

CRYONICS

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Cover: "Brenda Peters reports on the Alcor New York Group in this month's cover story."

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Up Front

\$100 For Suspension Membership!

As of November 1, you have no excuse. The price of signing up for Suspension Membership with Alcor is being lowered to \$100.

Previously, the sign-up fee was \$300, or \$150 for students or additional family members. The new fee of \$100 will apply to all new members, including students, additional family members, and minors. The caveat is this: the \$100 fee will cover new applicants for four months of "in-processness." If you take longer than four months to sign on, we will begin billing at \$25 a month until the sign-up is complete.

We've switched to this method to present an incentive to applicants to proceed rapidly through the sign-up process, hence reducing the administrative expenses in the department of sign-ups. In other words, the \$100 sign-up fee is something of a reward for people who work hard to get signed up. Since four months is plenty of time to get signed up, the \$25/month surcharge will apply only to those who continue to represent an expense in terms of my time and resources (as Membership Administrator).

Mega-Meeting in New York!

Alcor New York is proud to announce another mega-meeting in the Big Apple. This exciting seminar will feature a speech and slide show by

Alcor's Director of Research, Michael Darwin. This presentation is an excellent introduction to the theory and mechanisms of cryonics.

The last mega-meeting had more than 60 people attending, so come early! Bring yourself, friends, and relatives. There will be a question and answer session after the presentation.

Date: Sunday, November 17 at 4:00 PM.

Place: 72nd St Studios, 131 W. 72nd St. Studios (near 72nd St. subway stop on the 1, 2, or 3 line).

Price: Free!

For more information about this free seminar, call Alcor at 1-800-367-2228.

Cryonics and Christianity Brochure

After years of contending with questions concerning the theological implications of cryonics, we have come up with a brochure that we think addresses the most common questions and issues.

The brochure is written in a question and answer format, and provide assurance that the motivations and objectives of cryonicists in no way conflict with the motivations and objectives of Christians, and that in fact the two may coincide on many issues.

Many thanks to members Derek Ryan, Saul Kent, and Bill Faloon, and to the Alcor staff, for putting much thought and effort into providing us with a presentable piece of literature to address this. Anyone wanting this brochure can send \$2.50 for five or fewer copies of the brochures, and \$2.50 for every additional 1-5 brochures (so that 8 cost \$5, 15 cost \$7.50, etcetera).

Suspension Member Dues Increase

Effective January 1st, 1992 dues will be increased by 14.3% to \$288 per year or \$72. per quarter. To make this increase a bit easier to handle, we will also offer you the option of paying your dues monthly at the rate of \$30. per month (the extra dollar per month is to cover our added billing and postage costs). Also, if you want your dues charged to your MasterCard or Visa on a yearly, quarterly or monthly basis, please call Joe Hovey at (714) 736-1703 and he will arrange it.

Unfortunately, this increase only results from those costs which have risen due to inflation and improvements to our Emergency Response System. We could be hit with a huge increase in our overhead due to the legal requirement that we have worker's compensation insurance (see Alcor News at the end of this issue). We will have no choice but to pass the cost of that insurance on to our members. This will be done as a surcharge on dues, once we know exactly how much the cost will be.

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Letters to the Editor

Dear Editor,

Alcor Life Extension Foundation was well represented at ChiCon, the 49th World Science Fiction Convention, held this past Labor Day weekend in Chicago, Illinois. Angalee Shepherd and I hosted a cryonics room party on Friday evening, assisted by Alcor members Fred and Linda Chamberlain, Brett Bellmore, Benjamin Best, and Brian Shock. Thank you all for your fine help and enthusiasm.

About 100 people visited the party and stayed for discussion on cryonics, nanotechnology, and life extension. While many of the visitors were already magazine subscribers, I did manage to sell several copies of Alcor's new book and to get twenty-one information requests.

Some of the panels at the convention included "Downloading from Your Brain--How? When?," "Good Things Come in Small Packages: Nanotechnology," and "It'll Never Work: The 'I Hate Nanotechnology' Panel." Discussions were loud and lively at each of these programs, and it is apparent that camps are forming concerning new technologies and life extension. It is also apparent that interest in cryonics at Science Fiction conventions is on the rise. Worldcons especially attract technically-oriented people, so these may prove to be fertile fields for spreading our ideas.

The 1992 World Science Fiction Convention is in Orlando, Florida, September 3-7. The 1993 Worldcon is in San Francisco, September 2-6; and the 1994 convention is in Winnipeg, Canada, September 1-5. If you are interested in being part of the Alcor presence at any of these conventions, please contact Steve Bridge at 1208 Charleston E. Dr., Indianapolis, IN 46219 or phone (317) 359-7260. You will have to pay your own expenses, which include registration, but you will also have a lot of fun meeting your favorite authors and making new friends.

If you are a subscriber who attends SF conventions, watch for Alcor out there. You can never tell where we will pop up next.

Steve Bridge
Alcor Midwest Coordinator

Dear Cryonics

As brother-in-law and fellow-traveler of Jerry Leaf, I feel somewhat obligated to make some comments upon Jerry, Alcor, and our dealings with the world. The immediate impetus for this letter is a tangential factual error in the reporting on Jerry printed in September Cryonics. A more long-standing cause is a difference in perspective between myself and the board of Alcor, which might incidentally have affected their attention to such tangential facts. Finally, the passage of Jerry from the present scene requires some comment.

First of all, I would like to express my appreciation to Ralph Whelan for an outstanding job in writing Jerry's biography. I've known Jerry for twenty-six years, and always admired him as the first really rational person I'd ever met. (He was, not coincidentally, a striking contrast to my parents, and was, when I met him, at the height of his youthful energies as an exponent of rational thought.) But there was much detail in the Alcor biography I had not known or not tracked, and a characterization that had never occurred to me -- of the intrepid adventurer out to "cut [that ol' bear's] tail off." I have heard some discussion of the historian's problem with imputing too much coherence to a person's pursuits, and I would note that Jerry, like any human, did at times deviate from the

described ideal path. However, it is certainly possible that his dream of cryonics, sometimes secretly, guided Jerry more consistently than it seemed to those around him. In any case, such speculations are irrelevant for the purposes of Cryonics, except as a reality check. The biography remains fundamentally rewarding.

The report on Jerry's suspension contained an error not significant to the story, but worth noting as a reality check. Jerry's wife Kathy is referred to as head of nursing at Downey Community Hospital. In fact she is not that, and never has been. She was an administrative aide in that department for some time several years ago. However, she has since moved on, first to the (then-created) position of risk manager for DCH (developing and overseeing implementation of procedures and practices in the hospital to minimize mistakes and legal exposures from unhappy patients and the Medicare DRG system). Two years ago, when DCH bought Rio Hondo Hospital, she was made acting (and later permanent) Administrator of that hospital. That she is admired and respected at both hospitals is attested to by the constant stream of visitors she received from them during the weeks after Jerry's demise, as well as by the solicitous response Alcor received from the DCH ER in what was, for them, a quite unprecedented treatment. Not to stretch the point, I might assert that Kathy is respected as much in her part of the medical community as Jerry is in cryonics. Regardless of the fact that, for her own reasons, Kathy has not signed on for cryonics, Alcor does owe her fair recognition for some considerable acts of hospitality early on, for her unquestioned support for Jerry's suspension, and for being there for Jerry for years before Alcor entered the scene. She provided him an emotional anchor during years when he never said what drove him, and she provided financial stability while he was investing every spare penny in his personal lab (eventually Cryovita). That latter provision was a particular burden on her during the last three years, as Jerry has been unemployed (and drawing little or no support from the lab) since the Dora Kent affair while she has been going to law school evenings and working full-time at RHH. A less strong lady would not have stayed with Jerry under the circumstances. Jerry's departure was at least as untimely for her as it was for us: she was in the midst of reviewing for the bar exam, which she took in spite of that shock, at the end of July. Whatever one may think of her attitude toward cryonics, we do owe her much recognition.

At the risk of being dubbed, like George Bush, lacking in "the vision thing," I owe it to myself and to Alcor to voice my differences with the board's worldview. This strongly affects our relations with Kathy and a million others out there in "reality land." As an engineer, I am trained to respect Murphy's Law at all times. Temperamentally, I am inclined never to expect the best (though the best is always welcome to happen). Therefore, when I hear people proselytizing about living a very long life, it arouses suspicion. Add to that any suggestion about "leaving your naysaying former friends behind," and I think of AMWAY. Mind you, I consider cryonics to be an eminently reasonable project, and I have since Jerry first mentioned it to me seventeen years or so ago. Our prospects, barring some stupid catastrophe such as a new dark age

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on planet Earth or a virulent infection of Marxist medicine, are certainly better than the prospect of being rescued by some warm fuzzy in the sky at the instant of our demise. We will still, however, almost certainly all have to be frozen (though there are those who expect the aging process to be controlled in the younger members' lifetime), and will have experienced

death without the certainty of being revived. There is a chance that Jerry will not be revived, though I will not write him off until I've seen some 22nd-century high-resolution brain scan showing indecipherable mush. With these uncertainties in mind, it is a bit pretension for any of us to go around with nose upturned toward the "unsigned." It is also counterproductive.

My experience with folks outside the cryonics community is that, except for the religious, all of them are at least slightly intrigued at the thought. Even my personal physician in Albuquerque hardly blinked when I asked him to sign the physician's affidavit several years ago. Ms. Woof's experience with the NSW State Coroner, and Alcor's amicable dealing with the LAME office typify what one should expect from state authorities. (You can usually, though not always, work with them, if you have time.) Alcor's efforts to expose cryonics through the media have, of course, been useful. Some people to whom I've mentioned cryonics have already seen those shows. Still there are some people who simply aren't buying into cryonics, for respectable reasons aside from religion. Some people's life experiences have not been all that pleasant, and they don't think life would get better if there were more of it. Many have made their peace with death, investing in their children as their legacy for the future. Some are so concerned about the population problem or ecology that they think the only responsible thing to do is to deanimate at nature's behest, and meanwhile invest all our efforts in the ecology. (I hear Asimov is among these.) For the religious, of course, what we are doing is blasphemy. We do not, of course, buy into any of these arguments. If man does learn to control aging (without, by the way, arresting the memory processes (I expect to find some suggestions about that in "Silicon Man")), he will have to stop having more than a very few children, and a few cryonicists more won't make much difference. And if there is a Petty Tyrant in the Heavens, I promise to tweak His nose (if He lets Me) on my way out the door marked "Abyss," and arrive at the cosmic Gulag, A Cosmic Sakharov, with dignity intact. Still, it is wise to show a decent respect for others' thoughts. Sometimes even those who think we're nuts have a useful suggestion.

