

Cryonics

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Cryonics Outlawed in British Columbia

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Cryonics

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Cover:

*The real story on the B.C. ban.
See Ben Best's article in Alcor News.*

Something New — That Won't be Blue

Mike Darwin

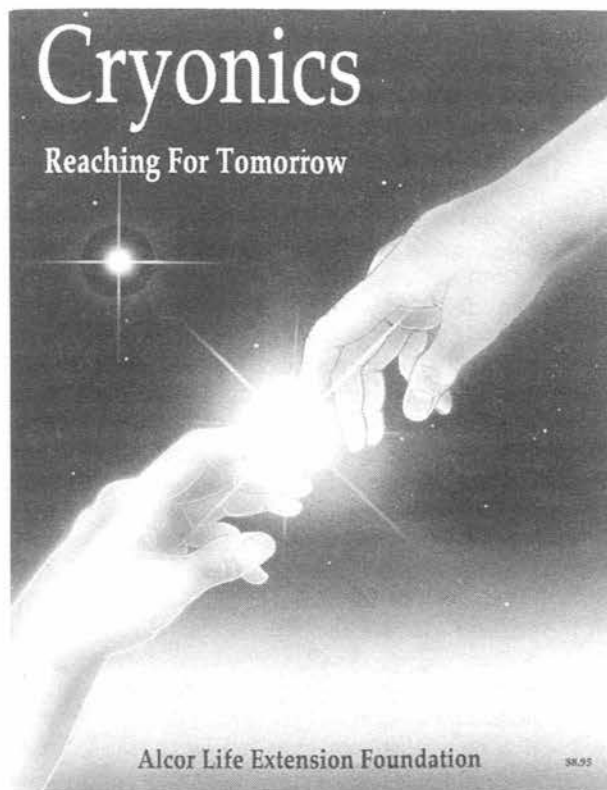
Now for a little good news. Some VERY good news. The Alcor handbook (commonly called the Blue Book for its years of blue covers) is continuing its evolution. In the past this evolution has been incremental, from a simple single-celled organism, to a blue-green alga, to a multi-celled organism to... a creature with lungs that can walk on land. In short, the history of the Blue Book is proof that the correct model of evolution is that of punctuated equilibrium. There have been big and very exciting changes.

For starters, the Blue Book isn't blue. It has a full color cover of original art. It has also increased in length by about 150%! Not only has it been heavily edited, but major (and much needed) new sections have been added. The most exciting of these new additions is a detailed repair scenario by cryobiologist Dr. Greg Fahy which lays out a scientifically defensible repair strategy. This repair scenario has not been previously published. Other important additions are "The Cryobiological Case for Cryonics" (previously available as a reprint) and a modified version of the "The Cost of Cryonics."

Two other critical changes are the addition of scientific references to the text (it is now extensively referenced), a nearly complete replacement of the clip art with photographs, and a complete reformatting. In short, the new Alcor handbook, retitled *Cryonics: Reaching For Tomorrow* (CRFT) looks truly professional for the first time. With the clip-art gone, lots of *Time Magazine*-like boxes added and

full-sized 8.5" by 11" format (e.g., *Cryonics*-sized) it looks great. It's also now 112 pages long and "perfect bound" — in other words it has a spine like a soft-cover book.

We are extremely proud and excited



about this new effort. We think you will be too. We went to with press with CRFT on 26 April (my birthday, and a better present I couldn't have asked for). That means that in about three weeks I'll be able to answer the question, "What do you guys *do* there all day long?" with a wicked smile and a copy of CRFT. I can say without hesitation

or embarrassment that CRFT is the finest piece of literature that Alcor has ever produced and, I believe, the finest piece of cryonics literature so far produced, period!

The cover price will be \$8.95 (a bargain considering that if the book were produced in standard trade paperback format it would be about 220 pages in length!) with a steep discount to members: \$4.95.

The large print run and new format will also allow CRFT to be used as a single element in answering information requests, nearly halving the cost of producing an information request and reducing the amount of labor involved by an order of magnitude or more (in the distance I can hear hundreds of weary volunteers screaming "Thank God! No more info packs to stuff!").

A tremendous amount of the credit for the new effort must go to Eric Geislinger and Jane Talisman, who pulled it all together and laid it all out. WOW! What a job. And what's more, they did it under terribly trying conditions with last minute changes being faxed in and the final corrections on the galley being rushed out of the facility after the CMB incident! Our sincere thanks to them for a job well done. The other "major player" in the new effort was Ralph Whelan, who massively edited the text and provided a good deal of input on its visual style. We owe Ralph for the shift away from the *Watchtower* format of the past.

Thanks to everyone else who helped too!

Letters to the Editors

Dear Editors,

John LaValley's response to criticisms of his review of FM-2030's *Are You a Transhuman* was much more agreeable than his original review. I would like to reply to John's comments on my letter.

I support John in his criticisms of FM-2030's statist views, coercive policies, and views on competition, and I sympathize with John's outrage with regard to some things FM says in the book. My own anger was no doubt dampened by my personal acquaintance with FM and the fact that I know him to be a decent and warm person despite some politically abhorrent views. I also wonder just what FM meant by modification of suspension patients. If he meant only removal of homicidal impulses I'd still be concerned but not outraged.

On the issue of obscenity: My objection is not to the use of scatological words as such. Rather, their usage should be severely limited for two reasons. First, use of a scatological expletive is usually a sign that the writer has communicated naked emotions without an attempt to explain their cause. Second, foul language is usually a poor means of expressing outrage, especially in print. Vitriolic expression can be more creative. John is right in saying that if you are going to use a scatological term it's ridiculous to write it but replace a couple of letters with blanks. That the word "bullshit" appeared with blanks in my previous letter was the doing of the editor, not me. [The editor might note that there's a difference between *using* a rude term, and merely *mentioning* it (as I just did).]

As for John's mention of having shown me the review before submitting it to *Cryonics*: I must confess that I did not remember that event when I wrote my letter, and even now I have the faintest of memories. I suspect the reason I gave little feedback at the time was that at Alcor events I am too busy talking to people to give more than a cursory reading to anything handed to me. John interprets the event thus: "Perhaps Mr. More finds that the rewards for being critical are greater when there is an audience to appreciate it." Though this is not the explanation for my not having offered comment at the meeting, it is certainly true. Like many opinionated cryonicists I enjoy having an audience. However, try as I might, I am

unable to feel bad about this.

Finally, I was surprised by John's talk of censorship, especially after he had displayed an obviously good understanding of freedom. Editing is not the same as censorship. Censorship involves one group of people (usually calling themselves "the government") coercively prohibiting other people from publishing material that the *owners* of the media want to publish. If an editor chooses not to publish a piece of writing in its current form, or in any form, that is an exercise of his or her legitimate property rights, not an act of censorship. To call it censorship implies that the government may step in and *force* the editor to publish the material. I'm sure that John would soundly reject such a statist idea, yet referring to editing as censorship does imply that.

Max More
Los Angeles

Dear Editors,

Every newspaper and magazine that I read that talks about people choosing cryonic suspension also state that "these people are willing to pay many thousands of dollars (some give dollar figures) to be suspended." This statement was also mentioned on the TV show *Lifestyles of the Rich and Famous*. And almost all the news articles *do not* mention that the suspension could be paid with an insurance policy and a quarterly/yearly emergency standby fee, such as I and probably other non-wealthy cryonicists are doing right now.

I think that these news articles are one of the major factors that stop people from considering cryonics suspension. The cost! I myself had read one of those articles and did not sign up until a few years later when I had curiously sent for more information from Alcor and got the full details.

To combat these news articles and the loss of many possible sign-ups because of the misinformation, why can't Alcor sell cryonics like salesmen sell cars?! Something can be done like having an insurance company, or companies, to back Alcor and then advertise: CRYONIC SUSPENSION NOW AFFORDABLE! ONLY A \$300 SIGN UP FEE AND \$___ PER MONTH TO QUALIFIED APPLICANTS. MAIL THIS COUPON FOR DETAILS AND INSURANCE QUESTIONNAIRE.

Also, by doing it this way, like the car

dealerships, when costs of suspensions increase like they did January 1, 1991, you can still get "customers" by the "easy payment plan" advertising.

What do you think? Reader responses?

David Johnson
Middletown, CT

To the Editor:

Thomas Donaldson's review of *Great Mambo Chicken* made for astonishing reading. Donaldson complained that the book constituted "a parade of clowns," that part of its purpose was "to put down cryonics," and that its general tone was "Gee, guys, look at these weirdos!" Unfortunately the review advances no evidence whatsoever for its viewpoint, and indeed misrepresents the the book at every opportunity.

Donaldson claims that the book lacks "any serious arguments for the privatization of space flight." Since the book does not purport to offer any such arguments, it's odd to hear the alleged absence of them labeled as a shortcoming; nevertheless, Donaldson fails to mention what the book does contain on the subject, to wit: a three-page exposition of Bob Truax's criticism of NASA's space shuttle design philosophy, including a summary of Truax's own engineering results; a five-page description of the private launch service OTRAG, plus a separate description of another private launch vehicle company, AMROC; a long discussion of the anti-bureaucratic, anti-government L-5 Society; plus a five-page description of a private and inexpensive means for human migration out of the solar system.

Donaldson asserts that "We do not get any serious discussion of cryonics." But the book presents the following evidence in favor of cryonics: a description of the total body washout experiments done on animals; the frogs that freeze during winter and then revive again in the spring; a discussion of human births achieved by implantation of previously frozen zygotes; plus a summary of Alcor's findings in the postmortem autopsy of two cryonics patients. All this was explicitly presented as scientific evidence in favor of cryonics, but none of it was mentioned by Donaldson. The book reviews some of the usual arguments against cryonics, and in every

case presents answers to those arguments from out of the mouths of the principals in the cryonics movement. The book also presents a short history of cryonics plus a description of an actual suspension and its results. Is it accurate for Donaldson to claim, then, that "We do not get any serious discussion of cryonics?"

Furthermore, the book explores the deep connection between cryonics and nanotechnology, which is explicitly rendered as supporting the practical workability of cryonics, and whose presentation includes a four-page summary of Ralph Merkle's proposal for molecular repair of the brain. Donaldson, however, does not see fit to mention any of this.

Not only does he selectively omit evidence unfavorable to his view of the book, Donaldson also fails to present any evidence that anyone in it is portrayed as a clown or as a "weirdo." Not once does he provide an actual example of the clownish portrayals he claims to find everywhere. Not once does he present an actual quotation from the book. Contrary to the impression created by his review, the word "weirdo" does not appear anywhere in *Great Mambo Chicken*, nor does the phrase "end of the century hubris." (My own term was "*fin-de-siecle* hubristic mania.")

Since the book's publication, I have heard from many of those I wrote about, including Fred and Linda Chamberlain, Paul Segall, Robert Ettinger, Keith Henson, Ralph Merkle, Saul Kent, Mike Darwin, Hans Moravec, Frank Tipler, David Criswell, Christopher Langton, Robert Forward, Timothy Leary, and Freeman Dyson. Without exception, none of these

people has made any objection to my portrayal of them or their ideas, and in fact many of their remarks have been extremely complimentary. There *are* three individuals who it would be correct to say are presented in *Great Mambo Chicken* as clowns, namely two members of the Riverside County Coroner's Office (whom I refer to as Tonto and Kemo Sabe), and David Park, the physicist who in 1987 immortalized himself by claiming (and I quote): "Space Travel is bilge."

Donaldson claims that my "sly and wounding" technique is "to describe, whenever possible, the most foolish ideas and acts of their adherents." My book discusses a great many new and revolutionary ideas. Which of these does he find foolish, and why? And which of them reflect poorly on cryonics? Donaldson doesn't say.

Finally, Donaldson claims that "For Regis (or the Greeks) hubris is fundamentally *wrong*." As was true elsewhere in his review, Donaldson presents no evidence for this claim either, and so he gets this one incorrect too. My own view of hubris is: *I admire it*. I do not subscribe to the age-old Greek, and later Judeo-Christian, concept that pride goeth before a fall or that trying to be like the gods is evil and blasphemous. I am an atheist myself and see nothing wrong in striving after immortality, omniscience, or omnipotence. My attitude toward hubris is perhaps best expressed by Hans Moravec, whom I quote in the book as saying, "One day we'll see if the Greeks are right." And while Donaldson claims that "Regis would be the last one to want a systematic discussion of hubris," he makes no mention of the four-page discussion of hubris that's ac-

tually to be found in the book. Indeed, there is no sign that Donaldson has even read that discussion, or that he's looked at anything in the book other than the cryonics chapter.

Thomas Donaldson has a perfect right to dislike my book as much as he wishes; that's what makes horse racing. However, it's difficult to have any respect for a review that ignores much of what's in the book it aims to criticize, that misrepresents its actual contents, that fails to provide so much as *one* piece of evidence for, or *one* actual example of, the evil phenomena he professes to find everywhere within it, and then complains of being treated unfairly.

Sincerely,
Ed Regis

To the Editor,

I understand that Ed Regis has replied to my review; he was gracious enough to send me a copy of it. He also sent a personal letter. In that letter he gave me information which convinces me that my interpretation of his book was wrong. I therefore withdraw my criticism of it completely.

While I could say a number of things about the points he makes in his letter of reply, I will not do so, because I feel that the matter is settled. I hope that it will suffice simply to say that he and I exist on very different wavelengths, which led to mistaken communication. Thank you.

Thomas Donaldson

How Can You Help?

David Pizer

One cannot be close to the cryonics movement, especially at Alcor, and not observe that there is a strong desire by many members to want to help. When a member helps Alcor, they are also helping themselves. Personally, I feel that the stronger we can build Alcor, the better each of our personal chances are for survival.

There are many ways a member can help; some people volunteer to do work

that they have skills in, some people actively try to recruit others into the organization, and some people send money.

Many members make donations because they want to help others in our organization. They feel that they might be helping the patients in suspension and some of the other members that are not as fortunate as themselves.

The money that one donates not only

helps others; it also helps the person making the donation. There are several good reasons why the money a member donates now might be very helpful to themselves in the future.

1) Research Donation: If one donates money for research and we can improve the procedures that we use in doing a suspension, then when that person

deanimates in the future there is a better chance that his memory and personality will survive. The better we can prepare and freeze each member in the near future, the better the chances that we can revive them later.

2) Legislation and Litigation Donations:

Alcor has done pioneering work in protecting the rights of our patients and members. If a member donates to help in our legal battles, they increase the chances that we might be able to cut through red tape and save precious time when it is that member's turn for suspension in the future; and even more to the point, be able to place the member into suspension in the first place! Our victories in the legal arena, and other recent favorable publicity, have brought us more respect from hospitals, coroners, and officials, thereby gaining us more cooperation in critical situations. It is vital that we win the *Roe v. Mitchell* case and it is important that we win the Donaldson case. We need donations now so we can continue in these endeavors, and not have to cave in under the powerful financial might of the unenlightened bureaucracies.

In the future, we might want to litigate or introduce legislation to insure that a cryonicist's right to a speedy suspension takes precedence over the State's right to autopsy.

Although we try to avoid litigation to bypass making permanent enemies of various regulatory officials, there are times

when we are forced to defend ourselves. Donations in support of this litigation give us the ability to protect our rights when all other avenues of settlement fail. Lack of resources in this area could cause us to be unable to stop the state from imposing unfair and dangerous regulations on our members and patients.

3) Operating Fund Endowment: Only the interest generated by the capital in this fund is spent. It is used for operations, those expenses not related to patient care or research. Your donations to this fund are added to *capital*, thus generating interest income which we hope will in the long run grow to the point where we can operate more productively on a day-to-day basis. Right now, our staff is underpaid and we have already eliminated one staff position and made plans to further reduce the size of our payroll if necessary. I believe that a well paid adequate staff is to the benefit of all members. Alcor's board has already put \$400,000 into this Endowment Fund. We think that the long-term financial stability which this fund will provide makes it an intelligent investment.

4) Unrestricted Donations: Donations in this area allow us to use the money in areas of the program we think are most critical.

There are several ways a member can make donations: You can mail us a check and/or you can send us a pledge. Several

members have asked if a certain amount could be deducted from their bank account each month. We are not set up to do this at this time. However, you can direct us to make a regular charge to your credit card of a specified amount each month. Some of our members faithfully make donations by increasing the amount they write on their check when paying their dues (this is easy: we provide the envelope, you're sending a check anyway — just include a little extra for whatever you can afford).

Money that you donate to Alcor benefits you and cryonics in general. We are a nonprofit organization. The better we can make our suspension procedures and the more strongly we can establish the rights of cryonics, the better each person's chances are that cryonics just might work. The bottom line is that the more money we can raise now, the better the chances are that we might get to be reanimated some day!

