of the time tends to be fairly routine for the medical officer due to the fact, if nothing else, that no other humans are around to accidentally infect members of the group. It must have seemed, from the standpoint of many physicians, a "piece of cake", albeit somewhat boring.

The purpose of having a doctor physically present at the Antarctica's research stations is, of course, due to the simple fact that for much of the time in Antarctica, travel is difficult if not impossible and, even if it weren't, hospitals on other continents are at extreme distance from the research stations. The problem Rogozov was to face is similar to what was once said by a crewmember of a Navy minesweeper. The sailor said his ship was a great idea that only had one weak point and that was the problem of who would sweep the mines for the minesweeper! Similarly, Rogozov was going to face the question of who is going to be the doctor for the doctor if something bad should happen.

And, as it does in life in general, Murphy's Law, the maxim that if anything can go wrong, it will go wrong and at the worst possible time, showed up! For Rogozov, the Law reared its ugly head on April of 1961 when he began to have nausea and fever, coupled with weakness. As things worsened, he began having pain in his right lower abdomen. By the next day, it

was obvious that this wasn't just some aggravating but self-limited viral infection. It was just around two and a half weeks since Yuri Gagarin had orbited the earth in the very high-tech adventure of space exploration but no high-tech devices were available for Rogozov. As his condition deteriorated, he realized the stark reality that he was up against. All conventional and conservative measures had failed to return him to good health. He was faced with the unfortunate reality that he probably had appendicitis. This stark reality was coupled with the fact that he was the only physician available to take care of the problem.

Normally, if at all possible, any individual in Dr. Rogozov's case would be transferred to an appropriate facility for what is, within limits, a pretty routine surgical procedure. In this particular case, the research station had no aircraft at its disposal. On top of that, the weather at the time prevented any aircraft that might have been available at any location wherever situated to land and airlift the doctor to a hospital setting. Rogozov was going to have to operate on himself lest he die of peritonitis that could result if the appendix were to burst.

The operation began at two o'clock in the morning. General anesthesia was obviously out of the question as it meant that Rogozov would be unconscious when he needed to perform the surgical intervention. Using only a local anesthetic and choosing a couple of people at the research station as his main assistants, he started in as systematic a way as he could in order to proceed safely with this do-it-yourself but quite critical procedure.

Initially he had decided to utilize a mirror that was going to be held by one of his untrained assistants to enable Rogozov to visualize his own internal structures so he could find and excise the diseased and offending appendage to his intestinal tract. The mirror proved to be more trouble than it was worth, however, and Rogozov proceeded to utilize his sense of touch to overcome his otherwise limited field of vision.

Due to his illness and also due to the stress of performing surgery on oneself, Rogozov accidentally nicked his bowel and had to sew that wound up, only adding to the stress in the situation. Taking a brief rest period of roughly a half a minute every four or five minutes, Rogozov continued to do the only option available to save his own life. Failure could mean the end of his existence.

Finally he reached the appendix and noticed a dark stain at its base. To Rogozov's trained eye, this meant that the appendix was indeed basically heading towards rupturing. He figured that within twenty-four hours it would have burst had he not intervened. If it had, peritonitis had a great possibility of following with, in all probability, the end of Rogozov's life.

After two grueling and exhausting hours the surgery was completed and the appendix removed. Rogozov said later that at times during this exhausting procedure, his hands "felt like rubber". But he kept working, knowing his own life was in the balance. In one last showing of his determination and drive, he educated his assistants on how to clean the surgical instruments and only when everything was in order with the instruments and the room that he had performed the surgery in did he give himself the luxury of taking some antibiotics and some sleeping pills.

Just two weeks after the operation, Dr. Rogozov returned to his usual duties. He lived until the relatively young age of 66 when he finally succumbed to lung cancer. Sadly he was not a cryonicist. The man that had shown such tremendous courage and wisdom in taking the only reasonable option for extended physical life that was available to him when he was a young man failed to take the only reasonable option for extended life as he got older.

The general point of his surgery was to accomplish the most basic desire of human beings and that is to live. His son, born several years after Dr. Rogozov returned from the ordeal in Antarctica, said that after the operation was over, his father was basically simply relieved, "because he had another chance to live".

You too can have another chance at extended physical life. The outstanding concept that Robert Ettinger advocated is a working reality today. Individuals of many different philosophies, beliefs, political viewpoints and religions are under the care of existing cryonics organizations. As indicated all these persons were individually unique but they shared one thing in common with each other and with Dr. Rogozov and that was simply a deep love for life. That deep love of life made them choose the very rational course of being actively involved in cryonics. You need to do the same. Join us today! You'll be glad you did!

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