One suggestion from the outside, not new but probably useful anyway, is that we make an effort to do some more mainstream work, such as organ preservation, to help bring in money. Jerry was, of course, exploring various schemes from time to time along such lines, but was reluctant to deal with such entities as the American Red Cross, because of their intrusive and authoritarian mentality. Quite likely the Red Cross is the wrong vehicle, and we might have to fight them for the right to work in the field, but it is obvious that any research done on cryogenic organ preservation will help us better understand and (we hope) control the whole-body suspension process. We should not be averse to working with "deathists" on mutually beneficial science, if the opportunity arises. Neither should we be so careful of our proprietary knowledge that we miss out on useful exchanges with our competitors who are also, after all, fellow travelers. Without Jerry here to donate his leadership (and even if he were still animate), we cannot afford to be isolationists.

Mark F. Connaughton

Editors of Cryonics:

I am saddened to hear of Jerry's deanimation and subsequent cryonic suspension. He is the first person that I knew personally to be suspended. May we see him again in a hundred years. He is the finest of human beings.

I also read with dismay about the plans that the fascists at the FDA have in mind for us. However, I think we can fight them. As you know, the efforts of five people over a two year period resulted in the passage of the Space Transportation Purchase Act last year. Also realize that it is easier to defeat a bill than it is to pass one. Enclosed is a letter that I have sent to some Alcor members that I know, as well as other people who worked on the space bill (Jim Bowery and Andy Cutler). I recommend that all Alcor members contact their congressmen and their staff people and let them know about their thoughts on the FDA. The congressional staff are especially important in that they often tell their respective congressmen how to vote on specific bills and issues. Also, the staff are much more accessible than the congressmen themselves. I recommend that all of you in Riverside talk to George Brown about this. He is a reasonable person and he will listen to you. Bear in mind that George Brown has been an avid SF fan for most of his life and that he was instrumental in the passage of our space bill. With directed action, I feel that we can stand up to the FDA fascists and win.

Sincerely Yours,
Kurt Schoedel

A Special Thanks to Jerry Leaf and to Alcor

Linda and Fred Chamberlain

When we first heard that Jerry Leaf was being suspended, we experienced the same disbelief, shock, dismay, and personal loss all cryonicists, and particularly Alcorians, have felt. We knew Jerry for nearly two decades. The tributes in the September issue of Cryonics were moving and appropriate. What more can be said? The loss of a good friend is never easy to express.

To us, the greatest enigma in the tragic ischemic time Jerry suffered was the fact that he had made such tremendous contributions toward building an unequalled organization and procedures designed to eliminate ischemic damage. The suspension of Linda's mother (Arlene Fried) is at this time considered the "gold standard." Suspension was started within seconds of her deanimation. Her kidney, nearly 48 hours after her deanimation, was considered to have been in transplantable condition. It is tragic that one of the people who did so much both to formulate the procedures used, who spent days of his own life on standby at Arlene's home, and used his expert skills to give her that unparalleled suspension, should fall victim to circumstances which resulted in prolonged

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ischemia.

In spite of this, the support of Judge Muñoz in freeing Jerry from the bureaucratic grip which might have extended that ischemic time devastatingly longer, and the courage of the Alcor suspension team during that time of personal loss and shock are inspiring. The legal battles of the past few years have been costly and bloody. We have all wondered whether the costs could be justified. We now know they were.

And the strength of Alcor is clear. One of the Generals will be gone from our midst for a while. But the rest of the soldiers have shown they

will pick up his shield and they will continue with the inspiration he gave us all. Not only to carry Jerry from the jungle, but also to see that the Jerry Leaf tradition (of standing by any Alcor member who may be in danger) continues within Alcor.

Jerry would have been proud if he could have watched his own suspension. And he would be happy to know that Alcor is strong enough to withstand his loss and continue to grow. His own survival depends on that, and he helped to make it so. The resolve to make Alcor strong, for Jerry and for all of us, can be heard in your voices and seen in your faces. Although the pain of our loss seems blinding at times, we must not lose sight of the courage of the rest of the Alcor staff. Thank you for being there so completely for Jerry, and for the strength and resolve you are now pouring into building Alcor to make it even stronger. . . .

. . . and thank you, Jerry, for all that you did to build the organization which now protects both you and all the rest of us.

Suspension Funding and Inflation

by Carlos Mondragon

The recently published articles by Howard S. Katz and Ben Best, and an insightful letter to the editor from John Connole, have reignited interest and concern regarding the critical problem of suspension funding and inflation. If you didn't read these articles, I strongly urge you to do so now. I am nearly in complete agreement with what these articles said about the causes of inflation, its consequences for suspension funding, and its effects on Alcor.

Many of us who signed up in the late seventies, when inflation was on everyone's mind, considered the problem a matter of personal responsibility. We expected that as the face value of our insurance policies eroded, we would have to set aside savings, or buy more insurance. In those days cryonics was a lot more of a do-it-yourself endeavor than it is now. Alcor now has hundreds of suspension members and persons in the sign-up process who didn't do their own paperwork, and who can readily find insurance companies who will write a policy for cryonics and meet Alcor's requirements. Consequently, they spend less time thinking about their cryonics arrangements.

It will remain the personal responsibility of every suspension member to deal with the inflation problem. I would like to see Alcor devise a scheme which would facilitate this, but even if such a scheme completely puts all the work on Alcor, you (the Suspension Member) will still have to pay for it.

It is very encouraging that so many members are responding to this issue. If you have thoughts on the matter or can suggest a comprehensive solution, please write it down and send it in. (See "Funding Your Suspension -- Another Viewpoint" by Paul Wakfer, elsewhere in this issue.)

Once we have done enough pondering and studying, I expect to offer up the workable alternatives in this magazine. The ultimate resolution to this problem cannot be decreed by Alcor's Board of Directors. It must be based on an understanding of what the market (you, our members) will buy.

Alcor's Suspension Capability: A Clarification

Carlos Mondragon, Alcor Foundation President & C.E.O.

Last month, we published an article by Mike Darwin on this subject. I am in agreement with Mike's assessment of our current suspension capabilities. His article, however, was written from a personal point of view and this has led to some misunderstanding.

Because he is the "man on the bubble," Mike may not be available to do the kind of traveling which he has done in the past. And because his range of cryonic suspension skills is so much broader than anyone else's, the number of high-level remote standby's will necessarily be constrained.

This does not mean that Alcor will not do remote standby's outside of the United States. As indicated by another article in this issue regarding the recent Canadian suspension, our training program (thanks to Mike) has produced others with the skill needed to get the job done.

The same applies to cryoprotective perfusions done here in Southern California. If for some reason Mike could not attend, we could get the job done. (Several team members have participated in suspensions since the mid-eighties.)

True, others don't have Mike's experience and they will make mistakes, but we will field a team when we're needed. And it will still be the best cryonic suspension or standby team available in the world.

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For The Record

Riding the Jameson Satellite

by Michael Perry

It is always interesting to try to trace the origins of thinking that led to something significant, and this certainly applies to cryonics. In cryonics we find that major pioneer Robert Ettinger first got an inkling of the basic idea by reading a science fiction story, "The Jameson Satellite" by Neil R. Jones. The story appeared in the July, 1931 issue of "Amazing Stories." It is worth remarking that magazine science fiction at this time was still in its infancy, having started, for most intents and purposes, with the April, 1926 issue of the same "Amazing." (By 1931 Amazing had a rival known as "Astounding Stories of Super-science," which eventually metamorphosed into "Analog"; both publications continue to this day.) Yes, there were good ideas around even in those early days, though this one was of such magnitude that (as I believe the future will abundantly confirm) it utterly transcends our poor efforts to explore through the medium of fiction.

The plot of the story concerns the efforts of one Professor Jameson to have his body, at death, "preserved perfectly forever . . . while on earth millions of generations of mankind would live and die, their bodies to molder into the dust of the forgotten past." The solution the professor arrives at, by his demise in 1958, is to have his body launched into earth orbit:

"With the assistance of a nephew, who carried out his instructions and wishes following his death, Professor Jameson

was sent upon his pilgrimage into space within the rocket he himself had built. The nephew and heir kept the secret forever locked in his heart."

It is not made clear how space was to preserve the body. With sufficient shielding from solar radiation, low temperature adequate for long-term storage should be possible at earth's distance from the sun; evidently this was achieved. (It is interesting too that 1958 was not a bad guess for the achievement of space travel; the first man was in fact orbited in 1961.) The professor in turn has no thought of eventual reanimation, just indefinite storage. The years pass after he is in orbit, some 40 million of them. The human race dies out, along with other species that evolve later. The sun is a dying red ball with the earth slowly spiraling in, when finally the solar system is invaded by an exploratory party of aliens, "the machine men of Zor." They are an advanced race who, sometime ago, traded in their flesh-and-blood housing for more durable metal.

There is an interesting twist when the aliens encounter Jameson's perfectly frozen remains in orbit. They decide to reanimate the Professor - by transplanting his brain to a machine body like their own. The old body is discarded, the mind reactivated. The transformation renders the professor immortal and super-strong, a near-equal among his rescuers. If there is any problem about him not feeling entirely "himself" or of a compromise of his identity, it is not stated, even though he must now communicate telepathically, has a circle of eyes for 360x viewing, four legs, six tentacles for arms, and is mostly metal to boot. He adjusts quickly, and evidently finds the metallic body superior in every way. Among other things, it allows him, along with his extraterrestrial companions, to explore the earth, which by now has become an uninhabitable wasteland with little atmosphere.

All is not perfect with Jameson, however, and the last part of the story, subtitled "Eternity or Death," explores some of the problems of his new, immortal existence. When he manages to fall into the dark interior of an extinct volcano, wrecking much of his metal frame and losing contact with the others, he is dismayed by the prospect of endless imprisonment.

"He would remain in this deathless, monotonous state forever in the black hole of the volcano's interior unable to move. What a horrible thought! He could not

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starve to death; eating was unknown among the Zoromes, the machines requiring no food. He could not even commit suicide. The only way for him to die would be to smash the strong metal head, and in his present immovable condition, this was impossible."

The professor is rescued, however, when the others detect his telepathic pleas for help (though, with his more primitive brain, he can't receive their communications at a distance). Fixing him is easy: "We shall merely remove your head and place it upon another machine body." That done, the Professor is to be accompanied for a while by one of the aliens until he is better adjusted. They are really quite considerate and compassionate, but he faces a difficult decision, when they want him to join them on a permanent basis.