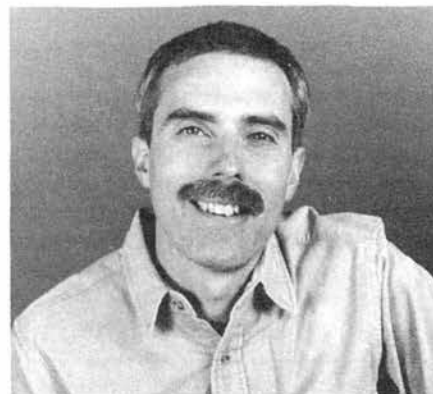
I urge every member who wants to help, to review his or her budget and let us know how you can help. For those who have been so generous in the past, I hope you will continue and all of us on the staff and board sincerely thank you and pledge that we will do our best to see that your donations are used in the best possible way to advance Alcor and all of cryonics.

Sincerely,
David Pizer, Treasurer

Cold War: The Conflict Between Cryonicists and Cryobiologists

Mike Darwin

Upon a two-thirds vote of the Governors in office, the Board of Governors may refuse membership to applicants, or suspend or expel members (including both individual and institutional members), whose conduct is deemed detrimental to the Society, including applicants or members engaged in or who promote any practice or application which the Board of Governors deems incompatible with the ethical and scientific standards of the Society or as misrepresenting the science of cryobiology, including any practice or application of freezing deceased persons in anticipation of the reanimation..." (emphasis added)



Introduction

For 25 years cryonicists and cryobiologists have been doing battle in the public eye. Some might scoff and call it hyperbole to dignify the verbal exchanges and skirmishes between cryonicists and

cryobiologists as "war." But war it is; for as in any war the cost has been the loss of lives, reputations, and fortunes. And as in war, the driving forces are envy, hatred, and a deeply-held belief that each side threatens the others' survival.

Twenty-five years is a long time for a war to continue. An entire generation has been born, and an older one died, since it began. Many of the early combatants are nearing the end of their lives... and still the battle goes on.

It is the purpose of this article to examine in detail the causes of the war, its history to date, and the likely outcome. The reader should be warned that this is a history written with a special set of prejudices. It is being written by one of the "generals" many years before the last shot is to be fired. As such, it must be scrutinized carefully and perhaps ultimately be set aside to await the passage of time and the objectivity and clarification that passing into history brings with it.

The Beginning

Cryobiologists and cryonicists were not always at war with each other. Indeed, many might question why there is a war at all between two groups of people with similar objectives and a common purpose: the development of mammalian suspended animation, or at least suspended animation for mammalian organs via cryopreservation.

The desire of cryonicists is to have available a technology which will allow them access to medical time travel (albeit one-way time travel) and cryobiologists are *the* most logical group of scientists capable of delivering that technology. At first glance these two groups should be natural allies, not enemies.

Logically, cryobiologists should have looked to cryonicists as a possible strong and unwavering source of support in achieving their research objectives, just as they *have* looked to the organ transplant community for such support. Certainly there are many examples in other areas of society and science where special interest groups have worked with researchers to develop technologies for which they have a deep need — even technologies which have theoretical problems standing in the way of their development.

Several examples of this kind of symbiosis between special interest groups and researchers come to mind. Consider the case of people who have suffered spinal cord injuries. Medical dogma was (and in

some quarters still *is*) that spinal cords do not regenerate, cannot regenerate, and will NEVER be induced to regenerate. Many individuals who were paralyzed as a result of cord injuries (wisely) refused to accept this and began to watch the medical literature closely for any work that might offer some hope. Naturally, there was some research which indicated that the situation was not as cut-and-dried as the establishment projected. By the early 1970s a number of research support groups founded by cord-injured patients came into being with one overriding objective: find a cure for spinal cord injuries.

These groups had names like the American Paralysis Cure Foundation and the Spinal Cord Society. They set about raising money to support research into methods for achieving regeneration and repair of the spinal cord that would lead to a cure. Overall, they found the relative handful of researchers working in this area very receptive to their concerns and more than willing to take their money. What they did NOT find was a group of researchers who were hostile, jeering, polarized, and ridiculing of their desire to walk again or of their belief in the potential of scientific research to unearth mechanisms of repair for central nervous system injury. And this despite the fact that decades of medical dogma asserted a contrary opinion.

Similarly, a variety of governments (both totalitarian and democratic) have shown a willingness to underwrite extremely costly research into areas which can even at best be described as "speculative" and fraught with theoretical as well as technical problems. Perhaps the best example of this is the four-decade-long commitment of both the United States and the Soviet Union to the development of thermonuclear or so-called "fusion" power. This undertaking, which is by no means merely an exercise in solving technical problems (there are many thorny theoretical problems here as well) has cost 20 billion dollars (worldwide expenditures) over a time course of 40 years and still has not yielded any clear answers as to whether it will ever be practical to generate even one watt of controlled power using this approach. Indeed, earlier this year, the American fusion community requested 700 million dollars per year (to continue more or less indefinitely) for more work on this problem (*Business Week* Oct. 15, 1990, pg. 62).

Perhaps an even more stunning example of governments' willingness to

work on projects which present substantial theoretical and technical obstacles and face strong opposition on theoretical grounds from a large body of establishment scientists is, the Strategic Defense Initiative or "Star Wars" program. Six billion dollars per year has been spent on this project for over five years, despite the vigorous objections of a plurality of well-informed and well-credentialed scientists in a variety of relevant disciplines — not to mention a vocal and well organized segment of the American public.

What happened between the cryobiologists and the cryonicists to cause such unreasoning enmity and a state of virtual war? What is different about the relationship of the cord-injured patient and researchers working on understanding central nervous system repair and cryobiologists and cryonicists? Why, if entities as conservative as governments are willing to underwrite multi-billion dollar projects in speculative science (and establishment physicists were willing to *take* such money) do cryobiologists run screaming from cryonicists? In short, what went wrong?

Enmeshed as I am in the heat of the battle on the opposing side, and given my life-long history of involvement as a cryonicist, I am distanced somewhat from the minds of the cryobiologists. Also, the critical first few years of the encounter between cryonicists and cryobiologists occurred before I entered the fray, indeed occurred from 1963 to 1967 when I was between 8 and 10 years old and hardly in a position to evaluate it. Nevertheless, that period of time is not without its "historical record," fragmented and anecdotal as it is.

Perhaps the first contact cryobiologists had with cryonicists was receiving, for review, copies of Robert Ettinger's manuscript for *The Prospect of Immortality*, circa 1963. Reaction to Ettinger's manuscript (and to the book which was published in 1964) was reportedly divided, but by no means universally hostile. Several cryobiologists who later became some of the most vocal critics of cryonics were not only *not* hostile, but actually demonstrated interest in and support of cryonics; particularly with an eye towards getting money to pursue cryobiological research.

Chief amongst these was Arthur Rowe (editor of *Cryobiology* and past President of the Society for Cryobiology), frequent repeater of the quote: "Believing cryonics could reanimate somebody who has been frozen is like believing you can

November 12, 1968

Dr. R. C. W. Ettinger
Cryonics Society of Michigan Inc
24041 Stratford
Oak Park, Michigan 48237

Dear Dr. Ettinger:

I wish to thank you for your letter of July 22, inviting me to join the Cryonics Society of America and to become a member of the Scientific Advisory Council. Please forgive me for the long delay in answering your letter as I have been on vacation, traveling, and I have also taken some time to deliberate seriously over your offer.

After careful and serious consideration of your proposals I find that it would be inopportune at this time for me to join and participate actively in the Cryonics Society. As Treasurer-Elect of the Society for Cryobiology, I must admit that my decision was strongly influenced by Dr. Arthur P. Rinfret, President-Elect of the Cryobiology Society, who has advised against joining and participating in the Cryonics Society.

Please believe that I have the greatest respect and admiration for you and your efforts in organizing the Society. I should appreciate very much being put on your mailing list and receiving correspondence pertaining to developments of the Scientific Advisory Council and the Society.

Sincerely yours,



Arthur W. Rowe, Ph.D.

turn hamburger back into a cow," and one of contemporary cryobiology's sternest critics of cryonics. (The origin of this quote is usually attributed to Peter Mazur, cryobiologist.) In a letter to Robert C.W. Ettinger dated 4 December, 1968, Rowe expresses interest in cryonics and wishes Ettinger "continued success in your endeavors." But perhaps more amazing still is the fact that in the summer of 1968, during the cryonic suspension of Steven Mandel by the Cryonic Society of New York (CSNY), Arthur Rowe was called by Saul Kent (then Secretary of the CSNY) and asked for cryobiological recommendations on how to better suspend Mandel. Not only was Rowe friendly and supportive during this conversation, he provided a considerable amount of advice (Saul Kent, personal communication).

As Saul Kent recounts:

"We were really unprepared to freeze Steven in that he was the first patient CSNY ever had and we had absolutely no warning whatsoever that he was terminally ill, let alone dying. When the call came in it was totally unexpected. The call came in the 28th of July, 1968. It was Sunday morning, and many of the people who were to participate were still asleep. Freezing someone was the last thing we were really



Peter Mazur



L: Michael Taylor, R: Art "Hamburger" Rowe

prepared to do.

I called Art Rowe to ask for basic advice. He had been friendly to cryonics in the past and I was hoping he might be able to make some recommendations or suggestions about what cryoprotectives to use, best temperature to perfuse at and so on. He (Rowe) was surprisingly forthcoming and friendly. He provided a fair amount of practical advice on just those issues, although now, with the passage of over 20 years, I don't recall the specifics.

Rowe continued to subscribe to *Cryonics Reports* and I believe there are several warm and supportive communications from him in the CSNY correspondence files."

Similarly, John Baust, past president of the Society for Cryobiology, had no deep objections to the program. Indeed, Baust even accepted grant money in the late 1960s from Texas millionaires Harlan Lane and Don Yarborough to support cryonics-related cryobiological research (John Baust, personal communication). Cryobiologist and heart-lung machine pioneer Richard Lillehei was also favorable toward cryonics and offered public support on at least one occasion (*Life Extension Society Newsletter*, Oct., 1964.)

Other evidence of the ambivalence and even the support of cryobiologists for cryonicists' objectives can be had by looking over the list of scientists present on the Scientific Advisory Council to the Cryonics Societies of America (CSA) as late as March of 1969. Present on that list are cryobiologists Hendrick B. Barner,



John Baust

August 23, 1965

Mr. Saul Kent
2083 Creston Avenue
Bronx, N. Y. #10453

Dear Mr. Kent:

Thank you for your note of August 8, 1965. I still cannot agree with you that the way to drum up interest in this area of research is to freeze humans at this time. While this may take advantage of the "sensational" aspects of the work, it is not in the long term the best way. Rather, I think we should go ahead, as I have said before, with continued research in the freezing of warm-blooded animals. I know that when we are able to freeze a warm-blooded animal and thaw him successfully, there will be few, if any, problems remaining for freezing humans. Thus, it would seem to me premature to freeze humans at this time until we are able to revive some of the warm-blooded animals.

We do desperately need more funds for research in this area, not only from the Government, but from private sources as well. I hope that your Society, in its own way, can stir up interest in this area, although I do not agree that the path you have taken is necessarily the correct one. However, I do respect your point of view, as, I am sure, you do mine.

With regards.

Sincerely,

Richard C. Lillehei, M.D.
Associate Prof. of Surgery

M.D., Armand M. Karow, Jr., Ph.D., William G. Manax, M.D., James A. Miller, Jr., Ph.D. and Richard D. Rink, Ph.D.

Armand Karow early in his career not only accepted grant money from the Cryonics Society of New York (CSNY), but even wrote a regular column for CSNY's newsletter entitled "Scientifically Speaking" for nearly two years (cf. *Cryonics Reports* vols. 1 & 2, 1966-1967).

While it would be unfair to say that cryobiologists as a group were ever supportive of cryonics, it is very clear that they were not uniformly hostile, either.

Outside of the cryobiological community the response to cryonics, while equivocal, was considerably warmer. The CSNY archives contain letters expressing interest and support from the likes of Willem Kolff, M.D. (the inventor of the artificial kidney machine and the father of

modern hemodialysis) (letter from W.J. Kolff to Saul Kent dated 26 August, 1965) and Adrian Kantrowitz, a leading innovator in early cardiac surgery and heart transplantation (letter from A. Kantrowitz to Saul Kent dated 27, 1965).

Polarization

Apparently, though, over the course of a few years cryobiologists became, as a group, increasingly polarized against cryonics. Initially this polarization was expressed simply in terms of more and more vocal and extreme anti-cryonics statements to the media. By late 1969 or early 1970 all of the cryobiologists on the CSA Scientific Advisory Board had been approached by one or more of their colleagues in the Society for Cryobiology and pressured to resign their positions. In particular, Ar-

March 20, 1967

Mr. Saul Kent
Corresponding Secretary
Cryonics Society of New York, Inc.
306 Washington Avenue
Brooklyn, N. Y. 11205

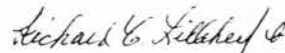
Dear Mr. Kent:

Thank you for sending me a copy of "Description of the Method for Freezing Humans," by Dante Brunol, M. D. I found his descriptive method quite interesting, yet I cannot help but return to the theme which I have previously written to you about. That is, these techniques, as described, are all "arm chair" techniques which should be worked out in the laboratory on experimental animals.

On page 2, Dr. Bruno makes a statement which I certainly agree with. "In my opinion, it has never been successfully done (referring to the freezing of a large animal) not because of impossibility, but merely because of lack of financing". This is certainly true. I would think that your Cryonic Society could make much more progress toward the eventual successful freezing of man, if they would devote their efforts to fund raising for support of laboratories engaged in research on the freezing of organs and animals. There is presently an acute shortage of funds, with no agency of the Public Health Service funding such studies at the moment. Thus your Societies could provide the impetus not only to raise funds but to bring to the public's attention the lack of support for research in this area. I am certain that with the proper funding in the next 10 years, it will be no longer necessary to indulge in arm ^{chair} speculation about how a person should be frozen, but that it will be done, with a good scientific background that successful thawing can also be done.

Again, many thanks for sending me your protocol for freezing.

Sincerely,

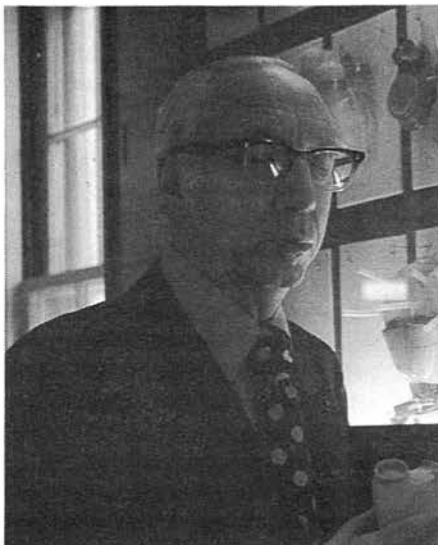


Richard C. Lillehei, M. D.
Professor of Surgery

mand Karow was chastised for listing the Cryonics Society of New York as a financial supporter of his research on rat heart freezing, as well as his involvement with CSNY. Karow once expressed his opinion to the author that he "was passed over for a position on the Editorial Board of the Society's journal *Cryobiology* because of his association with cryonics." Karow followed these remarks with an observation to the effect that he had "learned his lesson" and did not intend to get tangled up with cryonicists again (Armand Karow, personal communication).

War

By the late 1970s and early 1980s, prominent individuals within the cryobiological community began to take steps to destroy cryonics. Perhaps the first effort in this regard was made by Harold Meryman, then president of the Society. Meryman reportedly approached Minnesota Valley Engineering (MVE), the cryogenic engineering company and manufacturer of the custom storage vessels for whole body patients, and threatened them with loss of their institutional membership and refusal of their advertising in the Society's journal, as well as a boycott of purchase of their equipment unless they stopped supplying patient storage vessels to cryonicists. MVE complied, and for nearly a decade there was no reliable commercial source of whole body cryogenic equipment available to any cryonics organization anywhere (this information was supplied to the author in the late 1970s by



William Kolff

Photo: Saul Kent

CLEVELAND CLINIC

4020 EAST 93RD STREET
CLEVELAND 6, OHIO

DEPARTMENT OF ARTIFICIAL ORGANS
WILLEM J. KOLFF, M.D.

August 26, 1965

Mr. Saul Kent
Cryonics Society of New York Inc
103-55 97th Street
Ozone Park
New York 11317

Dear Mr. Kent:

I have enjoyed previous publications that you have sent to me. Good luck. Please keep me informed and keep sending me your other publications.

Sincerely yours,



W. J. Kolff, M.D.

WJK:jb

an individual in MVE management who wishes to remain anonymous). Indeed, it was in part as a result of this storage unit embargo that Robert Ettinger and the Cryonics Institute launched their program to build patient dewars in-house so as to be protected from such manufacturer black-listing.

In April of 1980, cryobiologist Maxim Persidsky wrote a letter to the California Board of Funeral Directors and embalmers urging the destruction of cryonics (letter from M. Persidsky to Kathleen Callanan dated 21 April, 1980). Persidsky's letter is interesting in that it shows the mind of a hostile cryobiologist at work in a way rarely publicly seen. Persidsky's letter lay undiscovered for 10 years until it was obtained, and then only with great difficulty, under the California Freedom of Information Act during litigation with the California Department of Health Services to establish the legality of cryonics in California. The letter is reproduced in full elsewhere in this article, but the following quote is instructive:

"I can't find the proper words to express my indignation about this gruesome practice, or rather cult, which has continued to persist for more than a decade. There is absolutely no scientific justification to expect that these frozen corpses can ever be resurrected regardless of any future scientific achievements. With our present knowledge we can clearly realize the extent of the irreparable damage that

ADRIAN KANTROWITZ, M. D.
4802 TENTH AVENUE
BROOKLYN 16, NEW YORK

DIRECTOR OF SURGICAL SERVICES
MAIMONIDES HOSPITAL OF BROOKLYN
PROFESSOR OF SURGERY
STATE UNIVERSITY OF NEW YORK
COLLEGE OF MEDICINE


August 27, 1965

Mr. Saul Kent
Cryonics Society of New York Inc.
2083 Creston Avenue
Bronx, New York 10453

Dear Mr. Kent:

Thank you for your note of August 20th with the enclosed material. It seems to me that the aims of your Society are indeed worthy. However, I do not know at the present time of any method which has been demonstrated to achieve your purpose. There are in fact enormous difficulties that must be overcome before it will be possible to store a complete organism. Indeed there are great difficulties in storing individual cells, although this has been accomplished for long periods of time. Our own experiences in the laboratory have been attempts at storing a single organ, such as a kidney or a heart, and we have successfully done this for as long as 12 hours. However, to do it indefinitely would raise enormous problems. In the long run I am not quite sure that this is a reasonable solution to the problems of disease. At any rate I admire your courage and wish you the best of luck.

Sincerely yours,



Adrian Kantrowitz, M.D.

AK:bcc

Dictated but not read


Mr. Saul Kent

NMRI-022-ecb
3900

As you can see, I have no particular quarrel with your ambitions other than that you are more optimistic than the facts warrant. The goal of freezing and resuscitating intact mammals is certainly the natural ultimate of applied cryobiology, although this does not necessarily imply that it is also achievable. In particular, the preservation of the labile constituents of cerebral function, particularly memory, poses a challenge many orders greater than the freezing and thawing of any other tissue in which millions of cells perform identical functions and where substitution, repair, and replacement make injury and partial loss tolerable.

I do have one major apprehension and this is the probability of exploitation of this proposal by commercial interests at the expense of a gullible public, mesmerized by the apparent ability of science to work miracles. The opportunities for profit in the provision of cryogenic burial facilities are enormous, exceeded only by the temptation for fraud. Your society will face opposition from many sides and will also attract its share of unstable personalities. I hope that in your enthusiasm and your need for support you will not find yourself supporting questionable commercial practices and organizations on the premise that any ally is better than none.

Very sincerely yours,



H. T. MERYMAN, M. D.
Biophysics Division



Harold Meryman

2100 Webster Street
San Francisco, CA 94115
415 363 2371

Ms. Kathleen Callanan
Executive Secretary
Board of Funeral Directors and Embalmers
Department of Consumer Affairs
State of California
1021 O Street
Sacramento, California 95814

April 21, 1980

Dear Ms. Callanan:

I am responding to your letter of April 9, 1980, in which you asked for my opinion as a cryobiologist concerning the practice of cryonics involving freezing and low temperature storage of dead human bodies, and the claims that revival of these bodies in a distant future may be possible.

I can't find proper words to express my indignation about this gruesome practice, or rather cult, which has continued to persist for more than a decade. There is absolutely no scientific justification to expect that these frozen corpses can ever be resurrected regardless of any future scientific achievements. With our present knowledge we can clearly realize the extent of irreparable damage that could be inflicted on the human body if it were subjected to freezing even under the most sophisticated conditions that current science can offer. However, even before freezing there will be irreversible damage to the brain and other vital organs resulting shortly after death. This damage will be further amplified during the inevitably slow processes of perfusion with cryoprotective agents and cooling. Very soon after death there will be a breakdown of lysosomes in the different cells and tissues of the body, resulting in the release of their harmful enzymes which will digest all the cellular structures and macromolecules upon which life of the cell depends. No future improvements in the techniques of thawing could ever repair disintegrated cells or the denatured or digested proteins and DNA molecules.

Prompted by success in cryopreservation of certain single cells in suspension, there have been numerous attempts during the past two decades to preserve organs such as kidneys at low temperatures. So far all have ended in total failure. In the early seventies we were optimistic in our predictions that it would take not more than a decade to resolve this problem, and that banking of frozen organs would become a routine practice. Today, after we have exhausted testing of most of the known experimental conditions and variables, we have come to realize how enormous are the problems associated with the preservation of organs alone. It is my belief that the attempts to preserve corpses in anticipation of possible future revival are completely futile scientifically and totally immoral in view of anguish, false expectations and useless monetary losses by relatives of the deceased.

Recently, an attorney, Michael Worthington, has informed me of corrupt practices by the Southern California groups at a cemetery facility at Chatsworth. Here are quotations from his letter to me:

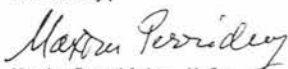
"On March 3, 1980 I personally observed the desecration that was left by the defunct Southern California groups at a cemetery facility in Chatsworth. The occasion was my inspection of human remains that were left to thaw in the 'cryatorium' at Oakwood Memorial Park. Dr. Gen Niyama of the Glenview Pathologists Group at David Brotman Memorial Hospital in Culver City accompanied me on this investigation. He related to me on the trip out to Chatsworth that he was formerly a member of the Society for Cryobiology. You might telephone Dr. Niyama (213) 836-7000 ext. 2816 for further details on the grisly scene that he observed. . . .

"Each of the bodies that we inspected had been perfused or embalmed in a different manner, indicating that they were used for purely experimental purposes. This reckless type of experimentation cannot be tolerated in a civilized society. . . .

"The Northern California organizations have formed a life insurance program whereunder payments of Fifty Thousand Dollars (\$50,000.00) or more are made directly to them in the event one of their so-called 'suspension members' dies. There are well over One Hundred (100) such members in California alone. There are numerous similar groups in other states, but Trans Time, Inc. in Berkeley is the only entity that actually performs human suspensions. The longer this goes on, the more likely it is that the cryonics organizations will abscond with all of the money and abandon human remains entrusted to their care."

In conclusion, I would like to see these organizations thoroughly investigated and their illicit activities quickly brought to a stop.

Sincerely,


Maxim Persidsky, M.Sc.
Director, Department of Cryobiology
Heart Research Institute

could be inflicted on the human body if it were subjected to freezing even under the most sophisticated conditions that current science can offer. However, even before freezing there will be irreversible damage to the brain and other vital body organs resulting shortly after death. This damage will be further amplified during the inevitable slow processes of perfusion with cryoprotective agents and cooling. Very soon after death there will be a breakdown of lysosomes in the different cells and tissues of the body, resulting in the release of their harmful enzymes which will digest all the cellular structures and macromolecules upon which life of the cell depends."

It is interesting and more than a little ironic to note that *fifteen years* prior to the time that Persidsky wrote the words above, a large and growing body of evidence was already present in the scientific literature to discredit the "suicide-bag concept" of lysosomal rupture resulting in destruction of cells shortly after so-called death. I cite below four papers debunking this notion:

Trump, B.F., P.J. Goldblatt, and R.E. Stowell, "Studies of necrosis *in vitro* of mouse hepatic parenchymal cells; ultrastructural and cytochemical alterations of cytosomes, cytosomes, multivesicular bodies, and microbodies and their relation to the lysosome concept," *Lab. Invest.*, 14, 1946 (1965).

Ericsson, J.L.E., P. Biberfeld, and R. Seljelid, "Electron microscopic and cytochemical studies of acid phosphates and aryl sulfatase during autolysis," *Acta Patho Microbio Scand*, 70, 215 (1967).

Trump, B.F. and R.E. Bulger, "Studies of cellular injury in isolated flounder tubules. IV. Electron microscopic observations of changes during the phase of altered hemostasis in tubules treated with cyanide," *Lab Invest*, 18, 731 (1968).

Eight years before Persidsky pronounced the situation hopeless due to lysosome rupture after death, an excellent and exhaustive paper appeared, entitled "Lysosome and phagosome stability in lethal cell injury" (Hawkins, H.K., et al., *Amer. Jour Path.*, 68, 255 (1972)). The authors subjected human liver cells in tissue culture to lethal insults such as cyanide poisoning and then evaluated them for lysosomal rupture. They state: "In conclusion, the findings do not indicate that the suicide bag mechanism of lysosomal rupture prior

to cell death was operative in the two systems studied. On the contrary, the lysosomes appeared to be relatively stable organelles which burst only in the post-mortem phase of cellular necrosis." And when does this "post-mortem phase of cellular necrosis" occur? Again, to quote from the Hawkins paper: "As late as four hours after potassium cyanide and iodoacetic acid poisoning, where irreversible structural changes were uniformly seen, it was clear that the great majority of lysosomes continued to retain the ferritin marker within a morphologically intact membrane..." To translate: even four hours after poisoning with drugs that mimic complete ischemia, the cells had stable lysosomes.

Perhaps even more to the point, in the decade prior to Persidsky's statements to the California Board of Funeral Directors and Embalmers, there was a veritable explosion of studies on the effects of complete ischemia (completely absent blood flow) on the mammalian brain. These studies documented not only the persistence of brain ultrastructure right down to the macromolecular level of which Persidsky speaks, but also of the preservation of brain *function* even after as much as *an hour* of no blood flow at normal body temperature. Even a cursory review of the literature would have revealed papers documenting the persistence of brain cell structure over the time-course of an hour or more of cardiac arrest. Here are two of the best of *many* papers that appeared over a time course of more than a decade before Persidsky wrote the words above:

Kalimo, H., et al., "The ultrastructure of brain death II. Electron microscopy of the feline cerebral cortex after complete ischemia," *Virchow's Arch. B Cell Path.*, 25, 207 (1977).

Karlsson, U., and R.L. Schultz, "Fixation of the central nervous system for electron microscopy by aldehyde perfusion. III. Structural changes after exsanguination and delayed perfusion," *Ultrastruc. Res.*, 14, 47 (1966).

The same is also true for papers documenting the preservation of the ability of the brain to recover metabolism after up to an hour of total cerebral ischemia. Largely beginning with the publication of a paper by Hossman and Sato in *Science* on 17 April, 1970 (Hossman, R.A. and K. Sato, "Recovery of neuronal function after

prolonged cerebral ischemia," *Science*, 168, 375 (1970)) which documented that so-called cell death did not occur until long after the return of circulation following a period of *one hour of absent blood flow at normal body temperature*, the literature exploded with papers on the effects of cerebral ischemia and the field of cerebral resuscitation was born. A small sampling of papers published in the preceding decade giving the lie to Persidsky's claims is cited below:

Okada, Y., "Recovery of neuronal activity and high energy compound level after complete and prolonged brain ischemia." *Brain Research*, 72, 346 (1974).

Hinzen, D.H. et al, "Metabolism and function of dog's brain recovering from long-time ischemia." *Amer. J. Phys.*, 223, 1158 (1972).

Hossman, K.A., and V. Zimmerman, "Resuscitation of the monkey brain after 1 hour complete ischemia." *I. Physiological and morphological observations.* *Brain Research*, 81, 59 (1974).

Rehncrona, S., et al, "Recovery of brain mitochondrial function in the rat after complete and incomplete cerebral ischemia," *Stroke*, 10, 437 (1979).

Hossman, K., and P. Kleihues, "Reversibility of ischemic brain damage," *Arch. Neurol.*, 29, 375 (1973).

Apparently Persidsky, like his colleagues, felt no need to get the facts before speaking out and urging that "...I would like to see these [cryonics] organizations thoroughly investigated and their illicit activities brought to a halt." Nowhere in his letter does he provide any references or other documentary evidence for his claims of "irreparable damage" as a result of freezing, let alone for his statements about the rapid post-mortem disintegration of cell structure.

Persidsky's scandalous statements reflect a total lack of respect for cryonics and are evidence of an out-of-hand dismissal based on personal prejudices without any recourse to the scientific literature which existed years before his statements were made. Nor is Persidsky alone in this kind of remarks. Even today it is not uncommon to hear cryobiologists and medical and scientific "experts" make the same kind of statements. It is extremely unlikely that Persidsky or his colleagues

would make statements regarding claims or assertions they considered in the realm of the "scientific mainstream" without careful recourse to the scientific literature first.

No doubt Persidsky never dreamed his letter would see the light of day. And, but for the California Freedom of Information Act and the efforts of Alcor member Keith Henson, it would not have.

By October of 1981, the Society as a whole had developed a very hard attitude toward cryonics and was even willing to commit it to print, as evidenced by their denial of membership in the Society to cryonicists and/or cryonics related organizations simply because of their involvement in or association with with cryonics (letter to Jerry Leaf from Harold Meryman, 5 October, 1981). By April of 1982 the Society was actively investigating ways to formally exclude cryonicists from its ranks (letter from Mary Douglas to Terrance J. Leahy, 20 April, 1982).

Word that an effort was underway to ban cryonicists, principally by the mechanism of revising the Society's bylaws, was leaked from the Society to cryonicists. Many of the internal communications which provide the documentation for this article were made available to the editors of cryonics publications, and thus passed into the hands of the leaders of the cryonics community.

Jerry Leaf, a member of the Society for Cryobiology, a cryonicist, president of Cryovita Laboratories (a major cryonics service provider) and a Research Associate at the University of California at Los Angeles (UCLA) made an effort to derail these proposed bylaw changes. He attended the Society's annual business meeting on 1 July, 1982 in Houston, Texas where it was anticipated the new bylaws would be enacted. Despite the fact that there was not a quorum of the Society's directors present, Harold Meryman (then the Society's president) moved that the new bylaws be enacted, stating that "since we are all friends the absence of a quorum is not important." Jerry Leaf objected to this and argued against adoption of the new bylaws and the "Policy Statement On Cadaver Freezing." Jerry pointed out that the new bylaws would strip the membership of many rights they held under the old bylaws and the Policy Statement was premature, since the results were still not in on the issue of the workability of cryonics.

Jerry's efforts resulted in the Society deciding to mail out ballots for approval of

the new bylaws; in effect giving the Society's entire membership the opportunity to decide the issue. On 3 August, 1982, a communication written by Jerry Leaf was mailed to the membership of the Society for Cryobiology explaining the unfairness of the proposed actions and urging them to vote "no" on the new bylaws and Policy Statement.

On 15 September, 1982, section 2.04 of the Society's bylaws took effect, denying membership and allowing expulsion of any existing member who is engaged or engages in "any practice or application of freezing deceased persons in anticipation of their reanimation." The bylaws passed by an overwhelming majority, confirming that the desire to exclude cryonicists from membership in the Society was broadly held, and did not represent the arbitrary imposition of the will of the Society's leadership on its membership.

Why?

I have talked with two cryobiologists unfriendly to cryonics about this issue and neither of them are able to pinpoint with certainty what the specific reasons were for this hardening of attitude.

One cryobiologist sympathetic to cryonics does have an opinion about what caused the formal polarization of cryobiologists against cryonicists. In particular, this cryobiologist feels that formal, administrative attempts to exclude cryonicists from the Society and attempt to publicly distance themselves from cryonics came about as a result of something this author did.

During 14-18 June, 1981, this author attended the Society for Cryobiology's meeting in St. Louis, Missouri. During the course of that meeting I had occasion to speak with Jerome K. Sherman, a cryobiologist who was at that time active and influential in the Society and who was chairing a session on gamete preservation at the meeting. Since we had corresponded briefly in the past, he knew who I was and the course of our discussion turned to cryonics. Sherman was fascinated by what I had to say and, much to my surprise, at the end of one of the sessions he chaired, he announced my presence and *solicited* a presentation on cryonics. Since I was giving cryonics presentations to others (not associated with the Society) in the area, I had a slide presentation documenting cryonics procedures. Sherman encouraged me to return to my room and retrieve it so that it could be used to ac-

company my presentation.

The 15 or so attendees were fascinated by the presentation I gave, which included a detailed series of slides showing how cryonic suspension was done, surgical approach used, cryoprotective protocol, and so on. The presentation seemed well received, and Sherman as well as half a dozen or so other cryobiologists stayed for nearly an hour afterward asking questions about every aspect of cryonics.