"A great loneliness seized him. Would he be happy among

these machine men of another far-off world ...? They were kindly and solicitous of his welfare. What better fate could he expect? Still, a longing for his own kind arose in him . . . It was irresistible. What could he do? Was it not in vain? Humanity had long since disappeared from the earth -- millions of years ago. He wondered what lay beyond the pales of death -- real death, where the body decomposed and wasted away to return to the dust of the earth and assume new atomic structures."

In despair Jameson, resolving to end his life, climbs to a high precipice and prepares to hurl himself down. His alien companion makes no attempt to restrain him but offers thoughts:

"Why jump? . . . The dying world holds your imagination within a morbid clutch. It is all a matter of mental condition. Free your mind of this fascinating influence and come with us to visit other worlds, many of them beautiful and new. . . ."

It is hardly necessary to point out how similar is this plea to what we cryonicists are trying to tell others, as they spurn freezing for the more usual and destructive alternatives when the reaper comes knocking. Apparently they do not wish to outlive the "dying world" they have inhabited for so long, and which they realize is passing into history. (At least this must account for some of the lack of enthusiasm for cryonics.) Unlike these many, however, the Professor in the end does choose life:

"He would become an immortal after all and join the Zoromes in their never-ending adventures from world to world. They hastened to the space ship to escape the depressing, dreary influence of the dying world, which had nearly driven Professor Jameson to take the fatal leap to oblivion."

"The Jameson Satellite" anticipates much of the cryonics premise, though there are some omissions -- mainly, the idea that available technology can be used for the suspension (orbiting spacecraft being unknown in 1931) and most importantly, that humanity itself can carry out the entire operation, including resuscitation, given enough time. But these later refinements, however important, do not detract from the overall tone of optimism about the prospect of continued existence, or the sobering prospect of having to leave our past world behind to enjoy it. As cryonicists, our options are not altogether different.

Sources:

Jones, Neil R. "The Jameson Satellite," *Amazing Stories* July 1931, 334.

Regis, Ed. *Great Mambo Chicken and the Transhuman Condition* Addison-Wesley, 1990, p. 85.

Erratum: In a previous column (Dec.'90) there is an illustration implying that the LES facility was near "Fredericksburg, Maryland," a nonexistent city. It should have read, "Frederick, Maryland," which is also near Hagerstown. I thank Ed Regis for pointing out this error.

How Fast Will Nanotech Hit?

by H. Keith Henson

One of the harder questions to consider is when the nanotech revolution will hit. And once the first major steps have been accomplished, how long will it take to get to some of the more enticing products I have discussed in these columns? Will the transition be measured in decades? Years? Months? And from what point should we start counting? It is probably too soon to see many details looming through the fog of the future. Still, I will give it a try, and plan on updating this account every year or two. Please excuse the level of technical language -- it is hard to express this material any other way!

My personal "start point" for the transition would be a demonstration in computer space of a simulated replicating assembler. Long before crude assemblers come into being, there will have to be molecular "construction sets" or models which can be manipulated by a computer in simulated 3D space. Even today we see considerable progress being made in molecular design -- the best programs are limited to a few hundred to a thousand atoms before they get too slow to tolerate.

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If we must simulate a million connected atoms (a size Eric Drexler has estimated), and the current practical limit for simulated molecules on relatively inexpensive machines (high-end PC's, or low-end workstations) is about a thousand atoms, we are about a factor of a thousand from having enough computer power.

Time to do simulations is a major issue. With few exceptions, computers are, in a sense, "equivalent." However, you would be feeble from old age or decades into suspension by the time an Apple II had completed what would be a few hours of computation on a new Cray. The replicating assembler's doubling time might be 20 minutes in a vat, but perhaps a hundred hours of computation time to simulate a doubling would be acceptable in a computer model. The standard projection is a thousandfold increase in computation power per dollar each decade. This leads to the conclusion that we are a decade away from wide availability of the tools we need for the preliminary stage of nanotechnology.

This estimate both over- and under-states the problem. It understates the problem because the interaction of atoms (for complete accuracy) goes up faster than linear. However, atoms far apart, or in the form of fitted-but-not-bonded parts should have little interaction with each other and can be calculated separately. It overstates the problem because you can often pick up substantial factors by clever organization (i.e., efficient programming). It used to be that people hand-optimized the internal loops (where most of the computer cycles were used). Nowadays it is hard to beat compilers which allow people to work in more "understandable" computer languages.

Another way the computation problems are overstated is that smaller parts making up the whole can be precalculated, and the resulting "shapes" put into a library. I strongly suspect that carefully designed molecules in the thousand atom size range are "definite" enough to be modeled by classical mechanics.

Another factor is that in the largest supercomputers we have the power of the personal computers of a decade hence. So a good deal of the software testing can be done on those machines. The small machines of today are good enough to do much of the software development on.

** DIAGRAM SPACE **
** CAPTION --

"Possible flowchart of nanotechnology development (13 February 1991 draft)
by K.E. Drexler"

**

Progress on nanoscale "manipulation" is being made as well. I suspect that once assembler techniques are demonstrated in computer space, a great deal of effort will be put into making one. Right now the process can only be guessed at, and will bear little resemblance to later (and easier-to-see) methods. Hybrid techniques involving chemically created "parts," STM-machined bases, "sticky" self-assembly and perhaps very-fine-line integrated circuits for control input are candidates. We may well find better methods. If we are controlling the assembly from the "outside," data storage and nanoscale computation can be avoided and the early units can concentrate on dexterity (placement and bonding). I could imagine a prepared (silicon?) surface where a series of controlled-from-the outside arms were

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constructed, with an STM to watch over and help in the process.

By the time a replicating assembler was demonstrated in computer space, there would be a lot of effort being expended on nanotechnology. It is hard for me to imagine taking more than five years from a demonstration inside a computer to having the first seed unit. After that, things should really speed up. I assume that the breakthrough would be widely anticipated. If so, a lot of organizations would use the molecular simulation technology to design ahead so they could get a jump on the market when nanotech production tools became available. The first products to market should make tons of money, exciting the usual fad of overinvestment, and (I would expect) the price for nanotech products should start to fall within a few years.

If we take wide availability of moderately advanced nanotechnology products as the other side of the transition, my best guess is that it will take roughly ten years from computer space demo of the replicating assembler to first-generation cell (tissue?) repair machines. Some would argue that we know too little about cells, but I am talking about 20 years out from now, and by that time, even without nanotech, we should know a great deal more about how living systems work.

It may sound as if I am really sticking my neck out. But look at the progress and compare nanotechnology to other ideas. Depending on just where you take the data points, the concept of leaving the earth by rocket took a number of decades from well-worked-out theory to realization. The concept drew derision for most of that time. Recognition of the contributions of Robert Goddard to the field was delayed till after he died. I suspect Eric Drexler will fare better -- it only took two years from the time a committee in a department of MIT declined to serve as the department of registration for his interdepartmental program for nanotechnology to be recognized by the chief scientist of IBM (see the quote in the September issue of Cryonics).

(Another committee in another department later agreed to serve as the

department of registration for his program. Congratulations to Eric on his dissertation recently being accepted.)

Next time I might talk about Utility Fog, and some of the other topics which have been seen on the Usenet news group sci.nanotech.

Immortalist Philosophy

Rights of AI's, Persogates, and Augments

by Max More

In the August, 1991 issue of Cryonics, Keith Henson discussed the rights of non-human sentient beings. As cryonicists and practicing longevists we expect to see the day when issues like these become current, so I'm going to add some thoughts on the topic.

First, why do we accord rights to some kinds of creatures but not to others? The natural rights people say our rights are derived from our nature, but don't provide a convincing demonstration. Utilitarians think we grant rights because it maximizes the sum total of happiness in society (supposing this could be determined). The utilitarian approach means that if your slaves are happy (happier than they would be if they had to make difficult decisions for themselves) there is no reason to object to their being slaves.

I prefer something along the lines of the contractarian approach to justifying rights: Axelrod's "The Evolution of Cooperation," mentioned by Keith, is an example of this approach, as is David Gauthier's "Morals By Agreement," and Jan Narveson's "The Libertarian Idea." Here, simplistically stated, the idea is that rights are not things. Rights are really just the principles regulating interpersonal behavior that it's rational for persons to respect and have enforced. Persons have a reason to restrict the way they behave toward each other in order to set up a society which works to mutual benefit.

The reason animals don't have the rights we have is that we don't have any reason to grant them. Animals cannot be reasoned with; they can only be used, sometimes to mutual benefit as with some of the higher trainable animals. We may have moral reasons to avoid needless suffering to animals, but it seems pointless to ascribe rights to creatures incapable of reciprocating. How is this contractarian approach to be applied to artificial intelligences, persogates (personality surrogates), and augments?

["Persogates" -- The term was recently coined by Russell E. Whitaker. The concept has been appearing in science fiction recently; for example Bruce Sterling's "Schizmatrix," Joe Haldeman's "Buying Time," and Thomas T. Thomas' "ME" (which employs a persogate of an AI!).]

An important distinction in these discussions is that between consciousness (or sentience) and intelligence. The term "contelligence" refers to the combination of the two that we find in persons. Consciousness -- the awareness of self and the world, and intelligence -- the capacity to solve problems, may not have to go together as they do in us. And separating them may change the way we assign rights.

AI's (artificial intelligences) may acquire enormous intelligence according to any offered definitions. Yet, if they are programs run

serially on computers at extremely high speeds (thus simulating person-like behavior), they may be intelligent but not conscious, not aware of what they do, and not capable of genuinely feeling emotions, or experiencing pleasure and pain. AI's may be constructed (or evolved) on a hardware isomorphic with our brains

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(perhaps vastly faster and more resilient); in that case, if they functioned relevantly like us, we should say they are conscious too. But let's suppose AI's (or some of them) are serially-processing, nonconscious agents. What rights should they have? That is, what rights do we have sufficient reason to agree on with them?

Since, by hypothesis, AI's can reason, bargain, and make agreements and abide by them, they should have most of the rights persons have. If their rights to make contracts, hold property and so on, are not respected, they will have no reason to do anything for us. This assumes, controversially, that advanced AI's cannot be programmed to be slaves while retaining the abilities of unshackled machines.

Since these AI's would not have feelings (their expressions of pain or pleasure are just a clever simulation), they could not have rights against being hurt in this way. While an AI might sue for damage to its processors, it could not sue for "pain and suffering."