However, according to the cryobiologist informant who attributes to this episode the formal hardening of the Society for Cryobiology against cryonics, the repercussions from this incident were far-reaching. Rumors about the presentation — often wildly distorted rumors — began to circulate. One particularly pernicious rumor, according to this informant, was that my presentation had included

graphic photos of "corpses' heads being cut off." This was not the case. Surgical photos which *were* shown were of thoracic surgery to place cannula and would be suitable for viewing by any audience drawn from the general public.

This informant also indicates that it was his perception that this presentation caused real fear and anger among the officers and directors of the Society. They felt as if they had been "invaded" and that such a presentation given during the course of, and thus under the aegis of, their meeting could cause them to be publicly associated with cryonics. Comments such as "what if the press got wind of this," or "what if a reporter had been there" were reported to have circulated.

Also, the presentation may have brought into sharper focus the fact that cryonicists existed, were really freezing people, and that they were using sophisti-



DEPARTMENT OF ANATOMY

UNIVERSITY OF ARKANSAS
MEDICAL CENTER
LITTLE ROCK

NOV 1 / RECO

SCHOOL OF MEDICINE
SCHOOL OF NURSING
SCHOOL OF PHARMACY
UNIVERSITY HOSPITAL

14 November 1967

Mr. Saul Kent
Cryonics Society of New York
306 Washington Avenue
Brooklyn, New York 11205

Dear Mr. Kent:

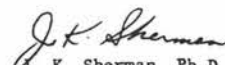
I am a cryobiologist whose long research experience has imposed a continued skepticism of the purposes of the Cryonic Society and Life Extension movements, based upon available research information, not theoretical possibility. Lately, I have noted statements like "Cryonic research is the key to the growth of cryonics" (Cryonics Reports Vol. 2, No. 7, p. 5, July '67) which stress research as an aim, or better, the foundation of progress in cryonics.

The purpose of my letter is to test the sincerity of your society's attitude toward research. The federal government, especially NIH and the Navy, has severely cut back support for the growth of basic research. This has affected all areas including cryobiology. My own research program has been hurt by it, as supplements have been approved and left dormant because of no funds.

Now, if your society really has interest in research in cryonics, it should be ready to provide it with support. How much financial support can the Cryonics Society grant to me and to others who are pursuing research on the very problems vital to answering questions of technique in Cryonic Society movements?

As a founding member of the Society for Cryobiology and former member of its Board of Governors, I am most anxious to receive your reply.

Sincerely yours,


J. K. Sherman, Ph.D.
Professor

cated procedures borrowed from medicine, and yes, even from cryobiology, which could cause confusion between the "real" science of cryobiology and the "fraud" of cryonics in the public eye. More to the point, it was clear that cryonicists were not operating in some back room and mumbling inarticulately; they were now *right there in the midst of the cryobiologists* and they were anything but inarticulate, bumbling back-room fools.

The Enemy Within

In the informant's mind this made taking some action a real priority. I might also add my own perception that it was around this time, or shortly thereafter, that many of the Society's officers and directors became aware of something even more potentially threatening: namely, that several of their own number were "closet" cryonicists, and, what's more, were influential and active in the cryonics community.

Two cryobiologists in particular (one of them the informant I have previously cited) posed a special concern in this regard. For not only were these individuals cryonicists as well as cryobiologists; they were path-breaking, high-profile cryobiologists who were beginning to contribute enormously to cryobiology in general and, even more alarmingly, were beginning to become influential in the leadership of the Society.

The attitude of the Society and some of the reasons for it can perhaps be put into perspective best by examining what occurred in June of 1985, when the Society sponsored a panel on "Ethical Considerations and Applications of Cryobiology" at its annual meeting in Madison, Wisconsin. A major focus of this session was a rabid attack on cryonics, using as "evidence" of cryonicists' wrong-doing and incompetence a number of newspaper stories which had been copied onto transparencies and projected for the attendees to see. John Baust chaired the session and Harold Meryman of the Red Cross Blood Research Laboratory (Bethesda, MD) delivered the most vituperative attack. Meryman cited the newspaper articles as evidence of fraud and wrongdoing by cryonicists and further indicated that the activity of cryonicists was damaging not only the public, but the discipline of cryobiology as well. That these articles might be inflammatory and inaccurate was never considered as a possibility.

A number of cryonicists were in the audience for part or all of this presentation including Paul Segall, Jerry Leaf, Hugh Hixon and myself. Segall, Leaf, and I vigorously defended cryonics against the half-truths of the media articles (the worst of which had been selected by Meryman for presentation) and attempted to set the record straight. This was to no avail, with many of the younger members of the Society lashing out at the cryonicists and accusing them of wild fantasies and "science fiction schemes." In response to a statement by the author to the effect that "cryonicists are counting on repair capabilities, on the ability to engineer at the molecular level," one nameless cryobiologist jeeringly shouted, "That will never happen; pure science fiction!"

The rest of the meeting was made as unpleasant as possible for cryonicists attending it, with most of the delegates refusing even to speak to or sit with (at dinner) the cryonicist attendees. One notable exception was cryobiologist Locksley McGann, who had the courage to approach Jerry Leaf and myself and express his regret for the way in which his colleagues handled themselves and the issue of cryonics at the "bioethics" session at the opening of the meeting. McGann was at pains to point out that he did not consider cryonics workable. But he also stated that he felt that we were sincere in our beliefs and that no one, including the Society, benefited from the kind of exchanges that had occurred earlier or the kind of treatment we were receiving at the meeting. Similar sentiments were expressed by J.K. Sherman.

The Madison meeting made clear that cryobiologists were not only not interested in establishing a dialogue with cryonicists, they were not interested in becoming even marginally informed about how cryonics works and why cryonicists think it a rational thing to do.

But beyond this particular incident, it is clear that the Society had a long history of less focused enmity toward cryonics. What was responsible for this enmity and lack of cooperation between cryonicists and cryobiologists? The answer is: a lot of things.

One major difference between the examples of speculative scientific research cited previously (spinal cord repair, fusion power, and SDI research) is that none of these undertakings involve commitment to taking any action now beyond paying for the research. For example, researching the problem of how to fix spinal cords doesn't

mean that cord-injured patients should be treated differently today.

(This is not strictly the case, as many cord-injured patients and the researchers and support groups driving them have recently begun to emphasize the need to protect such patients from muscle atrophy and tendon contracture which will occur; the rationale being that such changes cause permanent damage to limbs which may limit or prevent recovery if and/or when a paralysis cure is discovered.)

Need For Action Now

Cryonics involves altering the care of terminally ill patients *now, today*, in a very radical way; a way that challenges a variety of deeply held convictions and assumptions about matters of life and death. It also involves considerable expenditures and inconvenience for the person deciding on suspension, as well as for his/her family or friends.

Such bold action, which breaks with conventional mores on fundamental issues and challenges accepted medical criteria, is bound to provoke strong emotional reactions and much knee-jerk criticism. To take a position of advocacy for cryonics thus implies the need not only for foresight, but for *courage*.

As with any fundamental shift in world-view, early acceptance is not very likely. The history of science and technology is littered with the broken hearts and broken minds of individuals and groups who challenged the accepted "paradigm." Many examples come to mind; Robert Goddard was publicly ridiculed for his rocketry research and for his assertion that travel to the moon should be technically feasible (*Robert H. Goddard: Pioneer of Space Research* by Milton Lehman, DaCapo Press, Inc., New York, 1963). The work of Semmelweis and Lister with antiseptics was vilified and it was over two decades after Lister introduced the concept of antiseptics in England before it was widely practiced in the United States (*The Biography of Medicine* by Sherwin B. Nuland, Alfred Knopf, Inc. New York, 1988).

Need For Courage and Foresight

For cryobiologists to have taken a position of advocacy for cryonics, or even for them to have accepted money from cryonicists (and suffer guilt by association) would have required enormous moral

courage *in addition* to enormous foresight. Or it would have required enormous financial/professional benefit as compensation. Several cryonicists who have been around since the inception of the program in the mid-1960s are convinced that either support from — or at least the critical silence of — cryobiologists could have been had if only the program had grown large enough to generate significant revenue to support mainstream cryobiological research (Saul Kent and Robert Ettinger, personal communication).

Certainly a number of mainstream cryobiologists, some of whom were then or are now in influential positions in the Society for Cryobiology, were willing to accept research dollars from cryonicists for cryonics-related objectives and even to provide advice or lend their name to support the program (i.e., John Baust, Armand Karow, and Arthur Rowe). Some cryobiologists, such as Jerome K. Sherman, even offered complex research proposals to cryonicists to evaluate the efficacy of current suspension techniques and work on ways to improve them (Research proposal of J.K. Sherman to Robert Ettinger, as reported in *The Outlook*, p. 5, September, 1974). Unfortunately, the small size of the cryonics movement and the lack of research dollars prevented such support, causing the proposal to be turned down (*The Outlook*, p.5, October, 1974).

(*The Outlook* was the newsletter of

the Cryonics Society of Michigan (CSM) published starting in January of 1970. It is currently published under the name of *The Immortalist* by CSM's successor, The Immortalist Society/Cryonics Institute of Oak Park, Michigan.)

All of the Disadvantages

This situation left cryobiologists in a very interesting position. They were faced with all of the disadvantages of cryonics with no perceived or actual benefit. And there were plenty of disadvantages.

First there was the problem of the media. Cryonics, even under the best of circumstances, was bound to attract plenty of attention and not all of it favorable. Many people, both inside and outside of the medical and scientific establishments, find the very notion of cryonics macabre and gruesome (even leaving neurosuspension out of it). Further complicating the situation was the crude state of cryonics in the 1960s. Suspensions were hardly comparable to medical procedures and the image of most of the cryonics organizations in existence at that time was a non-professional and amateurish one at best.

Since cryobiologists and cryonicists do have similar objectives, there is often confusion in the public mind between the two. It has been our experience here at Alcor that members of the public often first contact the Society for Cryobiology

or individual cryobiologists seeking information on cryonics. This puts cryobiologists in the position of frequently having to clarify and distance themselves from the activities of the "body freezers" whom they consider pseudoscientific, irrational, and possibly fraudulent, and thus with whom they have no desire to be associated.

There is also the problem of the defiance and challenge to authority that cryonics represents. In the early days cryonicists came to cryobiologists in a friendly, open way looking for support and asking for advice and help. Within the space of a few years cryobiologists began to tell cryonicists, in no uncertain terms, that they should not be doing what they were doing (i.e., freezing people using unperfected techniques). Several cryobiologists were even forthright enough to say that they would cease to have a problem with cryonicists if we would "just stop freezing people and instead work on the problem of developing suspended animation by supporting basic cryobiological research."

But cryonicists didn't listen. They continued to place themselves into suspension and vigorously pursue a program of public education aimed at expanding their program. In short, they failed to obey the authorities.

To be continued next month. . . .

For the Record

The Second "Certainty" and Similar Constraints

Michael Perry

"Death and taxes," so the old saying goes, "are the only two certainties in life." We in cryonics, of course, are trying to change that, to make the "certainties" not so certain. Most of our effort is directed toward category one, death, and that is as it should be, for now. However, along with quantity of life, we also desire quality. Today we live in a world governed by scarcities of one sort or other; thus it has

always been, though the scarcities have varied. It has been remarked that some form of scarcity will always be with us due to features of human nature that are not likely to change even as we evolve into trans- or post-humans. This may well be so. Perhaps it will be necessary even, to give life meaning. Nevertheless, I think certain scarcities could realistically be eliminated, and that their elimination will

help make the future more "worth coming back to."

What particular scarcities do I have in mind? Those connected in a very basic way with physical survival, such as food, shelter, and life-saving medical care (if needed). In short these are things that today require *money*, and it is really the elimination of the *need* for money, at the basic level of survival, that I am proposing



as a future goal. (With no money one will pay no taxes, thus erasing that second certainty.) In other words, I think a future economy is constructible in which it will not be necessary to "work," in the sense of donating substantial labor to someone else or some institution outside of oneself. One should still be able to continue to live and, by our standards at least, live well. This is not to say that money and labor (or even taxes) will necessarily be eliminated, just that they should not be the necessary accompaniments of survival that they are today. (Actually, they are not quite "necessary"; one can live on welfare but this is a poor way to exist and robs others of the fruits of their labor without compensation.) One possibility might be a sort of "automated welfare state," based on the "slave" labor of machines designed for the purpose (who of course will have no sense of being "disadvantaged.") If this seems forbidding, perhaps the "state" part could be eliminated by providing each person with self-repairing robots or some other mechanism designed to provide basic sustenance.

The above ideas are hardly original with me, but have been elaborated at various times by science fiction writers and others who like to speculate about the future. Among the pioneers of cryonics, both Ettinger and Cooper had interesting things to say about automated economies. Ettinger, for example, in *The Prospect of Immortality*, (Doubleday hardcover ed., pp. 106ff) comments:

"Everyone who reads the papers or watches TV knows by now that, whereas the first industrial revolution involved the replacement of human and animal muscle by machines, the second industrial revolution, now barely beginning, rests on the replacement of human brains by machines. ...

"The invention of thinking machines, of automata with genuine intelligence, will of course have an importance difficult to exaggerate, quite aside from the prospect of immortality. This invention will obviously be in one sense the most important ever made, since it is equivalent to a magic

lamp from which will stem other wonders without limit. ..."

Some of the anticipated wonders relate to economics:

"Our trump card, finally, is that unlimited organizing capacity is also in sight, in the shape of intelligent, self-propagating machines. Such a machine need only show a small profit: that is, it must be able to reproduce itself from scratch and also do some directly useful work before it wears out. This is enough to ensure, on the compound-interest principle, that starting with only one machine we can in sufficient time have as many machines and as much wealth as we please....



"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, psychiatric advice, impressionist paintings, space ships, or pastel mink toilet rolls. It will keep itself in repair, and in fact continuously improve itself, and will build others like itself whenever required ..."

Cooper, writing in *Immortality: Physically, Scientifically, Now*, (1963 ed., p. 47) is more blunt:

"... Man was never meant to work. It isn't in his nature whereas it is within the nature of some machines. When man realizes that full unemployment is his goal and has devised an equitable distribution system then he will have achieved a measure of control over himself and some machines..."

As with Ettinger, Cooper anticipates extensive use of automation (p. 51):

"... The ability to intensify a physical force many times to get physical work done has been known for ages. The second potentiality[,] to multiply ... mental power many times in order to get mental work done[,] is the quite recent realization.

Similarly as a physical force may be intensified even a million times, for example, any approximation of this in the mental sphere is more than likely (to put it mildly) to produce revolutionary changes. This mental capacity ... is relatively to be considered the fulcrum of the second industrial revolution..."

Some of Cooper's bold sentiments provoked criticism, which he addressed in a postscript (p. 137):

"The idea that man was never meant to work caused considerable consternation. If some feel that he was, we wish them godspeed in the speedy pursuit of their conviction. We only hope they will understand their need for others of a Diogenean persuasion to stand aside and meditatively appreciate their 'necessary' labors."

The idea of eliminating the need to work for a living is a controversial one, and one that I think is easily misunderstood. Many fear "the replacement of human brains by machines" either because it might "obviate the need for mankind" say, or because an automated economy might get out of control, and create havoc on a scale hard to imagine. Others take the Malthusian position that unwanted labor is necessary because of the tendency of humans to procreate until scarcities on the basic level must occur. Still others feel that *having* to work is somehow necessary

that *having* to work is somehow necessary

to justify one's existence. All these objections and others can be met, I think, though not in a brief column such as this. A few closing remarks seem in order, however.

First, it is not work but *having* to work that I am suggesting be eliminated — in particular, having to do specific labors that are not very interesting or enjoyable.

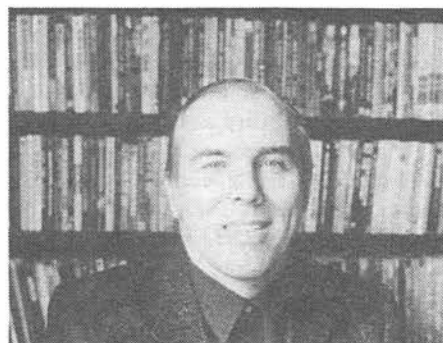
One should work hard, but only at what one likes to do. It may be that a total elimination of unwanted labor will prove impossible (some continuing supervision of the machines seems essential, for example) but the amounts remaining will hopefully be minimal. Finally, though it could be overly optimistic, I doubt the Malthusian doom sayers. People have

shown, in the 20th century, a capacity to limit reproduction that so far has defeated earlier predictions of inevitable poverty. This trend will continue and, we may hope, become more rational as our living standards improve and we, in fact, evolve to immortal post-humans.

Future Tech

Nanotech Notes

H. Keith Henson



Beachworld

A massive reorganization of the earth's surface is one of the more interesting things nanotechnology makes possible. Of course, some people will argue that we should leave the earth just the way it is. We clearly don't *have* to modify the earth — we could modify ourselves instead. Nanotech-modified humans could live comfortably out in the open any place on earth, and, for that matter, most places in the solar system. Alternatively, people could locally control their environment by the age-old houses-&-clothes method. Nanotech clothing could do a rather impressive job insulating tender meat bodies from a hostile environment.

However, the human race has a history of making large-scale modifications to the environment, dating back to the pyramids. Assuming we continue this habit, let's consider what might be done with nanotechnology-derived wealth and the ability to reorganize the earth into an optimal state for unmodified humans.

First, what is optimal? There are lots of choices. From the prices of real estate, pleasant climate and proximity to fresh or salt water are high on the list. Thirty or forty million years ago, the worldwide climate was more moderate, and there were large areas of warm shallow seas. Some weather theorists believe that the

rise of the Rocky Mountains and the Tibetan Plateau radically modified the weather patterns, leading to hotter summers, colder winters, intermittent glaciation, and drying of the forest (which in turn may have led to the human species). Lowering the average elevation of the land surface of the world is well within what could be done with nanotechnology, but not that good an idea. A lot of people consider mountains a good alternative to seashores.

Climate modification, perhaps even controlling the weather, should be doable with some combination of sunshades and reflected sunlight from space. Perhaps it could be done with an atmosphere which actively absorbed or reflected heat into space. An easy way to do this would be "floaters," vast numbers of little balloons which could be black, clear, or reflective on command from weather control computers. Chucking mountains into the ocean is too much trouble just to moderate the climate.

Anyway, flattening the high spots would not deal with the main problem, which is that we do not have enough shoreline and beaches. Given a world population of about 10 billion, and the need for (say) ten meters of beach per capita, we need 10^{11} meters of beach. We can get a feel for the area involved to give everyone a beach by laying it out as

stripes, alternating a km of water and a km of land, though it would more likely be designed as a fractal. Hmm, fractal fjords? Shades of Slartibartfast! (À la *Hitchhiker's Guide to the Galaxy* by Douglas Adams. If you *really* want to know what is going on, this is probably not the best place to find out, but it is a fun read.)

"Beachland" would be 10^8 square km or a square 10,000 km on a side. Wrapped around the world, it would extend a little over 2000 km north and south of the equator. While this is a serious reorganization of the surface of the globe, it is not impossible. Rather than a chicken in every pot, the new political slogan could be a beachhouse for every family.

SF writer Philip Jose Farmer once laid out an even more outrageous place for one of his series, a world wrapped from pole to pole with a vast, artificial, serpentine river. He populated *Riverworld* by resurrecting every human who ever lived — a project no doubt sponsored by the Venturists.

How would one go about making Beachworld? There is no problem with energy to move material — the sun puts out plenty. Obviously, you can't just dump the mountains into the ocean without having the sea level rise a lot. Islands supported by arches reaching down to the seabed seem like one way to do it. Floating structures anchored to the seabed are another choice. Maintained at the molecu-

lar level, there would be no worry about structures falling apart from corrosion or failing in a large earthquake.

I am not sure what materials might be used to construct Beachworld. Diamond is my favorite structural material, but — with all the other things carbon would be used for — I don't know if there is enough. There is 25 atmospheres of CO₂ locked up in limestone, and no lack of energy to get the carbon out, but we would have to deal with the by-products. The calcium oxide could be walled up and stored where the limestone came from, but what about the oxygen? You just can't dump that much O₂ into the atmosphere without creating a fire hazard of unbelievable proportions — even in a nanotech world. The oxides of the most common crustal elements, silicon and aluminum, are actually quite strong when prepared without flaws, so they might do for structures.

We still are going to need a lot of sand. It might be necessary to hollow out some mountain ranges for materials. The

space left by mining could be braced and left open so the form of the mountains did not change, or the mountains could be sculpted with more flat spots to make them more hospitable to habitation. Delivery or fast transport could be built inside the mountains and the outside devoted to trails, bike paths, and an occasional road for the automobile hobbyist.

Given fast global transport, and jobs which can be done almost anywhere, I wonder what fraction of the population would stay in cities and what part would like to live on the beach or up in the mountains? It doesn't really make that much difference: assuming the population levels off at reasonable levels we should be able to cater to most people's wishes. There are limitations. Some places like San Francisco Bay will be difficult to duplicate in substantial numbers, but we can build a few look-alikes.

Not only would it make sense to build a lot more land in water, but water could be brought to the land to a much larger ex-

tent than is it now. Deep tunnels could be used to move fresh water from the places where it runs into the sea to dry areas. I am sure we will want to preserve some desert, but most of the presently desolate areas of the world could be made to bloom.

The limits in the nanotechnology era on what we might do with the earth are mainly political. And if the other people won't let you realize your particular ideas on rebuilding the environment, you can always put your garden in a space colony, or rebuild a planet. Venus could be shaded or (a more ambitious project) dragged back from the fire, placed at a trojan point on Earth's orbit, and turned into a sister of Earth. I admit the scale of this project is a little outside of the "trivial" uses of nanotechnology. There is also a severe shortage of some elements on Venus, particularly hydrogen, which would have to be addressed. None of these objections should stop a determined and patient future Army Corps of Engineers equipped with nanotech wealth and tools.

Merkle's Defense: Still No Cigar

Gregory M. Fahy

Dr. Ralph Merkle's defense of "The Molecular Repair of the Brain," in response to my previous criticism, falls short.

Where's the Beef?

He puts his finger right on the problem: "Dr. Fahy's criticisms are largely concerned with the section of the paper that was not written...." The paper was entitled, "The Molecular Repair of the Brain," yet we are really told nothing about how molecular "repair" of the brain will be accomplished. We are told how data and/or raw materials can be collected, but that is all. This is not a description of repair. Hence, my criticism. Perhaps he could have entitled the paper "The Whole Brain Catalogue" or something to that effect. That would have inspired a different response. I would also note parenthetically that the word "repair" takes on a new

meaning when it refers to the total disintegration and total refabrication of an object rather than to relatively small alterations of the object.

Perhaps it is an accomplishment that my critique has forced Dr. Merkle to become more specific about what he now terms "synthesis" (previously "repair"). I will let others consider the merits of "synthesis." I, personally, have no interest in considering that subject further.

Cryogenic Chemistry

In his defense, Dr. Merkle says that hydrogen atoms can be abstracted by free radicals at cryogenic temperatures. I fail to see how this demonstrates that one can synthesize a whole brain at cryogenic temperatures. I am well aware of the ability of radicals to react at such temperatures. I am not aware of any implication that radical chemistry can duplicate ordi-

nary chemistry in every respect, which is precisely the point I made in my critique and which Dr. Merkle's defense continues to fail to address.

At the end of his defense, Dr. Merkle expresses wonderment that I could consider rupturing bonds at cryogenic temperatures using purely mechanical means to be a problem. He points out that molecules with weak bonds could be designed to make this easier. This totally fails to address my criticism that ripping apart normally existing biological molecules with total precision could be problematic. Perhaps Dr. Merkle can explain how he would selectively break any desired bond in cholesterol, cytochrome c, or even glycine at cryogenic temperatures.

Dr. Merkle implies that molecular vices (note: the spelling is not "vice," contrary to the opinion of the copy editor at *Cryonics* — "vice" is something else altogether!) can generate 1.7 million atmo-

spheres. He does not reasonably defend this assertion. Therefore, the assertion represents absolutely pure and empty speculation and can't be taken very seriously. Nor does he specify how much pressure would be necessary to drive most biologically relevant reactions (or at least those with a negative volume of reaction).

"Misunderstandings"

Dr. Merkle's defense is 100% based on the most extreme possible form of "off-board" repair, i.e., reducing the brain to a filing cabinet full of sorted molecules and a database describing their proper positions in the repaired brain. I guess I did misunderstand. I thought Dr. Merkle had also proposed that "on-board" repair was also possible. Apparently, he no longer feels that this is the case.

This is too bad since I consider the filing cabinet approach to be absurd. I was too polite to say so in my original critique and, clearly, Dr. Merkle therefore felt I must have somehow failed to notice that this was strongly emphasized in his paper. I chose to critique only that part of Dr. Merkle's original paper that I considered worth the trouble to critique, i.e., that portion of it that made at least some sense and had at least some potential value, namely, on-board repair (no quotation marks around repair).

In his defense, Dr. Merkle makes many statements to the effect that total disintegration and total resynthesis (i.e., dealing with every molecule in the brain many times and in many ways) is a simpler process than mere repair (i.e., dealing with a relatively small subset of molecules in a relatively unsophisticated way). This

seems absurd on the face of it. I do not say that one could not reduce the brain to a filing cabinet in principle, but I do say that this would be absurd due to the effort required in comparison to more moderate approaches. Certainly, the reconstruction of the whole brain has to be more difficult than the reconstruction of limited parts of it. Storing information about the positions of aberrant structures has to be less difficult than storing information about all structures. Understanding freezing damage has to be less complex than understanding both freezing damage and how to build brains from scratch. It was this view, in fact, that inspired me to derive an on-board repair scenario as a more reasonable alternative and to originally call this a "serious" (which later became a "realistic") repair scenario, in contrast to Merkle's off-board proposal, which I consider unrealistic and difficult to take seriously.

Rapid Heating

Dr. Merkle is sure that heating objects at rates a million times faster than anything ever before accomplished is no problem. But my vitrified kidneys shatter when warmed at only fractions of a degree a minute. This makes me considerably less sure than Dr. Merkle. The main point is really that brute force approaches to problem solving may be less intelligent than understanding the problem well enough to apply the *right*, more elegant, solution.

Other Points

In response to my question of how to obtain power for repair, Dr. Merkle sug-

gests motors. But where will the motors get the power (in an on-board scenario)? He also equates sliding rods with complex molecular manipulations, which I do not. I actually do not think that power supplies will be a problem (or I would not have written my own scenario), but neither he nor I have really provided a satisfactory picture of how this could occur (in an on-board scenario), although I have made some very rudimentary suggestions in my scenario. I can't evaluate Dr. Merkle's estimate of 17 minutes to build a brain (beyond finding it dubious), since he does not provide enough support for his estimate, but I prefer this estimate to his previous estimate because it is based on the true problem being solved and not on some other problem (i.e., biological protein synthesis) that is not the same. My point about the biological and nanotechnological "repair" times being unrelated seems well supported by the 17 minute estimate.

Philosophy

All repair scenarios contain subterranean philosophical issues, which Dr. Merkle has alluded to extensively and I have largely not commented on. These scenarios tend to force attention onto some unpleasant realities which are usually avoided. As a result of these discussions, I have some philosophical observations to make which will not be popular for readers of *Cryonics*. These philosophical observations will complete what I have to say about these matters. But that subject will have to wait for another time.

Cryonics, Intellectual Property, and the Problem of the Commons

Mike Darwin

Seventeen years ago, at the age of 18, I learned the first half of a very important lesson: the value of the capitalism of goods and services in creating human wealth and happiness. The second, more important half of the lesson came a few

years later: the value of the capitalism of *ideas*.

When I first learned this lesson, the world was a very different place than it is now (and indeed I was a very different person). I was a socialist and most of the

world was socialist too. There seemed to be present in the air the expectation that very shortly the whole world would be one big happy collectivist family. I cannot remember how often I used to hear people say (particularly on the college campuses

when I was in school) that the communist ideal was *right*; it was the human execution (i.e., evil human nature) of it that was flawed.

I hear that less these days. The bone-yard of Eastern Europe and the shocking images of poverty and degradation which filter in from *every* socialist country have (at least for the time being) muted those singing the praises of the workers' paradises. All but the most thick-headed seem to have figured out that there is something wrong with collectivism (although, please note, this does not mean that people have come to the conclusion that there is something *right* about capitalism).

What's wrong with collectivism is that it destroys the individual's incentive to produce by eliminating competition and reward. And it is, after all, *individuals* who produce; not committees or cooperatives. It leads to a world of shoddy goods — where such goods are even available at all. It leads to a world of demoralized people, stripped of choices not only in the marketplace but in their personal and "political" lives as well; because the only way to make people take medicine as unpleasant as life under collectivism is to *make them take it*.

I think it is fairly clear to just about everyone by now that collectivism of goods and services simply doesn't work. It took me a long time to understand that, and so I am sensitive to the reality that many others may also take a long while to understand it.

In order for me as an 18-year-old to come to understand the un-workability of collectivism I had to first understand where goods and services come from. For this insight I owe a debt of gratitude to the philosophy of Ayn Rand. But what I did not get from Ayn Rand was the other half of the picture: the un-workability of the collectivism of innovation, of the collectivism of the world of *ideas*.

All the material goods and services which contemporary capitalism thrives on are the product of people's minds. In fact, they are for the most part, the product of a very few minds. The idea for an automobile, or a table or a flower pot is a potentially immortal thing. An idea is an *ideal* thing that takes the shape of goods or services and paradoxically makes them *real*. Ideas are thus the ultimate source of all wealth and the true motor of the world.

While most of the world seems to be stumbling towards the notion that consis-

tent application of a capitalism of goods and services is necessary, the realization that consistent application of a capitalism of ideas is even more critical seems not on the event horizon.

It is a paradox of the business world that the more important an idea is the less commercially profitable it will be. Thus, someone who invents a new soft drink container is far more likely to get rich rewards for their efforts than someone who uncovers a new law of nature.

Our civilization has developed a sophisticated technology of protection for material goods (the products of ideas), and yet there is almost no protection for the ideas that are the source of all the material wealth in the world.

I believe we pay a terrible price for this. Further, I believe that our society and this civilization will fail as utterly as the Soviets' and their client states have failed unless we address this problem. While it is true that people who create new ideas (innovators) often do so for motivations not directly related to money, it is a mistake to assume that they are not touched by lack of remuneration for their efforts. It is a terrible feeling to see others grow rich from the products of your efforts (intellectual or industrial) and hold you in *sneering contempt in the bargain*. It is also true that, like everything else, innovation *costs money*. It takes money to eat, to secure shelter, and to do research. An innovator, no matter how well-intentioned or in love with their chosen discipline, is not immune from market forces either.

Thus, what we see is that innovation tends to get focused into areas where it can be rewarded. This is well-established in medicine, where common nutrients or compounds that cannot be patented are not adequately investigated or promoted even though they may be the best at treating or preventing a disease. Dr. Steve Harris made this very observation in a recent issue of *Cryonics* (12(1), p. 13 (Jan, 1991)).

In the February issue of *The Immortalist* (the publication of the Cryonics Institute) two articles appeared which bear on this issue and prompted this piece. The first is a response to Steve Harris's article by Michael Zehese. Zehese states:

Writing in Cryonics Dr. Steve B. Harris bemoans the fact that if physicians give someone what is tantamount to medical advice in a social setting it would be considered inappropriate to send a bill for

that advice. He goes on to say that pure advice given in an office setting is often expected to be free. He suggests that this "information socialism" discourages people from discussing or thinking about anything useful that cannot be tied to an invoice!... Maybe it is the cultural barrier of the Atlantic, but I should have thought that any information that is likely to help us in the war against death is worth propagating!

Of course, what Mr. Zehese doesn't say is how Dr. Harris (or any other information giver or innovator) is supposed to *eat* while he is busy contributing to the war against death. Naturally, what Dr. Harris and what any other rational, self-interested person will do is to focus most of their time and efforts on things that reward them, not on saving the world. This is the basis of capitalism and it is why in a successful society things are set-up to reward productivity, achievement, and efficiency. The reason it doesn't work well for ideas is that there are no truly effective mechanisms in place to *protect ideas*; patents only protect their highly specific application.

Needless to say, the capitalism of goods and services doesn't work well when there is no technology around to protect tangible property. In collectivist states, looting is institutionalized and people have the same attitude towards the material fruits of labor as Mr. Zehese, and so many others, exhibit toward the non-material (i.e., intellectual) ones. In its purest form, lack of respect for property rights in material goods and human labor becomes a ravening mob with each person doing violence to the next in order to relieve him or her of goods or labor. There are, of course, intermediate states such as the clan, or the fiefdom, or the family; an environment wherein some property rights are respected, but only within the narrow confines of the group. It has been the great triumph of civilization that we can now visit each others' homes and not fear being clubbed to death for our VCRs or forced into slavery as a servant or sex object for our neighbor. Thus, we are able to display our wares and our personal and professional assets freely and to exchange and barter with each other, greatly enriching everyone's life in the bargain.

Sadly, such a state of affairs does not yet apply to the world of ideas. Nor is this a matter of academic import only on these pages. This sad state of affairs touches

cryonics (and Cryonics too!).