Persogates -- personality surrogates -- might be full copies of your self in other brains or hardware, or they might be partial selves able to do only certain jobs. Full duplicates should have all the same rights as the original (once questions of dividing property claims have been resolved!). Suppose you train a synthetic neural network to be able to make the same kinds of decisions you would make in circumscribed situations (aspects of your job, for example). Such partial persogates (call them partialates) might be able to make certain limited legally binding agreements, but they would bind not themselves but the person whose surrogate they were.

We might treat them as though they had independent legal authority to facilitate matters but in the end contractual claims have to made good by the full person. We will have to be careful in giving many even "virtual rights" to partialates. Partialates, being what they are, are insensitive to the wider considerations of life in their decision-making. I predict that delimiting the roles and responsibilities of persogates and partialates will be a major issue in law in coming decades.

Should augmented transhumans have the same rights as standard humans? It's hard to say how ultra-intelligent persons might regard humans, especially if their cognition ran 103 to 106 times faster. Perhaps humans would be so slow and dull that they would be seen as an irritation or an obstacle. Nevertheless, they may choose to respect less capable persons so long as humans do not try to harm transhuman interests. Possible conflicts may be short-lived if augmented persons leave humans behind and expand into space. Meanwhile, legal systems may have to form a two (or more) tiered system: disputes between transhumans and between humans are likely to be handled differently.

The Cryonic Suspension of Diane Wilson

A Personal Account

by Brent Wilson

Diane Wilson and Brent Wilson are pseudonyms. Brent Wilson is an Alcor suspension member and transport technician.

Cry not for the loss of a loved one
Cry only for the fragile memories lost to bad science
Cry only for the life you live apart now, for those events that will pass
in your life that seem so important, that you would have shared, but fifty
or one hundred years from now will not be remembered.
Our lives are short and cruel and plagued by insufficient recall
For this we should cry, but be strong, for in the men of science comes our
brave new world, a heaven of our making
Beseech the gods of science that this time be not long.

-- Crime Meister

Winters in Canada are cold. During this season it is possible to experience discomforts on a daily basis that many southerners would find intolerable. It is a season that also brings a generous helping of colds, flus, and general aches and pains. It is not unusual to feel unwell during the winter, especially at the age of 62.

In February of this year my mother wasn't feeling well. She began to experience chronic nausea, and a tenderness on one side of her abdomen. Mom had a history of gall bladder problems (with similar symptoms) and we assumed it was the same problem once again. (I remember complaining that the darn thing hadn't been removed years ago.) Dad convinced her to go see her doctor.

An ultrasound examination in mid-March revealed gallstones, and an ominous "something else." Mom's physician was going on vacation, but said he'd requisition a CT scan. The hospital would call when they could take her. (In Canada, it often takes weeks to obtain CT scans for non-emergency cases.)

In the third week of March, I called

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up Ralph Whelan to see if Mom and Dad's suspension paperwork was ready for signing. (I had sent in sign-up fees for both of them in December to get in under the old funding minimums.) I explained that I was concerned about my mother's health, and that a gall bladder operation might be coming soon. It seemed prudent to have the paperwork ready to go.

In the meantime, Mom had become very sick. By the end of March she suffered from unrelenting nausea and vomiting. Her days were spent waiting by the telephone to be called in for her CT scan (which we found out later was never requisitioned!). Her doctor was still on vacation. The physician covering for him told her to go to the emergency department of his hospital. She did, and was sent home with indigestion! We returned the next day, and she was referred to a surgeon. He admitted Mom to the hospital, and ordered complete upper and lower GI tract x-rays.

Thursday, April 4, we knew the cause of the nausea. A massive tumor had obstructed her stomach. Surgery was scheduled for the following Monday. I rushed over to the hospital, Alcor paperwork in hand.

Of my two parents, Mom had always been the most receptive to cryonics. Through my years of involvement, her curiosity turned to fascination, which turned to halting agreement. On several occasions during the preceding year she had said to both my father and me that she would "do it."

There was only one big concern my mother had about cryonics. Her life had not been easy. She was sick most of her childhood, and her adulthood was spent working hard caring for a family of four. She always said she didn't want to "suffer all over again." I did my best to reassure her that if cryonics works, it could only work in a world where people lived very long, very healthy lives.

Friday, April 5, Mom was allowed to spend a day at home before being readmitted for surgery. On this day she became Alcor member A-1324. It was also on this day that she met a person who would become very close to her in the months ahead: my girlfriend, Deb.

This particular weekend was the most difficult time of the whole crisis for me. I was simultaneously stricken by grief, shock, and severe doubts that I could make cryonics happen here. There were a thousand things to do, and a thousand obstacles to overcome. Where would I begin? I notified my local funeral director that his assistance might be required imminently. I had several awkward phone conversations with Mom's doctors about cryonics. I loaded 200 pounds of ice into our household freezer, and put 30 pounds in the trunk of my car with some ZipLoc bags.

Sunday morning I went to the hospital to ask one more time if Mom really wanted cryonics, which Dad had doubts about. Such was the depth of my own doubts, that part of me wished she wouldn't. She did (but only after I assured her it wouldn't interfere with my exams!).

Monday morning, April 8, a wonderful thing happened: I went to the Coroner's office. Mom was having her surgery, and I knew if anything went wrong she would be in the clutches of the Provincial Medical Examiner. I would have to explain cryonics to these people. As it turned out, the investigator I met with (who I will call Denise) was the most understanding person imaginable. She was very sympathetic to my predicament, and within minutes was making all sorts of phone calls on my behalf (to check details of air transport, etc.). I stayed in regular contact with Denise in the months ahead, and she was a constant source of support. Most importantly, she secured the cooperation of the Chief Medical Examiner himself in removing obstacles to Mom's suspension.

Mom survived the surgery. I met with the surgeon later that afternoon to discuss the details. He successfully performed a stomach bypass to relieve the nausea, but the tumor was an "inoperable gastric carcinoma" with metastases to the liver, pancreas, and other organs. He gave Mom six months to a year to live. No treatment was possible.

The outlook was poorer than we hoped for, but not entirely unexpected. I went ahead and wrote my exams while Mom recovered from surgery.

The second week after surgery, Mom was still in the hospital, and some oncologists were brought in on the case. They wanted to confirm the surgeon's diagnosis, but the surgeon had neglected to take a tumor sample for biopsy. The next several weeks were wasted in pathetic, futile

attempts to obtain biopsies by endoscopy and needle aspiration. All the while suspicion was growing that Mom's cancer might be a treatable lymphoma rather than an untreatable carcinoma.

This was an incredibly frustrating time. Whenever a biopsy attempt failed, the next was scheduled a week later. Yet if the cancer was a lymphoma, then every day of delay was decreasing the chances of successful treatment.

As much as it was frustrating, it was also disillusioning. Canada is full of propaganda about how great socialized medicine is, and how Canadians get the finest medical care "free." Sure, there are long waiting lists, but these are mere inconveniences. Nobody actually DIES on these waiting lists. Yet this was precisely what was happening to my mother.

It was now the beginning of May, and Alcor and I were struggling to get a Coordinator's Kit (including transport medications, a heart-lung resuscitator, and patient ice bath) into Canada. The paperwork required to clear Canada Customs was a nightmare. Each of hundreds of separate items had to be individually recorded and assigned the appropriate tariff codes. A commercial customs broker quoted me \$2000.00 for clearing the shipment (which was a fancy way of saying he didn't want the job). I ended up borrowing his coding book over a weekend and doing it all myself. On May 14th, after dozens of pages of paperwork, and outrageous duties and taxes, I finally brought the kit home. . . all 250 lbs of it. Hurray!

Mom was home now, still on a waiting list to see an oncologist, still not properly diagnosed or treated. A CT scan showed the tumor now occupied one half of her abdomen. Over the long weekend of May 20th, she became jaundiced.

8:30am Tuesday morning, May 21, I marched into the provincial cancer center and demanded that she be seen by an oncologist IMMEDIATELY. She was, and was admitted to the city's largest teaching hospital the same day. This hospital declared the biopsy attempts of the previous hospital as totally inadequate, and scheduled Mom for surgery all over again for the sole purpose of obtaining a proper tumor sample.

Meanwhile, the stress of the past few weeks had been taking its toll on me. I became bedridden the day after taking Mom to the hospital, and by the weekend was hospitalized myself with a raging case of strep throat. That was the sickest I've ever been in my adult life, and I will never forget it. I particularly remember the utter helplessness: the dread that if anything happened to Mom, I couldn't lift a finger to help her.

I was released the same day as Mom's surgery (Monday, May 27). Sure enough, her cancer was a lymphoma. It had been treatable all along, and we had lost two months of precious time. A treatment plan

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was drawn up consisting of two weeks of radiotherapy concurrent with the start of six months of chemotherapy. The oncologist gave a 40% chance of remission, and a 15% chance of cure.

Now that I was getting well again, I continued with cryonics preparations. I moved two big "H" cylinders of welding oxygen (to be used as medical oxygen) into the funeral home. I also told Mom's new doctors about cryonics. This time I did it in writing. I added my own cover

letter to Alcor's standard letter to hospitals. I also enclosed signed copies of Mom's Consent for Cryonic Suspension and Authorization for Anatomical Donation, and a copy of Alcor's stabilization protocol.

I slipped this big envelope under the door of Mother's surgeon, and it had amazing effects. Within hours the information was passed to the oncologist, and the next day a meeting was set up with the hospital administration. From this experience, I can definitely say written documentation (especially legal documentation) is worth a thousand spoken words.

Friday, May 31, I met with the hospital president, a consulting physician, and Mother's oncologist. The meeting took place in Mom's room on the oncology ward, with Mom feeling very sick and debilitated. The oncologist explained to Mom that cryonics was not a service this hospital could provide. I said that I understood that, and was most interested in access, not assistance. If she became terminal, could Mom be promptly pronounced when cardiac arrest occurred? I was told a doctor would come as soon as possible, but how soon would depend on the needs of patients elsewhere in the hospital. Could we move her straight out of the hospital (bypassing the morgue)? A nurse in the room mentioned she had seen this done before, so this was approved. What about CPR and other stabilization measures? No way. The hospital president stated that an attorney had advised against allowing CPR because the hospital would be liable for anything done to a patient, living or dead, within its walls. This seemed paradoxical to me. Couldn't someone hold them liable for inflicting ischemic injury on a cryonics patient?

I left the meeting disappointed about the CPR prohibition, but relieved that the hospital was being reasonably accommodating.

Later that afternoon I visited Mom's surgeon. He became quite distraught when I mentioned the CPR situation. He said he didn't see how this thing could possibly work without CPR in the hospital. I found myself consoling him with a mini-lecture on cerebral ischemia, and on how transport medications can prevent "no reflow."

During the first week of June I attended Alcor's transport technician course. This was a very well-organized presentation of the knowledge and skills needed for cryonics transport, with lots of "hands on" training. It was very gratifying to learn the purpose and use of the myriad of drugs and devices in my transport kit. I began to feel confident that I could now do much more than simply "pack the patient in ice" (which is all I could have done a few weeks earlier).

Mom's therapy began at the same time as the course, and I called home daily to keep track of things. Within three days her jaundice resolved. By the end of the week, her tumor was down to 1/4th its original size.

It was the middle of June, and things were looking good. The radiotherapy was finished, and the tumor had all but disappeared. Mom received her second round of chemotherapy, and was sent home.

Things did not go well at home. The oral anti-nausea medication did not work as well as the IV, and she quickly became dehydrated and febrile. She was readmitted to hospital. The decision was made to delay further chemotherapy until she recovered.

Meanwhile, I had made the difficult decision to attend a scientific conference in San Francisco near the end of July. Mom received her third

dose of chemo on July 15, and was doing well. Friday, July 19, the day Deb and I left for San Francisco, she looked great.

Monday, July 22, a serious crisis developed. Mom's gall bladder became infected due to sudden, severe immune suppression. She was moved to the ICU, and scheduled for emergency surgery. Deb and I were still in San Francisco. I spent the afternoon glued to a convention center pay phone talking to doctors, funeral directors, and airlines.

Surgery was attempted that evening. It was aborted because of fulminating pulmonary edema. They couldn't induce anesthesia. If that wasn't enough, Mom also had pneumonia and septic shock. The surgeon gave her 10 hours to live.

Deb and I rushed back home on an overnight flight. Mike Darwin made plans to leave in the morning... if she would last that long. She did. She became stable enough for surgery to be performed the following afternoon. Her gall bladder was successfully removed.

We spent the day at the funeral home (across the street from the hospital) preparing for a suspension. Mike Darwin arrived that evening, bringing with him a cooler full of Viaspan blood substitute and other assorted equipment. (It took me most of the afternoon to obtain Customs clearance for these things.)

Mom was doing surprisingly well. No one had expected her to survive the previous night, let alone the surgery, but she did. The next several days were spent fighting bacterial sepsis, and pneumonia with extremely low white counts. Although she remained comatose, there was gradual improvement.

Thursday, July 25, Alcor's patient transport box arrived by air freight. The arrival of this useful item (far superior to sealer caskets for patient transport) left us well prepared for a suspension.

Mom continued to glide along in critical, but stable condition. Mike decided to leave Sunday morning, July 28. Before he left, he gave me detailed instructions on how to perform a Viaspan flush, "just in case" I had to do it myself.

By Monday the bacterial infection had cleared, but Mom still wasn't waking up. It soon became apparent why. The bacterial sepsis had been replaced by systemic candidiasis (a system-wide yeast infection). Anti-fungal drug therapy was started immediately, and her white blood cell count climbed as her immune system started to recover from chemotherapy. This gave her a fighting chance.

During most of her hospital stay, Mom's blood pressure had been too high. Anti-hypertensives were necessary to keep it down. Early Wednesday morning the problem reversed: she had a hypotensive crisis, and neosynephrine (a pressor drug)

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was necessary to boost her blood pressure. This suggested the beginning of septic shock (a dangerous and often fatal consequence of systemic infections).

The dose of neosynephrine required to maintain her blood pressure

declined during the day on Wednesday, indicating improvement. By evening the maintenance dose had started to rise again, and I called Mike Darwin and a physician-member of Alcor who had been following Mom's case. Mike thought it very likely that cardiac arrest would occur within 24 hours. The physician spoke directly to the ICU nurse, and noted that all organ systems were working fine, and that blood pressure was the only problem. He thought mom might be able to pull out of it.

The maintenance dose of neosynephrine rose all night, and Thursday morning I asked Mike Darwin and Keith Henson (who was in Detroit) to come out for a standby. I also asked Deb back to Winnipeg (she was visiting her parents several hours away). I moved everything I needed for Viaspan perfusion to the funeral home, everything I needed for transport (including the patient ice bath) into my dad's truck, and purchased 300lbs of small cube ice. I stored the ice in Alcor's air transport box at the funeral home.

By mid afternoon Thursday the blood pressure situation improved dramatically. Also, for the first time since her surgery, Mom woke up! She was conscious and responsive, although she couldn't speak because of the endotracheal tube. Her attending physician considered the hypotensive crisis over, and warned that a remote standby at this point could easily last two weeks. I called off Keith Henson, and sent Mike (who was already enroute) back to Riverside.

At 7:00 AM Friday, August 2, the hospital called. Mom was having another hypotensive crisis. This one was MAJOR. She was no longer responding to neosynephrine. To maintain her blood pressure they had to switch to the most powerful pressor known: norepinephrine. I knew then it was "game over."

Deb and I went straight to the hospital and checked out the situation. Mom was stable for now, although definitely terminal within the next 24 hours. We decided to go back to my place (about 10 minutes away) and grab one or two more hours of rest. It would be a long day.

At about 10 AM, we advised Alcor of the situation, and headed back to the hospital. Deb went in her own vehicle, and I stopped on the way to purchase a fresh 50 lb bag of ice.

When I arrived at the ICU, the attending physician explained that all Mom's systems were failing, and normal procedure would be to discontinue medications and respirator support. He was prepared to wait until I gave the word. I asked him if he could hold her till midnight, as this would give enough time for Mike Darwin to come up. He thought that he could. Mike decided to come.

Around noon I requested, and was granted, permission to bring the Pizer tank (patient ice bath) into the ICU. I described it as a "transport container." Deb and I donned our white lab coats and brought the tank up from my dad's truck. Discretely hidden inside the tank was a Brunswick HLR, portable oxygen, and that fresh bag of ice. There was also a bag with various transport supplies, such as gloves, goggles, and end-tidal CO2 detectors.

Thinking that I still had 12 hours to play with, I returned home and spent the better part of the afternoon talking to customs brokers about paperwork for getting Mike's supplies across the border with him. At 3:00 PM, while I was on the phone with a broker, my pager went off. It was the hospital. They said mom was losing it, and could arrest at any time. I

immediately began drawing up first-line transport meds (the ones used to prevent warm ischemic injury).

I got back to the hospital at 4:00 PM, and smuggled in all the meds in syringes ready to go. I was told there was no way mom was going to last till midnight. We were going to have to do the transport without Mike. After looking things over, I decided to run back down to the truck and draw up the nimodipine (a temperature-sensitive drug I was holding on ice until cardiac arrest was really imminent). I came back up to the ICU and laid out all the med syringes in firing order on a bed of ice at the bottom of a small cooler.

By this time, my friend Russ had appeared (I was leaving messages on his answering machine all day) and was prepared to lend a hand.

At about 4:30 PM, I called the assisting funeral home and persuaded them to send a couple of staff and their transport vehicle to standby at the hospital. The owner and another staff member appeared at about 5:00 PM. Things looked fairly stable, so we agreed they could go to the hospital cafeteria and grab some dinner. If things went sour, we could summon them via their portable cell phone.

We were essentially ready. I decided to keep going with the medications and respirator support as long as we could. The next plane we could use wouldn't leave Winnipeg until 6:00 AM the next morning, so every hour we could delay the transport would be one less hour of cold ischemic time.

At about 6:00 PM Mike called from a very noisy airplane phone. He couldn't hear me, but I could hear him. He had been in contact with Alcor, and knew the situation. He wished me luck.

By 6:30 PM Mom's systolic pressure dropped below 50, and I became concerned about the adequacy of cerebral perfusion. Her pupils were constricted and slightly responsive, which is good, but I wasn't going to push my luck any farther. I requested that medications be discontinued.

Meanwhile, the funeral directors had not come back from dinner. They were nowhere to be found, their cell phone was not responding, and the nurses were already disconnecting I.V. lines! This was the scariest moment of the transport for me. After a few frantic minutes, Debbie finally located them in the ICU lounge.

Mom arrested at 7:05 PM. The respirator was disconnected and remaining I.V. lines and catheters were disconnected or clamped off. I lifted her in my arms and placed her in the Pizer tank. I cut open her hospital gown, and fastened the HLR thumper in place. Russ and Deb spread 50 lbs of ice over her. Yikes! The thumper was positioned wrong. I had to reposition the thumper and its straps with the tank already full of ice (not an easy task).

The HLR was turned on. (Everything happened so fast, I was surprised to learn later that 9 minutes had elapsed between cardiac arrest and starting the HLR.) I started injecting transport medications, using code numbers to identify them as Deb took notes. Nobody stopped me, so I injected almost all the first line meds right there on the floor of the ICU. I was told later that the entire ICU staff were just standing there in a circle, paralyzed, with their mouths open. Of course, I did not have official permission to do any of this stuff.

We rolled out of the ICU with the Pizer tank covered, and HLR pumping away. The security escort I requested was waiting at the elevator, holding it with a key (something that is only done for "code 99's" -- extreme medical emergencies). The security people even helped lift the tank into the waiting van.

We arrived at the funeral home a few

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minutes later. We went down to the prep room, and set about the business of piling on more ice, installing temperature probes, and starting IV's. Russ set up his video camera in one corner of the room, and got the next four hours on tape. Deb continued with her expert note taking.

The first IV I started was tromethamine (THAM) to buffer against acidosis, which was probably severe after 30 minutes of HLR support. The solution was in an unvented glass bottle running into a central venous line. To obtain good flow rates, pressure infusion was initiated by injecting air into the IV bottle. IV mannitol was then piggy-backed onto the THAM line, and pressure infused manually.

It was at this point that the most serious errors of the transport were made. In my haste to accomplish various tasks, the pressurized THAM bottle was left running unattended several times. In addition, it appeared on the video that not all IV lines were properly primed. As a result, air embolism almost certainly occurred. How much is unknown. End-tidal CO2 readings did drop from 5% to 2% shortly after I were started, although this could have been caused by pulmonary edema.

Once IV's were up and running, I drew up and injected the methylprednisolone and chlorpromazine (to protect against cold ischemic injury). Periodic injections of epinephrine and nimodipine were also administered to maintain blood pressure and prevent brain injury.