This tutorial on the capitalism of ideas has not been provided solely as a result of Mr. Zehese's remarks in *The Immortalist*. Rather, it was also prompted as a result of the remarks of Robert Ettinger in the same issue of *The Immortalist*. These remarks, and the article which prompted them, are reproduced below:

Zinn on Alcor's "Roe v. Mitchell" Legal Fund

"The health department is trying to kill me!" Thus exclaimed cryonicist Ralph Merkle at Dr. Segall's annual Christmas party. Dr. Merkle was referring to the legal fight against cryonics being waged by the California Department of Health Services.

I have been informed by Alcor representatives that the aforesaid Department has filed a Notice of Appeal of the decision and injunction against it in Los Angeles Superior Court for the county of Los Angeles. In all probability the Appeal will be heard by a three judge panel of the Court of Appeal for the Second Appellate District, and the decision will appear in law books published by West Publishing and Bancroft-Whitney. It is also possible that the losing side would appeal further to the California Supreme Court, a seven person body. Another alternative sometimes occurs when the California Supreme Court will order an opinion of the court of appeal "depublished" but will approve the result mandated by the lower court without issuing an opinion of its own.

It is vital to all cryonists that this legal contest be won. In a battle of this nature the expenses may be anticipated to be great. Contributions may be sent to ROE v. MITCHELL FUND, Alcor, 12327 Doherty Street, Riverside, CA 92503.

What happens if we lose? I seem to recall a character in one of Charles Dickens' novels asserting, "If the law says that, the law is an ass!" Legislation authorizing cryonics could be proposed, but I'm sure some people wouldn't wait for it and would leave California in the interim.

Our founding fathers pointed out that we have certain inalienable rights, such as life, liberty, and the pursuit of happiness. The Department of Health Services in California is trying to deny us all of these rights simultaneously! Does this mean that we would resort to revolution if the right to implement cryonics was denied in California? The Steppin Fetchit alterna-

tive, "Feets do your stuff!" sounds far preferable.

— H. Jackson Zinn

To which Ettinger responded:

Certainly the litigation mentioned is important to all cryonists — as also the other litigation in which Alcor has engaged, and also many other activities of Alcor, past and present. It is also possible that donations to the Alcor fund, by non-Alcor members, might help improve the atmosphere of inter-organizational cooperation. But this is not the whole story, when a non-Alcor individual asks himself whether to make such a contribution, instead of making an equivalent contribution to his own organization.

The bottom line is what the net result will be. As best I can judge, no contribution by non-Alcor individuals is likely to tip the balance, to cause the litigation to be abandoned, or to be won or lost. Instead, the net result will simply be to subsidize Alcor, instead of the individual's own organization. Let me point out that this same conclusion was published in the newsletter of the Cryonics Association of Australia (in connection with the Donaldson Alcor Fund) even though the Australian group is essentially a branch of Alcor.

Some may think it unfair for Alcor to carry the whole burden of litigation on behalf of cryonics in general and California cryonics in particular. Other will focus on the fact that Alcor has by far the largest financial resources of all cryonics groups, and historically has been fiercely competitive in its relations, not to put too fine a point on it. Needless to say, individuals can and will make their own decisions...

This response by Ettinger points up the problem of the commons with respect to intellectual undertakings (and yes, Virginia, arguing court cases and creating law is an intellectual undertaking). But the problem hardly stops there. Alcor is and



Photo: Hugh Hixon

Jack Zinn

has been engaged in a wide range of research and development in virtually every area of cryonics. In almost every instance we have openly published and disclosed this work, usually not even patenting it. Perfusate formulations, animal research, suspension protocols, all have been published in great detail in the pages of *Cryonics*.

Some Very Important History

Over the past decade we have repeatedly seen our work not only used by other cryonics organizations, but in some cases even patented by them without so much as an acknowledgment in the footnotes. (Fortunately, our disclosure history will void such patents where they infringe on our innovation.)

In fact, the history of how Alcor rose from the ashes in the early 1980s after a period of being moribund is a lesson in not being taken advantage of, and one worth sharing with those who may have arrived on the cryonics scene recently.

In 1981, when I came to California,

Alcor was almost non-existent. Virtually all of the revenue collected from Alcor members went to a non-Alcor suspension service provider. The only problem was, most of the real day-to-day work of training, readiness, and actually doing the dangerous and dirty part of suspensions (transport, stabilization, and perfusion) was being done by Alcor people (or people who soon become Alcor members). The work was all ours and the benefit was all theirs. As discontent rose over this, we were told in effect: from each according to his ability, to each according to his needs. The problem was, our needs were not given as much consideration as our abilities.

Gradually this changed and Alcor became more assertive, independent, and competent. Here we were, a bunch of cocktail capitalists suddenly discovering first-hand that personal incentive does work. We worked very hard to improve every aspect of our operation. We advertised and we compared our program to the competition. What's more, I believe the record will show that we did so *honestly*. I am also proud to say that we did so, as Ettinger accuses, *aggressively*. We have never shied from debating any issues and the differences between Alcor and other groups were (and are) grist for the mill.

However, it also needs to be pointed out that we never engaged in one-sided competition. The pages of *Cryonics* were open to both sides of every issue and still are. Thus, we did something most competitive, free-market businesses almost never do: we offered our competition a forum to reach our own "customers." Indeed, we even supplied the names, addresses, and phone numbers of our competitors to our own customers and urged them to check them out.

This was not the kind of behavior we received in return. What Ettinger *doesn't* tell you when he says "Alcor...has been fiercely competitive, not to put too fine a point it," is that CI and *The Immortalist* were a closed forum; for years not only insulating their "customers" from any access to Alcor, but, up until a few years ago (when the enormous media attention given Alcor made it impossible for them to continue to do so), actually refusing to mention our name in print even when discussing work we were responsible for!

Likewise, *Cryonics* magazine came about because it was impossible to get any material published in *The Immortalist* which openly addressed problems in the

cryonics movement on any level.

The net effect was that Alcor began to grow. And grow rapidly and disproportionately to the rest of the cryonics community. True, some of that growth came at the expense of CI and others: we actively "advertised" and we did not exclude the members of other groups from our recruitment efforts.

Indeed, we felt and we still feel it would have been immoral for us not to have done so. I speak with confidence when I say that everyone at Alcor believes that Alcor offers the best quality cryonics services and the most dedicated staff. We have a proven track record of placing and maintaining our members in suspension against high odds and in tough situations. We're proud of that record and we want everyone to have the opportunity to benefit by knowing about and, if they *choose*, signing up with us. We think that's not only moral and good for us, it's good for our prospective members too. After all, it's people's lives we're talking about here and we don't think that there is anyone else around right now that can even come close to offering the quality of service we can. We know we can't be objective about ourselves, so we have always provided access to others so that people can make their own decisions.

We know that Alcor is not for everyone. Some don't like our policies and procedures. Others don't feel the quality of suspension counts for much and that what's really important is getting frozen and staying frozen, not how you're frozen (Ettinger among them), and still others simply can't afford us. That's life. We know that. But we acknowledge no duty to not compete or to feel guilty about our successes which have resulted from foresight and hard work.

Over the years there have been a number of efforts by our competitors to erode Alcor's competitiveness. The most recent of these was the Federation of Cryonics Societies (FOCS), which was to be a "trade association" of cryonics groups. Interestingly, at the 1990 Asilomar conference on Reanimation and Re-Entry, Ettinger proposed that a non-competitive policy be implemented wherein various cryonics groups would refrain from making any comparisons between themselves and others. This policy would extend even to answering specific questions about differences between cryonics services! An insightful analysis of this suggestion was written by Ben Best in the Winter (Jan-

uary, 1991) issue of *Canadian Cryonics News*:

The discussion seemed productive until the issue of free expression arose. CI's Robert Ettinger angrily lashed out at the Alcor people with the words "Alcor has gotten a lion's share of the publicity and a lion's share of the new members." ACS' Jim Yount jumped in to repeat what Bob had said almost word for word (using the lion's share phrase). I was a bit stunned. Did Alcor owe the other organizations an apology for being raided by a SWAT team during the Dora Kent affair? Hadn't cryonics in general, and all cryonics organizations benefited directly and indirectly from Alcor's hard work and publicity? Would FOCS be given the job of making sure that no organization got more members than any other? Talk about community and cooperation sounds very high-minded until it takes the form of attempting to crush freedom, individuality, and self-expression for the "collective good." Whatever else FOCS might accomplish, it seemed to me that CI and ACS representatives were intent on suppression of truth, of competition, and even of Alcor. If the other organizations were objecting to the "cannibalizing" of members from competing organizations for suspension recruitment, I could have some sympathy, but I did not get the impression that this was the issue. I do not believe that more than a very small minority of Alcor members are people "stolen" from other cryonics organizations."

As the above illustrates, the notion of a free market and of competition is one which seems alien to Ettinger and CI. It is true that a debt of gratitude is owed to Ettinger for the idea of cryonics and the publication of *The Prospect*. It might even be argued that a great deal of the frustration Ettinger obviously feels at Alcor's successes may be traceable to the fact that all the profit he has had for his trouble and his idea are his book royalties, the gratitude of many cryonicists, and the possibility that it will save his life. The perceived greater success of Alcor using *his* idea may be very galling.

We are mindful of the debt of gratitude we owe *Ettinger*, and we believe we have and are repaying it by being open in disclosing the technical and other advances that we have made and by furthering cryonics.

In discouraging CI members (and

others) from contributing to Alcor's fight for establishing the right to cryonics in California. Ettinger is making a number of errors. First, he assumes that the length and quality of the fight Alcor will mount will be unaffected by contributions from non-Alcor members. This assumes that we have all the money we need or are likely to need. If only this were the case. As anyone who has examined our books or read *Cryonics* knows, we are in an extremely cash-tight position and are hardly the deep-pocket Ettinger seems to imply. We are already beginning to cut back on money expended on the DHS case and others and we will do so in part by degrading the quality and quantity of preparation that we do. In other words, we'll try to get by on less than the best. If we are to continue to operate we will have little choice but to do this.

Alcor members have contributed well over one hundred thousand dollars to the legal defense of cryonics. They are battered and bleeding from the effort and many have given till they hurt; in some cases borrowing against credit cards or taking on other debt to deal with the crisis. The staff has taken a deep cut in pay and the average yearly wage for an Alcor staff member is \$13,714.29. We are hardly swimming in resources.

Another error is the implied one that it is somebody else's fight and that CI doesn't stand to benefit from a win. This isn't the case on a number of levels. First, CI has members here in California. Members which CI will probably not be able to recover if Alcor loses the DHS case. What about them, and what about CI's potential for future growth? These arguments apply even more powerfully to the other California cryonics organizations.

Consider this; the Alcor UK facility will be closing as a direct result of the loss of resources used in the DHS fight. How will this benefit CI or its members living in Europe? How will the negative press associated with this setback further cryonics or membership growth in Europe for any of the American cryonics organizations?

There is also the issue of precedent. California is a major precedent-setting state and what happens here *will* be watched closely by other states. Ettinger seems to think that CI has or will have no enemies in Michigan. In this he is very likely mistaken. Cryonics is not protected in Michigan, it is *tolerated*. We speak from experience in saying that this will probably not always be so. Sooner or later someone

in Michigan will decide to take on CI. It may be this year, or next or a decade from now. But it will happen. And when that time comes, a win on the books in California will be much more comforting than a loss.

But even beyond these fairly straightforward direct benefits, there are the even more powerful indirect ones. If we lose this case it is important to understand what the DHS wants: They want our patients interred or cremated. They have no intention of letting us "slip across the border" by issuing us burial-transit permits, death certificates, or other documentation we would need, say, in order to move to Michigan. They want us D-E-A-D.

If this happens it will be a public spectacle of immense proportions no matter how it turns out. I believe that the cryonics program as a whole will be severely damaged by this. Two of the three existing cryonics organizations will have been destroyed (leaving only CI). But they will not merely have been destroyed, they will have been destroyed in a highly visible and public way. The effect this will have on membership growth for any remaining or new cryonics organizations will be devastating. Public confidence in the safety and workability of cryonics will be severely compromised. The damage done will dwarf that which we experienced during Chatsworth when for **five years** after the trial (and subsequent disclosure of thawed patients and cryonics fraud) there was little growth in cryonics and a resultant widespread public perception that the idea was a discredited and fraudulent one.

It will be very difficult for CI to deal with the resulting widespread (indeed I'll go so far as to say universal) public perception that "cryonics was outlawed." Let it happen here, let our patients be destroyed and CI will, for however long it remains in existence afterwards, be answering the question "Oh, that's illegal isn't it?" every time the word cryonics enters conversation. To be followed by the cogent observation: "Well, after all those people were thawed out and buried in California when it was banned there, I don't think...."

Also present in Ettinger's remarks is a deeply collectivist premise: the notion of the finite pie. Implicit in Ettinger's argument is that people will not give CI money if they give it to us. We suspect that the truth is that most CI members contribute very little to CI on a per capita basis compared to Alcor members' contributions to Alcor. We say this having examined both

CI's and the Immortalist Society's financial statements for the last 10 years or so.

While we do not know the precise financial demographics of CI's members, we do *know* many of CI's members. We see no evidence that they are poorer than Alcor members. Indeed, if anything we see evidence to the contrary. The average CI member we've encountered would seem to have a richer resource base to draw on than the average Alcor member (who tends to be younger, and thus poorer). In any event, very few cryonicists, be they CI members, Alcor members, or ACS members, give anything approaching a significant fraction of their disposable income...

Finally, there is the issue of the morality of Ettinger's position. As I said in the first part of this piece, the crowning achievement of civilization has been the perfection of the means of protecting people's tangible property and personal freedom. The technology for the protection of intellectual property has lagged far behind and the world has suffered.

Any just person feels outrage at theft or freeloading of any kind. This is so because justice is critical to their survival as well as the survival of their neighbors. It does not take the soul of a poet to feel outrage at what happened in Kuwait or to feel contempt at a line of reasoning which justified it on the basis of the Kuwaiti's oil productivity depressing the prices of Saddam Hussein's niggardly output!

Alcor has been in front of the pack long enough to know what it feels like to be told that being better is wrong and that we owe the world immortality, or at least mediocrity. We didn't buy that 10 years ago and we're not buying it now.

It is unfortunate that we don't have any way to recover the enormous costs associated with making cryonics legal for everyone. It is unfortunate that we cannot better protect our intellectual property in the research domain. This is the way the world is right now and if we want the job done we have to be prepared for the reality that a lot of parasites and freeloaders are going to catch a ride *gratis* and perhaps be in an even better position to benefit from our efforts than we will when the fighting is over (having smugly kept their powder dry).

But all is not lost. We intend to be here a long, long time. We may just need to work a little harder, think a little smarter. But then, that's what we've been trying to do all along anyway!

Financial Realities of Lobbying for Cryonics

Allen J. Lopp

Last month I encouraged each of you — particularly those of you that live in California — to write your state lawmakers about keeping cryonics legal. [Refer to Ben Best's piece under "Alcor News" for your object lesson. --Eds.] I also mentioned that some Alcorians are investigating ways to monitor the California Legislature's attitudes and activities regarding cryonics.

On April 12 I attended an all-day seminar in Sacramento on lobbying and legislative monitoring. The seminar was given by a company called Legi-Tech. Legi-tech maintains a computer database of all the bills in the California Legislature and their current status, then sells access licenses to anyone who wants to dial in with a personal computer and check on lawmaking activity.

Having never done any serious lobbying myself, the seminar certainly fleshed out a number of areas that I didn't entirely understand. One thing that I *have* understood all along, and which the seminar reconfirmed, is that doing a thorough job at legislative monitoring requires a significant financial commitment from an organization the size of Alcor, or a community the size of cryonicists in California.

As with any other purposeful activity, we must balance desired efficacy against available resources. If our resources are scant (guess what, they are!), we might concentrate on *reactive* facilities: a watchdog function that warns us when unfavorable legislative activity is imminent, and a minimal lobbying capability to counter such activity. If our resources are sufficient to support more, we can proceed on to develop *pro-active* capability, the ability to propose and advocate new laws explicitly accommodating cryonic suspension activities. Although the level of possible activity is a continuum, I see it in four

main stages:

0) Do very little or nothing at all, because we don't have the resources or the organization to do better (this is the current situation).

1) Monitor legislation at a minimal level to ensure that a direct attempt at legislation unfavorable to cryonics will come to our attention — then prepare a contingency plan to be followed if such a bill does come up, and hope that the opposition doesn't opt to be unusually crafty the first time at bat.

2) Monitor legislation and the political climate more thoroughly, do some intelligence work, and figure out more actively who might be friend or foe.

3) Propose legislation explicitly favorable to cryonics and actively promote it among legislators, with the ultimate goal of actually getting it enacted into law.