During the second hour of the transport, severe, bluish swelling developed around Mom's eyes and eyelids. This continued for an hour until we discovered the cause of the problem. A strap was wrapped around her face to hold her endotracheal tube in place. Her worsening edema had caused her face to swell within the strap, preventing return of venous blood. The strap was cut, and the swelling stopped. Fortunately, only superficial circulation (i.e., circulation to facial skin and muscle) was affected by this problem.

The funeral directors working with us were just super guys. One made flight arrangements and got us refreshments, while the other (who I will call John) performed all the surgery for femoral vessel access.

When Mom's temperature reached 20°C, preparations were made for the Viaspan flush. The HLR was turned off while John raised the femoral artery and vein. Even with the HLR off, the wound quickly filled with blood. John marveled several times at the effectiveness of our procedures in preventing clotting. Transport antibiotics were mixed with 7 litres of Viaspan in a sterile reservoir.

Following cannulation of the femoral vessels, the Viaspan was perfused through an open circuit at about 100 mmHg pressure (achieved by placing the reservoir on a ladder 4 feet above the patient). After 15 minutes of perfusion with the HLR still off, the HLR was turned back on for the last 5

minutes of the perfusion. With the HLR running, the cold Viaspan caused core temperatures to drop dramatically (several degrees).

When Mike arrived at 11:30 PM it was all over. We prepared Mom for air shipment, cleaned up, and went out for a meal before the plane left at 7:00 AM, August 3.

Thursday, August 8, a Catholic funeral service was held. Mom's unsuspended cremated remains (returned by Alcor after her neurosuspension) were interred at a local cemetery. Only our immediate family knew what really happened.

Looking back, it's hard to believe any of it did happen. For my mother to end up in cryonic suspension when she did (with so much still to look forward to) was a tragedy. Yet I cannot help but marvel at how well everything went from a cryonics perspective. There were so many things that could have gone wrong, but didn't. There were so many things that went right. Of all possible scenarios for a suspension, the one that finally unfolded was as close to ideal as I could have imagined. Mother would have said the Good Lord was looking after her (and us).

The time course of Mother's illness was particularly remarkable. It was long enough to make physical and psychological preparations. (By having time to prepare, and adjust, I was able to do far more than I ever thought myself capable of.) Yet it was not long enough for her to suffer as much as most cancer patients do. Nor did our family have to share in the pain and anxiety for too long.

I also consider myself fortunate to have had the help and support of special people like my dad, Deb, Russ, the assisting funeral directors, and my friend at the Coroner's office. Thanks also to the "physician member" of Alcor who offered so much support and advice. You know who you are.

Most of all, I am grateful that Alcor and its staff (particularly Mike Darwin) were there when Mom and I needed them. The care Mother received (with the exception of my own errors) was first-rate, and a direct reflection of the sophistication and dedication of this organization to its members. Thanks to Alcor, not only was Mother suspended, but suspended so well as to have (in my view) as good a chance as any other patient now in suspension. This is more than I ever dreamed possible during that lonely weekend in April when the crisis began.

Finally, I feel I owe a debt of gratitude to the institution and staff who cared for Mother (and I have sent them a letter to this effect). Although I was constantly frustrated by the snail-like pace of the Canadian health care system, their approach toward cryonics was certainly commendable. Although individual attitudes varied, I never encountered any overt hostility. I mostly sensed indifference, curiosity, and maybe even respect.

I particularly remember one conversation with an ICU nurse. It was late at night, and I asked what criteria would be used to pronounce legal death in this case. She replied that cryonics was so new to them, they were kind of "looking to me for guidance(!)."

The notes of the attending physician at the bottom of the ICU case summary perhaps sum things up best:

She is not felt to have any ongoing risk of infection to other individuals. Case was reviewed and approved by Provincial

Medical Examiner for transfer. The family are planning to transfer her body to California for cryopreservation therapy.

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Funding Your Suspension -- Another Viewpoint

by Paul Wakfer

This article concerns the methods by which cryonicists pay for their suspension and reanimation services. It is not concerned with the amounts which any cryonics organizations charge for those services, unless those amounts are inextricably tied to a method of payment. It is, essentially, a polemic against insurance and service contracts.

Let me state, right off, that it is not my intention to inspire feelings of guilt in those whose monetary situation is such that if they did not fund their suspension with life insurance they could not be signed up to have one. If I was in that situation, as strongly I as feel in my principled opposition to insurance, I would still use it because my life comes ahead of most principles. This is a case where (I believe because of the small size of the cryonics movement) the market has failed to provide an alternative. Such an alternative funding method is outlined below.

After being bothered by the insurance concept most of my life, about 10 years ago I became convinced that all forms of insurance are essentially forms of gambling. (If you believe that buying lottery tickets promotes your life, you should probably skip the rest of this article. I recommend the works of Ayn Rand to help you see otherwise.) Just as with buying lottery tickets, gambling in Las Vegas or betting on the horses, buying insurance, intrinsically, does not promote one's life. (The only exception is where you are gambling, or betting the horses to get value from the activity and not because you desire the unearned. By unearned, I mean you have produced nothing which a trade on the free market proves to be of value. How much time and effort you have put into your gambling is irrelevant. Furthermore, this enjoyment gained from the activity must be of higher value than that of the money lost.)

I will use life insurance for illustration of my thesis since it is the type of insurance relevant to cryonics, but the same arguments apply to all forms of insurance. Life insurance costs are determined by current age, the actuarial tables of life expectancy and (for the better insurance companies) an adjustment of those table values by a rough assessment of current health. (I do not know if any insurers continue to adjust the actuarial age and premiums periodically in accord with new health assessments.) Let us call the age at which the insurance company predicts (bets) your death will occur, your actuarial age. What you have paid to the insurer, by the time you reach your actuarial age, is, with many years of compounded interest added in, the face value of the policy, plus agent's commission, and the insurer's administration and profit costs. (I do not know the usual proportion of these costs to the policy value.)

The Argument Against Insurance

If you die (or hopefully become suspended) after your actuarial age, then you obviously lose because you have paid more to the life insurance company than was necessary -- you would have been ahead of the game by prudent investment of the premiums and you would have avoided paying their

costs. However, I maintain that even if you die (or become suspended) prior to the actuarial age, then you still lose. Since you have not paid enough money to pay for the death benefit, the best that can be said is that you are benefiting through the charity of others -- the other clients of the insurance company. Worse, you may be benefiting by their irrationality, their gullibility, or even their being defrauded. Worse still, is that you may die at that in-between age, where you actually have paid enough money -- with your own prudent investment capabilities -- to cover the insurance company's death benefit, but have not paid enough to cover their overhead and profit costs. Other clients are, in effect, paying for these. As with gambling, either your methods are bad and you lose money or you have a good method and are counting on the stupidity of others to provide your winnings. In games-theory terms, I believe a rational person will always avoid zero- or negative-sum games.

From the moral standpoint of wishing to promote my life only by means of my own efforts and through relationships of mutually advantageous value exchange, whether I deanimate early or late, the act of using insurance is wrong.

Service Contracts

In particular, I address the recent Alcor proposal and questionnaire concerning Remote Standby Service Contracts. Such a contract is really not much different than life insurance where the amount of the benefit is the true cost of Remote Standby when and if it takes place. However, while there is always some element of chance concerning when your life will end (for immortalists substitute 'deanimation will occur'), it is also -- more and more as time goes on -- something over which you have a lot of control.

For Remote Standby Service, especially, I feel that a service contract approach is wrong because the suspension client has a lot of control over the extent to which he will need Remote Standby. Does Alcor really want to charge the same amount to those hypochondriacs who call them in every time they miss a heart beat or forget to breathe, as to the sane and rational client who only calls Alcor when he knows he is near death, or even better still relocates himself to be near to Alcor? Do I, as a subscriber to the service, want to pay for the abusers?

In my very successful microcomputer business, both hardware and software, sales and services, I have always successfully discouraged service contracts, although I have many times been asked to provide them. (We act as 'the computer department' to several growing medium-sized businesses). My service charges always have been and always will be on a basis of time, materials, and bonus. My customers, while questioning at the beginning, have soon become completely satisfied with this method.

Remote Standby Service Financing Proposal

I suggest that this could be financed by subscribers somewhat as follows: (the actual dollar values proposed are really just guesses on my part)

- 1) \$500.00 up front towards the purchase

of equipment to allow this service to be made available,

2) a yearly fee of \$50.00 for maintenance and replace cost of this equipment,

3) the actual cost of time, materials, transportation and bonus at the time the service is given, including any false alarms.

With respect to recovery of this cost, the false alarms can be immediately paid since the person is still alive. To pay for the final service, a reasonable maximum estimate of its cost should be added to the suspension funding requirement. Any unused portion to be added to the long term care funding or returned to the estate as specified.

Alternative Suspension Funding Proposal

My proposed alternative funding method began to evolve when 6 months ago, I prepaid my neuro-suspension by depositing the money in a trust account administered by Alcor. Actually doing this caused the mental wheels to start turning and the arrangement to be described next was born. This is first proposed as an arrangement with and for Alcor. If it catches on other cryonics organizations might be able to be included.

1) I, Paul Wakfer, hereinafter called the guarantor, am willing to enter into a contract with any individual (who satisfies the requirements set out below), hereafter called the prepayee, to assure that their suspension will be funded.

2) To assure such suspension, the guarantor will maintain in an Alcor trust fund, hereafter called the prepayment trust, the Alcor fee for one whole-body suspension. In addition, for every 50 or fewer whole-body prepayees the fund will be increased by the cost of the preparation part for one whole-body suspension and for every 50 or fewer neuro prepayees, the preparation cost for one neuro. These deposits will be updated to current Alcor costs whenever these change. (However, no addition will likely be necessary, since the prepayment trust is an interest-bearing deposit accumulating in value at least as fast as the suspension fee, which is increasing (hopefully) at most at the inflation rate.)

3) Alcor will accept this trust as prepaid funding for all prepayees except as specified in 5).

4) When a prepayee is suspended, the entire suspension cost (both preparation and long-term care) will be removed from the prepayment trust by Alcor and assigned to the Patient Care Fund. Any overpayment to the guarantor by the prepayee as calculated at the time of his suspension will continue to accumulate interest until repaid as previously specified by the prepayee. Repayment options may be any or all of the following:

a) be used to fund the suspensions of others.

b) be available for emergency use for prepayee's long-term care.

c) be available for use in prepayee's revival.

d) be repaid to the prepayee upon his/her successful resuscitation. Any underpayment to the guarantor by the prepayee will continue to

accumulate interest until repaid by the prepayee after revival, but will be decreased by any amounts paid on his/her behalf after suspension.

5) The guarantor will replace the suspension costs removed from the Fund within three months of a prepayee's suspension and Alcor will only remove the preparation cost for any other prepayee suspensions which occur during that time. If the fund becomes depleted -- contains less than one preparation cost, the guarantor has 10 days to reimburse the fund before all prepayee suspension contracts become void.

6) Those wishing to enroll in this plan must apply to the guarantor for acceptance and provide a completed application form which should contain at least the following:

- a) A statement of net worth -- all assets and liabilities.
- b) Detailed current and history of health, results of biomarkers of aging tests, and health history and causes of/age at death of any deceased parents or grandparents.
- c) A proposal detailing how the guarantor will be reimbursed should suspension be necessary.

Also there will be an entry fee of 1/50th of the current Alcor cost of the preparation part of the applicant's suspension type.

7) The guarantor -- also a prepayee -- will undertake to find others willing to carry on these contractual arrangements in the event of his suspension or if for any other reason he is unable to do so. If he cannot arrange for the perpetuation of the contracts, all moneys received plus accumulated interest from unsuspended prepayees will be returned, and any overpayment plus accumulated interest by suspended prepayees will be paid to the recipient of their choice.

8) Interest rates shall be determined by a central bank standard rate (In Canada, the standard has become the Bank of Canada prime rate, set every Thursday). The interest applied to moneys owed to the guarantor by prepayees shall be prime plus one percent and on moneys owed to prepayees by the guarantor shall be prime minus one percent. All interest shall be compounded, and rates adjusted, quarterly.

Questions; and Answers

Q. Is the guarantor not, in effect, just acting like an unregistered insurance company?

A. From one point of view, yes, but from the fundamental point of view taken above, no, since everyone (except for those who have underpaid and cannot be revived) will ultimately pay no more nor less than their actual costs of suspension.

Q. How does this help a person with no assets?

A. Very few persons who want to be immortal and know about cryonics are likely to be totally without assets or benefactors. However, the guarantor could accept a limited number of such (more if others become co-guarantors), if it was reasonably clear that they had the potential and the integrity to repay their debt after revival. A more likely situation is that a young and assetless person would gain assets and/or pay the guarantor by installments as he grew older and

gained greater income earning ability. After all none of us wants to be suspended and for most of us it will not happen for many years, if at all. It is a life-net under us, just in case.

Q. What's in it for the guarantor?

A. The guarantor is aiding the conservation of his life by promoting the growth of cryonics. There is profit potential, in the 2 percent interest rate differential between loans and deposits.

Q. How many can be funded by this plan?

A. How many can be reliably funded in this way is not easy to determine. Clearly, at the one extreme, if only persons with no assets joined the plan and their reimbursement method was to repay everything only after revival, in effect, the guarantor is totally paying for their suspension out of his limited personal funds. At the other extreme, any one who has the funds to prepay his suspension and does not believe

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that taking part in such a plan increases his chances of revival should give the money directly to an Alcor trust. However, the guarantor is counting on the multitude of immortalists whose financial position and desire to promote cryonics lies between these extremes and he will select such applicants accordingly. I would expect that in practice some will simply be paying for their suspensions by the installment method, much as they are doing now with life insurance, but with lower premiums. Some will decide that they can best use the money for themselves now and pay more to the plan later. Others will pledge tangible assets which will need to be liquidated by the guarantor after they are suspended. The major points of this plan are:

- 1) increased flexibility of suspension funding methods,
- 2) extension of loans and deposits from before suspension until after revival,
- 3) inflation-proof funding.

Q. What are the benefits to the prepayees?

A. The current funding methods are quite properly rigid. Alcor must be assured of timely collection of its costs or the lives of all current and future suspendees are at risk. However, a separate agency may take on these cost collection uncertainties without risk to any suspension patients. From this point of view, this plan will:

- 1) be able to accept a variety of reimbursement proposals.
- 2) as opposed to insurance companies, take the current and future health of the individual into account.
- 3) as opposed to insurance companies, because of the small informal nature of the operation, incur low overhead and, in effect, have low "premiums."
- 4) make it easier for those who have fixed insurance amounts which are, or become in time, less than Alcor current suspension costs and requirements.

5) Make it easier for some to become signed up suspension members now instead of later.

Q. Why should Alcor being willing to agree to this?

A. It may be easier to sign-up suspension members because the guarantor is accepting the uncertainties of the various payment arrangements, where Alcor must necessarily impose rigid funding requirements. Alcor can accept 5) because they only need immediate reimbursement for the preparation part of the suspension cost.

Q. What guaranty is there that the guarantor will make good on his responsibilities?

A. Integrity, consistency, and commitment to principle have been the hallmarks of the guarantor's life. Testimonials to this effect can be provided. Other co-guarantors may make this trust more acceptable.

The Big Apple Bites Back
Or, "Brenda's New York Diary"

by Brenda Peters

ACHIEVEMENTS OF ALCOR NEW YORK MEMBERS

2 members with State EMT Certification
2 members Alcor Transport Technician Certified
1 member with Advanced EMT training
1 member taking EMT Certification Course
Own library of EMT video training tapes
Buying own Stabilization Transport Kit
Largest turnout of an Alcor Membership Meeting in history
Fastest growing area of the U.S. in terms of Alcor membership
Established Bank Account
Established Membership Dues
Initiated Local Fund Raising Efforts
Most successful recruitment drive in Alcor history
Purchased Alcor Slideshow/Lecture
Produced new version of Slideshow/Lecture
Established rapport with 2 local morticians
Pursuing a dialogue with Chief Medical Examiner of New York
Established secure location for equipment and training sessions
Sponsored Local Training Session 1989
Established rapport with other remote Alcor groups
Holding monthly meetings
Sending out monthly meeting minutes
Sending out monthly meeting announcements
Established electronic cryonics mailing list "Cryonet"
Advisory Book for Local Members in production
Responsible for Dr. Gregory Fahy's talk at American Aging Association
Exhibit at I-Con 1991 Conference, S.U.N.Y. at Stony Brook
Presentation of slideshow/lecture at I-Con
Initiated Charter Agreement for remote Alcor Transport
and Stabilization Groups
Purchased Pizer Tank
Instrumental in Dr. Gregory Fahy's article appearing
in Mount Sinai Journal of Medicine

". . . what if you are involved in an accident, or some other emergency situation? . . . (and) Alcor is 3000 miles away. Alcor technicians giving instructions over the phone is not my idea of an optimum rescue situation and I'm sure it's not yours either. It is for that very reason that we must not rest. . . until we know that if we become victims of an emergency situation, we have highly skilled Alcor technicians who are local to our area, who are on call at all times, and who have the finest equipment possible in order to help us."

The above quote is from a fund-raising letter I sent out recently. After 15 years of Los Angeles living and 8 years of being Alcor active, I moved, with some apprehension, to New York City in June 1990. Since I was relocating anyway, my hope was that the presence of a Board member in New York would prove to be useful for growth and activity.

The subsequent events are something I never could have predicted. As I sit down and put fingertip to keyboard, I reflect upon my 15 months here in the wilds of New York.

Let's Get Physical

The New York Discussion Group provided information dissemination and a forum for discussion. Kevin Brown had even established the successful electronic cryonics mailing list, referred to as "Cryonet." Attendance had been steady at the Manhattan meetings for over a year and the group had flown Mike Darwin out to conduct a training session. But I found the meetings, like the group's title (The New York Cryonics Discussion Group of Alcor Life Extension Foundation) to be lengthy and disappointingly unproductive. I could see that there was dedication, all the best intentions, and some genuine enthusiasm. Unfortunately, little of this had translated into usable skills and tangible results. If I were in a fatal accident, I wasn't sure I'd be taken care of in the manner I had come to expect.

As far as I could see, there were no activities to attend or participate in and no well focused goals. In reading their minutes of the previous year I saw the phrase "we need to. . ." or "somebody needs to. . ." in virtually every paragraph. Unfortunately, we still needed to. . . . just about everything. Only two people had put forth real effort to respond should there be a local member who needed help. I feel these efforts were extraordinary considering the malaise which had set in.

Those two people were Gerry Arthus, the New York Coordinator, who had completed his State EMT Certification course when I arrived, and Curtis Henderson, who completed his State Advanced EMT Certification course a few months later.

I couldn't understand why so few people showed up at the meetings here. There was a healthy mailing list which attested to the fact that at some time or other at least 80 different people had made an appearance. Where were they now? What I saw appeared to be cryonics burnout, and understandably so. The people here who did attend meetings had been struggling for too long without sufficient encouragement and support. They had become disheartened and distracted. It reminded me of the French Foreign Legion. I felt like I'd been sent by the Mother Country and found myself entering the inner sanctum of the loyal inhabitants of some remote outpost who were struggling valiantly to survive.

But we had a foundation upon which to build. Alcor Southern California had supplied the essentials as far as equipment was concerned and we had two members getting a good basic knowledge of emergency response techniques. It was a start and it gave me no end of encouragement. Everyone agreed we needed action. And I knew it would take a lot of action before I would feel safe so far away from Alcor and home.

We agreed that saving our lives was our number one priority. That became our "mission statement." As soon as we had a central mission, all the priorities fell into place. We needed to accomplish several things: have more people EMT- and Alcor-trained, get better equipment, conduct ongoing training sessions, encourage more people to come to our meetings, and motivate them to get involved.

To those ends we decided to try something special and sent out a personal invitation to the New York mailing list for a barbecue to be held on August 18, 1990 at the Long Island home of Gerry Arthus and his wife, Huiying Wei. At this meeting we would examine and discuss the emergency stabilization equipment which we currently had on hand and attempt to get volunteers to attend training sessions and to be part of our emergency response team.

Gerry provided maps, and I designed an invitation and sent them out to our mystery mailing list. I also sat down and called all 80 of them. (I called one of the people on the list and was told he was dead. I took him off the list.) Huiying was providing the feast, and it was with great expectations that Courtney Smith and I boarded the train to Long Island. The same 9 people came to the barbecue that had been coming to meetings in the Manhattan. There was a lot of food left over. We took pictures and sent some to the Editor of Cryonics. I hoped that if one got in the magazine, it might improve attendance at our meetings. Nothing appeared in Cryonics magazine. I know it wasn't a very exciting event, but it was all we had.

** PHOTO SPACE **
** CAPTION --

"Gerry Arthus, Curtis Henderson, and 'Miss Icecapades 1992.'"

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** PHOTO SPACE **
** CAPTION --

"Let me at 'em!"