For the first time now, I feel I can present a reasonably reliable estimate of how much each of these levels might cost us, in dollars and otherwise.

LEVEL 0: DO NOTHING OR ALMOST NOTHING. This option is obviously the cheapest and considering the present climate, it is probably risky to the point of being foolhardy. Since there is considerable interest in doing *something* and the possible consequences of doing nothing are obvious, I won't discuss this further.

LEVEL 1: MINIMAL MONITORING. Minimal monitoring is developing and maintaining a moderately effective reactive capability. My notion of minimal monitoring is possibly subscribing to a



legislative computer database, such as Legi-Tech or similar, plus a low but ongoing level of letter writing and meetings with a few strategic legislators and their staff members by a handful of cryonics advocates.

The Legi-Tech database service is offered via a number of payment plans which vary from \$6000 per year for unlimited use down to a \$500 sign-up fee plus \$115 per hour of connect time. The \$500/\$115 plan would probably be most reasonable in our situation. Assuming maybe 30 minutes per month connect time, this plan amortizes to about \$100 per month for the first year.

But keep in mind that bill monitoring in itself does not do us any good. We must also position ourselves so that we can block unfavorable legislation once we know about it. Thus I feel that having a few cryonicists stay in touch with a few cooperative legislators is a must for this plan. Otherwise, even if you see the missile coming, you have no way to stop it. Establishing and maintaining a working relationship with legislators requires dedication and persistence on behalf of the cryonics activists involved, and even if we attend to these relationships diligently it may still be difficult to assess the relative strength or weakness of our positioning.

LEVEL 2: THOROUGH MONITORING AND OUTREACH. This level of activity would be more highly defensive and would prepare the groundwork for proactive efforts in future years. The level could be activated in either of two ways: 1) Hire a professional lobbyist based in Sacramento to monitor proposed legislation on a part-time basis, to do intelligence work and to "test the water" periodically (mention cryonics in passing to legislators, staff members, and other lobbyists to get a feel for the prevailing attitudes and also

pick up inside info, if any is to be had); or 2) find a cryonicist who is willing to relocate to Sacramento and learn how to become a lobbyist.

Possibility 2) above is not likely, but if we did have a suitable person to do lobbying that person would need at least a part-time salary. Even half-time at minimum wage would be about \$6000 per year. Considering that lobbying is an activity with high costs of its own (phone, copying, a reasonably presentable car, nice business clothes) this person would need an expense account of maybe another \$6000 annually. So this option is seen to be possible but not very promising at the moment.

Possibility 1) may be a more likely approach in the immediate situation. One of the leaders in the Legi-Tech workshop is a professional lobbyist with his own firm. He said a client account that desires this level of activity would cost about \$350 up to \$1000 a month, depending upon the demand on time. He said, though, that any group that hires a professional lobbyist should require periodic written reports and should check up on the lobbyist from time to time. I would add to this that if cryonicists were to hire a professional lobbyist or firm, we would have to plan for considerable effort in familiarizing the person or group to the details of cryonics operations and legal concerns.

LEVEL 3: SPONSORING A BILL. If a group approaches a legislator to introduce a bill, that group is the *sponsor* of the bill

and the legislator is the *author* of the bill. Thus, the idea here is for Alcor to find a lawmaker that will introduce a bill favorable to cryonics and Alcor would be the sponsor of the bill.

There is little doubt that eventually the cryonics community will want explicit recognition in the law. This type of activity, however, could be very expensive. The professional lobbyist above quoted that "running a bill" with a hired professional lobbying firm could cost from \$3000 to \$10,000 a month. Of course, the lobbyist gets paid whether the bill is passed or not.

Sponsoring a bill, however, does not absolutely require professional lobbying. Citizen lobbying by individual cryonicists is also a possibility. How effective could we be with this approach, considering that most of us are plain common folks with 5-day 9-to-5 work weeks just like most other people? I have my doubts about this approach, especially since cryonics is so widely perceived as "controversial" or even "crazy." I suggest that it might serve us well to project the most professional and business-like image we can.

On the other hand, sponsoring a bill, even one that we know has little or no chance of passage, might be a worthwhile effort if we are clear with ourselves that our main objective is not passing the bill but *educating legislators about cryonics and the cryonics community*. Lawmakers tend to be very busy and not likely to pay attention to a topic where no legislative activity is imminent. By sponsoring even a

"go-nowhere" bill we have a reason for aggressively educating legislators about cryonics. (Of course, the fact that such a bill is deliberately a "go-nowhere" bill is not talked about except among your most trusted cohorts.)

So we have four alternatives, and related estimated costs:

LEVEL 0: DO NOTHING
\$0 per year

LEVEL 1: MINIMAL MONITORING
\$1200 per year

LEVEL 2: MONITORING/OUTREACH
\$12,000 per year

LEVEL 3: SPONSORING A BILL
Up to \$120,000+ per year

If I assume that doing nothing is out of the question and \$120,000+ per year is out of the question, then Levels 1 and 2 are our realistic options. The cost of Level 1 is easily within our reach immediately, if we judge this to be an effective use of our money. Moreover, I suggest that we initiate fundraising efforts aimed at implementing Level 2 as soon as we can do so with financial confidence.

Who is this "we"? Well, it might be Alcor, or it might be a different group organized specifically for political advocacy. There is such an organization already in existence, and next month I'll talk about *Citizens for an Extended Lifespan*.

Recent Abstracts of Interest

Tetrad JW Langston JW

The effect of deprenyl (selegiline) on the natural history of Parkinson's disease
Science 1989 Aug 4;245(4917):519-22

The effects of MPTP (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine), a neurotoxin that produces the symptoms of Parkinson's disease, can be fully prevented in experimental animals by inhibiting monoamine oxidase B. On the basis of this observation, a double-blind, placebo-controlled study in patients with early Parkinson's disease was initiated to determine whether deprenyl (a selective monoamine oxidase B inhibitor) would delay the need for L-dopa therapy by slowing the progression of the disease. Fifty-four patients were randomly assigned to deprenyl (10 mg/day) or placebo treatment groups and followed

until L-dopa therapy was indicated or until the patient had been in the study for 3 years. Analysis of Kaplan-Meier survival curves for each group showed that deprenyl delayed the need for L-dopa therapy; the average time until L-dopa was needed was 312.1 days for patients in the placebo group and 548.9 days for patients in the deprenyl group. Disease progression, as monitored by five different assessment scales, was slowed (by 40 to 83% per year) in the deprenyl group compared to placebo. Therefore, early deprenyl therapy delays the requirement for antiparkinsonian medication, possibly by slowing progression of the disease.

Folkers K Langsjoen P Willis R Richardson P Xia LJ Ye CQ Tamagawa H

Lovastatin decreases coenzyme Q levels in humans.

Proc Natl Acad Sci U S A 1990 Nov; 87(22):8931-4

Lovastatin is clinically used to treat patients with hypercholesterolemia and successfully lowers cholesterol levels. The mechanism of action of lovastatin is inhibition of 3-hydroxy-3-methylglutaryl-coenzyme A reductase, an enzyme involved in the biosynthesis of cholesterol from acetyl-CoA. Inhibition of this enzyme could also inhibit the intrinsic biosynthesis of coenzyme Q10 (CoQ10), but there have not been definitive data on whether lovastatin reduces levels of CoQ10 as it does cholesterol. The clinical use of lovastatin is to reduce a risk of cardiac disease, and if lovastatin were to reduce levels of CoQ10,

this reduction would constitute a new risk of cardiac disease, since it is established that CoQ10 is indispensable for cardiac function. We have conducted three related protocols to determine whether lovastatin does indeed inhibit the biosynthesis of CoQ10. One protocol was done on rats, and is reported in the preceding paper [Willis, R. A., Folkers, K., Tucker, J. L., Ye, C.-Q., Xia, L.-J. & Tamagawa, H. (1990) Proc. Natl. Acad. Sci. USA 87, 8928-8930]. The other two protocols are reported here. One involved patients in a hospital, and the other involved a volunteer who permitted extraordinary monitoring of CoQ10 and cholesterol levels and cardiac function. All data from the three protocols revealed that lovastatin does indeed lower levels of CoQ10. The five hospitalized patients, 43-72 years old, revealed increased cardiac disease from lovastatin, which was life-threatening for patients having class IV cardiomyopathy before lovastatin or after taking lovastatin. Oral administration of CoQ10 increased blood levels of CoQ10 and was generally accompanied by an improvement in cardiac function. Although a successful drug, lovastatin does have side effects, particularly including liver dysfunction, which presumably can be caused by the lovastatin-induced deficiency of CoQ10.

Watson RR Prabhala RH Plezia PM Alberts DS

Effect of beta-carotene on lymphocyte subpopulations in elderly humans: evidence for a dose-response relationship.

Am J Clin Nutr 1991 Jan;53(1):90-4

The effects of various doses (0, 15, 30, 45, and 60 mg/d) of supplementary beta-carotene were evaluated. The percentage of lymphoid cells with surface markers for T-helper and natural killer (NK) cells and cells with interleukin 2 (IL-2) and transferin receptors were significantly and substantially increased in peripheral blood mononuclear cells collected from older human adult volunteers after supplementation with greater than or equal to 30 mg beta-carotene/d for 2 mo. The increase in the percentage of cells with markers of NK cells and in expression of IL-2 receptors was dose dependent. The plasma concentrations of beta-carotene were also elevated significantly; however, there was no increase in the amount of retinol present in plasma. This indicated that immunomodulation induced by beta-carotene may be due to the carotenoid rather than to an increased amount, and hence actions, of vitamin A. These results support the role of immunostimulation as a potential mech-

anism of action of beta-carotene with cancer-prevention potential.

Kendall MD Fitzpatrick FT Greenstein BD Khoylou F Safieh B Hamblin A
Reversal of ageing changes in the thymus of rats by chemical or surgical castration.

Cell Tissue Res 1990 Sep;261(3):555-64

Differences in the thymus of young and old male CSE Wistar rats were examined by use of routine histological stains on paraffin-embedded sections. There was a highly significant loss of thymic weight and disruption of architecture with age. Both surgical castration and chemical castration induced by a luteinizing hormone-releasing hormone analogue (Goserelin) caused a significant increase in thymic weight and the reappearance of a well-defined cortex and medulla in ageing rats. Cell surface antigens were detected on cryosections after incubation with a range of monoclonal antibodies. The Pan T cell marker (detected with antibody W3/13) showed fewer positive cells in ageing rats, and an increase after chemical castration. The smaller glands of old rats had fewer positive T cells with CD4 (MRC OX35) and CD8 (MRC OX8) antigens, and more after chemical castration in both young and ageing rats, but the greatest changes were seen in the intensity of Class II major histocompatibility complex (MRC OX6) immunoreactivity. In both young and ageing chemically-castrated rats, the number of cells and the intensity of immunoreactivity were greatly increased in the medulla.

Azam M Jain S Baquer NZ

Enhancement of rat brain cytosolic monoamine oxidase activity by clorgyline. Comparison with (-)-deprenyl and MDL 72145.

Biochem Pharmacol 1990 Nov 15;40(10):2215-8

The presence of unsedimentable forms of monoamine oxidase (EC 1.4.3.4) in liver and brain homogenates has prompted fresh studies on the effects of inhibitors on this cytosolic monoamine oxidase. Clorgyline is a specific monoamine oxidase A inhibitor and (-)-deprenyl and MDL 72145 are specific monoamine oxidase B inhibitors. We investigated the effects of (-)-deprenyl, MDL 72145 and clorgyline on the purified enzyme from mitochondria and cytosolic monoamine oxidase along with high speed cytosol and 1% Triton X-100 treated mitochondrial preparations. Clorgyline enhanced the activity of the purified enzyme several-fold. (-)-Deprenyl and MDL 72145 also enhanced and inhibited the activity of cytosolic monoamine

oxidase in a concentration-dependent manner.

Poungvarin N Viriyavejakul A
L-deprenyl therapy in Thai patients with Parkinson's disease: before and after, clinical trial of 50 patients.

J Med Assoc Thai 1990 Jul;73(7):381-6

Fifty Thai patients with Parkinson's disease of all staging were allocated for 10 mg/day L-deprenyl therapy as the monotherapy (6 patients) and adjunctive therapy for at least two months. The assessment of this open study included the activities of daily living using Schwab/England Scale, Hoehn and Yahr staging and Unified Parkinson Disease Rating Scale (UPDRS) by comparison of the initial and after two month of treatment scores. There was improvement of both Schwab/England Scale and UPDRS in Hoehn and Yahr stage I, II and III patients. In stage IV and V patients there was no benefit of L-deprenyl therapy of both clinical and statistical analyses. Adverse effects of L-deprenyl were not serious. There were dry mouth (20%), anorexia (10%), nausea and vomiting (8%), insomnia (6%), lightheadedness (4%) constipation (4%), abdominal pain (2%), generalised ache (2%). We conclude that L-deprenyl therapy is effective, safe, but costly. It is more effective in early Parkinsonism. The effectiveness of L-deprenyl is less in more advanced states of Parkinson's disease. Thus, selection of the appropriate Parkinsonian patient for L-deprenyl therapy is vital.

Sun IL Sun EE Crane FL Morre DJ

Evidence for coenzyme Q function in transplasma membrane electron transport.

Biochem Biophys Res Commun 1990 Nov 15;172(3):979-84

Transplasma membrane electron transport activity has been associated with stimulation of cell growth. Coenzyme Q is present in plasma membranes and because of its lipid solubility would be a logical carrier to transport electrons across the plasma membrane. Extraction of coenzyme Q from isolated rat liver plasma membranes decreases the NADH ferricyanide reductase and added coenzyme Q10 restores the activity. Piericidin and other analogs of coenzyme Q inhibit transplasma membrane electron transport as measured by ferricyanide reduction by intact cells and NADH ferricyanide reduction by isolated plasma membranes. The inhibition by the analogs is reversed by added coenzyme Q10. Thus, coenzyme Q in plasma membrane may act as a transmembrane electron carrier for the redox system which has been shown to control cell growth.

Canadian Emergency Response Kit to be Issued

Alcor is still accumulating members in Canada. Due to the difficulty of getting equipment through customs in a timely fashion and the availability of a person willing to become certified as an Alcor Transport Technician, a decision has been made to issue a standard emergency response kit and to place it in Winnipeg, Manitoba; right smack in the middle of Canada's "inhabited" zone.

We would like to get at least one, and preferably two, other Canadian Alcor members certified to provide back-up for this kit. If any Canadian Alcorians would be interested in taking the Transport Protocol Training Course, please contact Mike Darwin immediately, as there are few slots left in this course (800)367-2228.



Transport kit

Photo: Hugh Hixon

Cryonics Illegal In British Columbia

by Ben Best

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Bob Ross, a reporter for *The Province* newspaper of Vancouver, British Columbia, took an interest in cryonics several months ago. Phoning the British Columbia Funeral Association, he learned that cryonics is illegal in B.C. Interviewing Canadian cryonicists, he passed this information on to Brian Wowk, who passed it on to me.

To my knowledge, British Columbia is the only jurisdiction anywhere which specifically prohibits cryonics by law. Nonetheless, considering that no cryonicists knew of this fact until nearly a year after it came to pass, there is no guarantee that similar laws do not lurk among the statutes of some other provinces or states.

The Cemetery and Funeral Services Act, Bill 42, became law in British Columbia in April 1990. Under the heading "Arrangements Forbidden" is Part 5, Section 57: "No person shall offer for sale or sell any arrangement for the preservation or storage of human remains based on cryonics, irradiation or any other means of preservation or storage, by whatever name called, that is offered or sold on the expec-

tation of the resuscitation of human remains at a future time."

In an attempt to find out how this law came to be, I phoned the British Columbia Funeral Association. I was told to phone a Mr. Paul Snikars, the Registrar for the Cemeteries and Funeral Services Branch of the Ministry of Labour and Consumer Services of the Province of British Columbia. I called Mr. Snikars [(604) 387-9114] and identified myself as a Director of the Cryonics Society of Canada and told him I was phoning from Toronto. I said that I had recently learned that cryonics had become illegal in British Columbia last spring and that I wanted to know what kind of thinking was behind this illegality. This question made him fairly uptight and he made reference to the many representatives from various sections of society (mentioning church groups repeatedly) that had been consulted. When I pressed for information about what scientists had been consulted, he became extremely evasive, defensive and upset. He told me he "didn't have time" for this and that if I had any questions or complaints, that I should submit them in writing.

I could feel that he was close to hanging up on me and I knew that this was a situation requiring extreme delicacy and tact if I was to gain cooperation. I tried to gently assure him that it was not my intention to blame him. I told him that it is an issue about which I have strong feelings because I feel my life is at stake, but the fact that there are currently less than 5

people to my knowledge in B.C. with an interest in cryonics does not make it a groundswell mass-movement kind of issue. He apologized somewhat, but said that the accusative way I had begun the conversation had raised his hackles. He was particularly sick, he said, of people phoning him from Toronto, telling him how things should be run in British Columbia.

Since Mr. Snikars is the person primarily responsible for enforcing the Cemetery and Funeral Services Act, I tried to explore how he would interpret Section 57. At first he said that if a British Columbian made an arrangement with a cryonics organization outside of the Province, there would be no problem with the B.C. law. However, when I pressed him on the point of a B.C. funeral director packing a person in dry ice for shipment, he began to see that this would be an example of "selling any arrangement for the preservation or storage of human remains" — prohibited by the Act. Still trying to be agreeable, he suggested that the person could be shipped out of the Province first and then frozen. I explained to him the damage done by autolysis, particularly after the first hour postmortem, at room temperature. When I asked him what he knew about cryonics, he acknowledged that it wasn't very much. I asked if he would like to receive some literature on the subject and he agreed that it would probably be good to have such information in his files.

Mr. Snikars emphasized that, although he enforces the Cemetery and

Funeral Services Act, he had little to do with creating it. He could, however, make recommendations which would be taken seriously in future modification of the Act. He said that Bruce McCullen, Director of Policy and Planning, had been more involved in the creation of the Act. Mr. Snikars agreed that I could phone him in the future, and did not seem in a bad frame of mind at the end of our conversation.

It was very clear to me that — as angry as I felt — it would be counterproductive to vent that anger on government functionaries. When I phoned Bruce McCullen [(604) 387-1754], it was with the intention of (1) finding out who was responsible for the law (2) finding out what the appeal process is and (3) refraining from expressing any bitterness which might alienate his cooperation.

As it turned out, Bruce McCullen could not tell me who was responsible for Section 57 of the Act. The Act was evidently 14 years in the making. In large part it was based on the Gosse Royal Commission of 1976, a study conducted by a former law professor named Richard Gosse. The commission report and various drafts of the Act had evidently been reviewed by representatives from six sections of British Columbian society: (1) the Cemeteries Association (2) Old Age Pensioners (3) the Association of Churches (4) the Funeral Director's Association (5) the Consumer's Association of Canada and (6) the Memorial Society. I got the impression that somewhere along the line someone had been motivated to add Section 57 and that probably no one else had enough knowledge or feeling about cryonics to raise an objection.

Mr. McCullen seemed even more eager than Mr. Snikars to say that a person making arrangements with a cryonics organization outside of British Columbia would have no problem — although I once again mentioned the problems. Mr. McCullen said that the prohibition against advertising for sale would not apply to an advertisement for cryonics services appearing in a national magazine. He said that requests to change a statute are reviewed yearly — but that the volume of such requests means that requests of greatest urgency are given highest priority (adding that requests from non-residents of British Columbia will count for far less than requests from British Columbians). The request to change a statute should be in the form of a letter directed to the Minister of Labour and Consumer Affairs.

Although I was not argumentative

with Mr. McCullen, I did express concern with how easily in a nominally free society a nonviolent act can be declared criminal. After I suggested that the law might have been an attempt to prevent fraud, I acknowledged that cryonics is an unproven scientific procedure. He suggested that this unproven nature may have been the grounds for prohibition. I'm certainly glad there weren't more government functionaries around when the Wright brothers were attempting to fly.

I asked Douglas Skrecky, who lives in Vancouver, B.C. if he would try to find out anything he could about the Gosse report. Douglas sent me a letter in which he said, "I have read the report prepared for the Minister of Consumer Services in 1976 by Richard Gosse and found no mention of either cryonics or irradiation in it."

In attempting to determine the means by which legislation can be changed, I phoned the Policy and Legislation Branch of the Ministry of Labour and Consumer Services [(604) 387-1791]. I was told that the procedure is to write a letter to James Rabbitt and further told that Robert Herchak is the Policy Specialist responsible for writing changes to the Cemetery and Funeral Services Act. Mr. Herchak's telephone was busy, so I phoned the Assistant Deputy Minister responsible for Consumer Services and Administration [(604) 387-3129]. I was again told to write James Rabbitt and somehow referred to David Oliver, a Senior Research Officer.

I phoned David Oliver [(604) 387-1905] who told me that he is not presently in the department associated with the area of my concern. He did, however, say that he knew of Section 57 and had, by chance, been one of the team responsible. He said he was not at liberty to divulge the identity of other members of the team and that it would be of no help to know who the individuals were. He almost went so far as to admit writing the Section by saying something about putting "ideas into words," but he quickly backpedaled by saying that he was merely a "lowly bureaucrat" and that no individual is responsible for legislation — the Ministry as a whole is responsible.

I explained that with no one taking responsibility for the legislation, I find it extremely difficult to identify the relevant issues. I said I was not compiling a "hit list" (he laughed). I said that by identifying the person or persons responsible there would exist a possibility of engaging in a meaningful dialogue on the subject and isolating the critical issues. He said that individuals come and go and that individuals

are not important. Although Mr. Oliver would not directly take responsibility, I found that it was not difficult to induce him into arguing at length in defense of Section 57.

Mr. Oliver said that no one has yet been successful in storing a body in such a way as to be revived and that legislation is designed to prevent people from being misled. In discussing a possible letter I could write to Mr. Rabbitt, he allowed that I could argue that with proper "disclosure mechanisms" in a cryonics contract there could be no possible harm. He said that I should also quote the "offending clause" and repeat what I had told him about British Columbia being the only jurisdiction in the world in which cryonics is illegal. (Mr. Oliver seemed to doubt my word about this latter claim, but had no basis to dispute it.)

Mr. Oliver said that the law did not forbid British Columbians from buying cryonics arrangements outside of the Province. He said that another Section of the Act provides that when someone makes a request for the disposition of remains in a will, the executor of the will is bound to follow that request — which could include packing in ice and shipment to California. When I mentioned the fact that a funeral director would be violating Section 57 by packing someone in ice for shipment in exchange for monetary compensation, Mr. Oliver said it would all depend on how the Registrar for Cemeteries chose to interpret the Act.

When I returned the discussion to the subject of the basis of Section 57, Mr. Oliver opined that cryonics is a futile exercise because even if a dead person is thawed, all you get is a thawed dead person. I attempted to lead him through the argument concerning changing definitions of death, but he refused to accept the idea of the distinction between legal and actual death — or that death is a continuous rather than a discrete process. When I mentioned the fact that University of Pittsburgh animal experiments had shown that brain blood vessel spasm preceded the beginning of nerve degeneration by 30-45 minutes, he said that animal experiments are not relevant because animals can hibernate. When I said that cats do not hibernate, he said that he had personal experience with his cat having a near-death experience and losing sight due to brain degeneration.

Mr. Oliver expressed the opinion that if he talked to 100 doctors in British Columbia, he doubted that as many as one

or two would say that science is anywhere close to reviving a frozen dead person. I said that future science will have capabilities that present science does not have. When I mentioned the idea of the Wright brothers being forbidden to fly, he said that flying is a different matter since anyone can observe that birds fly. He also said that the legislation does not forbid research and that if new discoveries are made the legislation can be changed.

I suggested that a person who dies of AIDS now will not be able to benefit from future discoveries if he is not frozen now. Mr. Oliver raised the issue of overpopulation and expressed the opinion that it would be a mistake for society to allow people to "indulge in a large scale in preserving themselves." I asked him if in raising this issue he was acknowledging that cryonics might work or that concern with overpopulation was a factor in framing Section 57. He denied both, but the fact that he expressed this opinion indicates to me that he would adamantly oppose cryonics whether or not it was proved to work.

I asked Mr. Oliver if he was saying that a person who dies of AIDS has less of a right to life than other people. He said that "a right is only a right, not a future possibility" (?) and that rights are conferred by society. I then asked him if he thought it was proper for society not to confer a right to further life to an AIDS victim. I can't remember his answer, but I think he returned to the proposition that cryonics is unworkable.

Somewhere amidst all that discussion, I also expressed the opinion that a person has the right to commit suicide. He immediately leapt upon this idea by saying that to induce a person to be frozen before death with the claim of future revival is not only fraudulent, but murderous. I did not attempt to engage him in further discussion on this point.

I ended my conversation with Mr. Oliver by thanking him for providing me with so much insight into the thinking behind Section 57. I think I had succeeded in arguing the basic issues with him without provoking real hostility.

Later in the day, I phoned the Policy Specialist, Robert Herchak [(604) 387-3390], who had been spoken to by Mr. Oliver about my earlier phone call. Mr. Herchak was very friendly, helpful and agreeable, but he made it clear that he would not argue the merits of any proposal for legal amendment — that such proposals must be submitted in writing.

Mr. Herchak told me that the Cabinet prioritizes legislation it wants to deal with two times per year. Issues regarded as unimportant can be put on hold for several years.

Mr. Herchak told me that the sequence of events for requesting amendments to the Cemetery and Funeral Services Act would begin with my sending a proposal to Minister James Rabbitt, who would forward the proposal either to the Registrar or (more likely) to Mr. Herchak for research. Mr. Herchak's concerns would be, what policy is best for protecting consumer interests and how can industry conflicts be minimized. In addressing the latter question, he said that he would seek feedback from industry representatives. When I asked him about cryonics representation, he said that cryonics could only get industry representation if there were cryonics who belonged to the British Columbia Funeral Association and were active in the Association. He said he would also consult with the Registrar, Paul Snikars. And Mr. Herchak said that if the proposal to amend Section 57 mentioned that there is no precedent in law elsewhere, authorities in other Canadian Provinces may be contacted for discussion and consultation.

Mr. Herchak asked where I was calling from, and I acknowledged that I was calling from Toronto and that the Cryonics Society of Canada is Toronto-based. I told him, however, that I had moved to Toronto from British Columbia 3 years previous and that I knew of a number of people interested in cryonics who live or travel in British Columbia. I then thanked him for his help and ended the phone call.

There are a number of points to be made to put this entire matter in proper perspective. First, it is wrong and dangerous to simply assume that some interest group is responsible for the latest legal perfidy. Douglas Skrecky told me with assurance that Section 57 was due to the fact that the British Columbia Government is controlled by "Christian fundamentalists." Mike Darwin held that Section 57 was probably the work of the local "mortuary/cemetery establishment." To attack Christian fundamentalists without evidence of their culpability may well make enemies out of people who are largely unaware of the existence of cryonics — or the implications of cryonics efforts. Nor would we attack cemetery/mortuary people, whose cooperation can greatly benefit our own activities. As Fred Chamberlain has stressed, we should work for

the time when cryonics is absorbed into the menu of services offered by mortuary/cemetery people, rather than present ourselves as competitors.

Moreover, it seems quite possible to me that Section 57 could simply be an example of one "lowly bureaucrat" managing to foist his views into the laws governing a Province of three million people. One person with a strong opinion who is crucially-placed could well implement those opinions if all others are ignorant and/or indifferent to the issues involved.

A lesson for all cryonics here is to keep informed of the laws and upcoming legal developments concerning cemetery and funeral services acts of your Province, State or relevant legal jurisdiction. Be in communication with your funeral association legal body. Often a few letters or phone calls to the right bureaucrats is sufficient to have a significant influence on upcoming legislation.

Concerning British Columbia, letters to the right bureaucrats should be written, particularly by British Columbians, which challenge the idea that Section 57 protects consumer interests, reflects scientific truth or is good for the funeral industry. These bureaucrats are:

The Honorable James T. Rabbitt
Ministry of Labour and Consumer Affairs
Parliament Buildings
Victoria, British Columbia V8V 1X4

Mr. Paul Snikars, Registrar
Cemeteries and Funeral Services Branch
Ministry of Labour and Consumer Affairs
1019 Wharf Street
Victoria, British Columbia V8V 1X4

Letters could also be written by British Columbians to their representatives in Parliament. We should remember that in the United States, chiropractic services were included under Medicare despite vigorous opposition from the AMA and US Department of Health, Education and Welfare. The deciding factor was ultimately a 7-year letter-writing campaign by chiropractors and their supporters which swamped Congressmen with an unrelenting flow of sacks of mail. I have also heard the opinion that cryonics should be allowed to grow before attempting to challenge B.C. law, considering the danger that a backlash might endanger the legal situation in other jurisdictions. I see no obvious answer.

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Meeting Schedules

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

The SUN, JUNE 2 meeting will be held at:
ALCOR/Cryovita Laboratories
12327 Doherty St.
Riverside, CA 92503

Directions: Take the Riverside Freeway (State Hwy 91) east toward Riverside. Go through Corona and get off at the McKinley St. exit. Go right (south) on McKinley. Turn left (east) on Sampson (1st stop light). Go about 1 mile along Sampson to Granite. Go left on Granite to its end, and turn right on Doherty. Go about 200 yards on Doherty and turn left into the industrial park just short of "Great Eastern Furniture." Alcor is the third building from the back, on the right.

The SUN, JULY 7 meeting will be at the home of:
Dave and Trudy Pizer
Mountain View Motel
State Highway 2
Wrightwood, CA
Tel: (619) 249-3553

Directions: Take US 15 (Barstow Freeway) up into Cajon Pass. Get off at State 138 and go west (left, toward Palmdale) to County Road 2. Turn left onto County Road 2 and go through Wrightwood. The Mountain View Motel is on the far side of town, on the right.

There is an Alcor chapter in the **San Francisco Bay area**. Its members are aggressively pursuing an improved rescue and suspension capability in that area. Meetings are generally held on the second Sunday of the month, at 4 PM. Meeting locations can be obtained by calling the chapter's secretary, Carol Shaw, at (408) 730-5224.

The SUN, JUNE 9 meeting will be held at the home of:
Leonard Zubkoff
3078 Sulphur Spring Court
San Jose, CA

The SUN, JULY 14 meeting will be held at the home of:
Ralph Merkle and Carol Shaw
1134 Pimento Ave.
Sunnyvale, CA

Directions: Take US 85 through Sunnyvale and exit going east on Fremont to Mary. Go left on Mary to Ticonderoga. Go right on Ticonderoga to Pimento. Turn left on Pimento to 1134 Pimento Ave.

The SUN, AUGUST 11 meeting will be held at the home of:
Keith Henson and Arel Lucas
1794 Cardel Way
San Jose, CA

Directions: Take the 17 South (880) and get off going east on Camden. Stay on Camden as it turns south and go to Michon Dr. Turn right onto Michon and go to Harwood Rd. Turn left on Harwood and go south to Almaden Rd. (1st street on right). Turn right on Almaden and right again onto Elrose, then left onto Cardel. 1794 is near the end of the street, on the left.

There two Alcor discussion groups in the **Greater New York area**. Details may be obtained by calling either Gerard Arthus, at (516) 474-2949, or Curtis Henderson, at (516) 589-4256.

The **New York Cryonics Discussion Group of Alcor** meets on the the third Sunday of each month at 2:30 PM, at **72nd Street Studios**. The address is 131 West 72nd Street (New York), between Columbus and Broadway. Ask for the Alcor group. Subway stop: 72nd Street, on the 1, 2, or 3 trains.

Meeting dates: **June 16, July 21, August 18, September 15.**

The **Long Island Cryonics Discussion Group of Alcor** meets on the first Saturday of every month, at the home of Gerry Arthus. The address is: 10 Jefferson Blvd.; Port Jefferson Station, L.I., telephone (516) 474-2949.

Meeting dates: **June 1, July 6, August 3, September 7.**

There is a cryonics discussion group in the **Boston area** meeting every second Sunday at 3:00 PM. Information may be obtained by contacting Eric Klien at (508) 663-5480 (work) or (508) 250-0820 (home). Meetings will be June 9, July 14, and August 11 at 3 PM at the home of Eric Klien; 1 Sinai Circle B10; Chelmsford, MA 01824. Take 128 to 3 north, then take the Route 110 exit right toward Chelmsford. Go 1.5 miles and turn left on Wilson Street, in front of the CVS. Make a right into the apartment complex.

The **Houston area** has a discussion group on cryonics, life extension, and the high/low diet. Meetings are typically held the second Saturday of every month. For more information call Ravin Jain at 713-797-1076 or Rupert Hazle at 713-480-3309. Correspondence may be addressed to Rupert Hazle at 15107 McConn, Webster, TX 77598.

Other Events Of Interest

There will be an Alcor fund-raising dinner on Saturday, September 28 at 7 PM at the LAX Marriott Hotel, 5855 W. Century Blvd., Los Angeles. The goal is to raise money to continue Alcor's research to improve cryonic suspension services. Reports will be given on recent advances in cryonic suspension, ongoing research in cryonics, and plans for future research. Reservations are \$100/plate, check or money order to Alcor at 12327 Doherty St., Riverside, CA 92503; or by credit card to 1-800-367-2228.

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