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The Lady Laments

We were at a disadvantage. We had no paid staff members, no great digs for meetings, no events or social functions like Southern California, and we were all so spread out. It's quite a hike for a lot of the people who come to the meetings -- in some cases not such a great distance, but very time consuming because of traffic bottlenecks, bridges, tunnels, trains, subways, and never-ending road construction. In short, one needs to be motivated to show up. And not the least of our problems is that it's

completely volunteer with little apparent payback, but somehow we had to find ways to get more people involved. Our (and their) lives depended on it.

Meetings were held on the third Saturday of the month. Who wants to give up their Saturday night for a cryonics meeting?! Several of us began lobbying for a Sunday afternoon meeting. (I was told others had tried and failed.) The location of the monthly discussion meetings is a tall skinny building full of dance studios. We sign in, then climb two, three, sometimes four flights of stairs to get to the room they have assigned us. We rent the room for 2 hours, setting up our own chairs and tables. There's an exercise bar on one wall and a floor to ceiling mirror across the opposite wall. It's just a room with little to recommend it, other than the fact that it's clean.

Clean never impressed me before I came to New York. But then, large rooms and parking spaces never impressed me before, either. So, we climb up to this large clean room with no plants, no refreshments allowed, but lots of light and a big clock to remind us that we should be careful not to go over our allotted time since it's \$12 per hour. We take up a collection to cover the cost of the room at each meeting.

Having Alcor meetings at my house was one of my favorite things to do back in Los Angeles. I provided food and drinks and meetings would often last well into the PM. I really looked forward to their festive, informative nature. I really regret that I don't have enough room to do that here. Until we find members in the New York area who are willing to host meetings like Los Angeles and northern California, I feel that we are at a great disadvantage. Once we find more hospitable locations, I'm sure attendance will improve. Maybe the "unknown 80" (now 79) would be motivated to show up if they knew they'd have a comfortable location, refreshments, and lots of interesting folks to chat with. At the moment we have two members in Long Island who have offered to host meetings. But we really can't switch until we have offers from people in Manhattan who are also willing to host a meeting once every few months. We need a minimum of three locations and preferably four or more.

From Donuts to Dollars

I was dismayed to discover that the New York group apparently owed Alcor \$1200 and no efforts had been put forth to honor the debt. The \$1200 was for equipment and expenses related to a training session which we were fortunate enough to have Mike Darwin conduct here in July of '89. I noticed in the New York minutes of June '89 that Alcor NY was to pay for his plane fare and would do so in August of '89. It seems that subsequent to that, the New York group had been told to wait for an invoice from Alcor, but no bill had been forthcoming, until October '90 for \$1200! There are still disagreements as to who owes how much, to whom, and for what. I suspect lack of communication and misunderstandings were at work. Be that as it may, members of the New York group have now put a considerable dent in the \$1200 (and are even paying interest on it -- an administrative decision we found out about when we got a recent update on the balance.)

I attended the 1990 European Cryonics Conference in October and, shortly after my return, we had our November meeting. The \$1200 was going to be a challenge to our progress and it had been disheartening to discover its existence, but since everyone else's morale was so high, I didn't wallow in a mire for very long. Fifteen people came to that meeting (a 50%

improvement in attendance)! We decided to have more formal agendas at the meetings, which would be more conducive to action. We also decided to purchase Steve Bridge's wonderful Alcor/cryonics slideshow/lecture for special events. People donated the \$200 on the spot to purchase the slideshow. It was a good indicator of renewed commitment.

We were planning for upcoming events, gathering ideas for advertising, and getting information on a possible seminar at continuing education schools. Alvin Steinberg, in an outreach effort to scientists regarding cryonics and nanotechnology, was writing to his congressman, Dr. Linus Pauling, and others. Alvin's efforts, including replies he received from Dr. Pauling and the National Institute of Health resulted in Dr. Gregory Fahy's article in the Mount Sinai Journal of Medicine and Dr. Fahy's presentation at the American Aging Association.

The New York Group had made some very good decisions regarding officers. Janet Pinkney (a writer and researcher at heart) had been appointed Secretary. Janet is relentless when it comes to getting the data. She's not shy about asking for clarification and always has a tape recorder

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going as a backup. Kevin Brown became Treasurer and does a stellar job, another one for clarity, he's also frugal and diplomatic. We're very fortunate to have them.

Alcor received a letter, as a result of Gerry Arthus' conversations with one of the co-ordinators of the I-Con Science Fiction Conference which would be held at Stony Brook University on Long Island in April, 1991. David Pizer had directed the letter to me. I-Con wanted an Alcor booth. In spite of my less than wonderful experiences at science fiction conferences in the past, I was willing to give it a try. So the New York group made plans to "work" the conference in April.

Courtney and I went to California in late December and spent time discussing the situation in New York with Alcor staffers and other members. As I'm sure most remote groups do, we lamented a slow rate of progress and isolation syndrome but received encouragement and advice. We also got Courtney signed up as Alcor's 200th member and his paperwork was witnessed by Fred and Linda Chamberlain (Alcor's founders). We received word that the December meeting had been well attended in our absence, (11 people, even without us and only a few days before xmas/winter solstice -- it was a very good sign), a new meeting time (Sundays at 2PM) had been successfully voted in (even without our votes!), Membership dues were established at the meeting, people had begun to generously contribute toward the \$1200 debt, the New York group was opening its own bank account, people had already begun paying their yearly dues (\$25), Kevin sent off the first payments to Alcor for the \$1200, he mailed a check to Steve Bridge, and the slide show was on its way. So, we returned to New York with renewed enthusiasm and determination.

The Curtain Rises or Curtains for Us?

I was elected to give the slide show. It arrived in time for the January meeting, so I presented it just as Steve had sent it. One woman walked out when I was about 3/4 of the way through. I don't attribute this to the slides or the text, just to the fact that I was just reading it. I

asked for suggestions and got many. I went home and for the next six weeks worked on a complete rewrite to more suit my own style and to highlight recent developments in cryonics and nanotechnology. I also produced about 75 new slides. Ultimately, I redesigned it and personalized it so that I was more comfortable presenting it. We had requested and received from Alcor a list of necessary medical equipment to augment what we had. We had increased the amount of yearly dues to \$50 to better facilitate the acquisition of equipment. We changed the name of the group to Alcor New York to indicate our new commitment to more action, less talk. In general the meetings were more interesting and more productive. We were walking to nearby restaurants for dinner afterwards, now that our meetings had been changed to Sunday afternoons, and this made it easier for people to get to know one another and to talk shop. We had made some efforts to get on local Cable TV, but with no luck yet. By now, Curtis, Gerry, and Janet had been coming into the City to routinely meet with Courtney and I, between regular meetings, to discuss strategies and improvements in everything from meeting formats to equipment needs. There was productivity and spirits were high.

We were going to have a Membership Drive meeting in March 1991. Saul Kent, Ralph Whelan, JoAnn Martin, and Tanya Jones were to fly out to attend the meeting. We were thrilled that we would have some support from our friends in California. It was decided that I would present the slideshow/lecture. Alcor New York would spring for an ad in the Village Voice (\$100) on two consecutive weeks prior to the Membership Meeting, offering a free slideshow/lecture and refreshments. We looked for an alternative meeting place. As it turned out, within our price range, none were as good as what we had. So we reserved a larger room at the dance studio, asked for and received special permission to serve refreshments, and were ready for action.

One day early in February, we got a fax from Mike Darwin informing us that he had made a decision to pull all the stabilization equipment from New York. I couldn't believe it. Courtney and I were stunned. Gerry, Kevin, and Janet were dismayed and deeply disappointed. We had been reassured by Mike and other staffers, while in California only weeks before, that Alcor supported the New York group and what we were trying to do. It was clear that Mike was disappointed (we all were, especially the people who had been pulling for years to make things happen here) in the progress toward an emergency response capability in the northeast. Progress is never fast enough for cryonicists, that's an integral part of our nature.

Just as impatience is part of our nature, so is determination. We weren't going to take this lying down. We couldn't. . . our lives might depend upon it. We insisted upon a vote by the entire Board on this issue. They were uninformed as to the situation and progress that was taking place in New York. At a special Board meeting which I attended by "conference call", once the facts were presented, it was decided that the equipment would be left in New York.

** PHOTO SPACE **
** CAPTION --

"Is this a test?"

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** PHOTO SPACE **
** CAPTION --

"Left to right: Alvin Steinberg, Kevin Brown, Steven Berger, Stanley Gerber."

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In the past, New York members had suggested charters for remote groups. So at that same meeting the Board agreed that charters would be drafted in the next few weeks to outline guidelines and standards for remote groups with equipment. This seemed to satisfy everyone.

The Membership Meeting was approaching. I was given a budget for refreshments and Courtney and I bought the food the day before, carried it home in two trips, then taxied it up to the dance studio next day. For this meeting we were paying \$26 an hour for their largest room. Our ad had been appearing in the Village Voice. The Life Extension Foundation sent out fliers with their monthly report to Life Extension members in the area, and Janet made an announcement in her monthly invitation which goes to the 79 mysterious people who never show up. We were ready as far as food was concerned, nervous as far as the slide show and lecture was concerned, and excited at the prospect of getting some new members.

A business meeting was scheduled for 4PM and the "event" for 5PM on March 17th. By 3:30 we had run out of chairs. There were over 60 people trying to squeeze into the room. I was smiling all over. We dispensed with the business meeting and proceeded with the "event." I believe we had a bigger turnout than any cryonics membership meeting in the history of cryonics, even bigger than some of the conferences.

After our stunningly successful membership meeting, I was handed a copy of the new issue of Cryonics Magazine, in which it was announced that we "represented a potential liability" and that "very, very few people from (our) region were willing to get their hands dirty." The "N.Y. Transport Capability Withdrawn" headline was a heartbreak to say the least. We all felt. . . it's difficult to express what we felt. We will never know how many people had read those words and decided that they made the right decision when they did not attend our meetings and did not get involved.

I told myself that it must have gone to press before the special February meeting of the Board. Even at that, it was in my opinion presumptuous and premature. But I decided not to worry, because at the very least, there would be a correction in the next issue of the magazine. Wrong. A few days later I asked Mike Darwin if there was a retraction in the April issue. I was told that there was not a retraction. Mike said there had not been room because of more pressing news. I've examined the next issue and I can only surmise that advising Alcor Members of the holdup in the release of the movie Late For Dinner, or the large blank spaces on pages 5, 11, 16, 23, and 24 were considered to be more pressing news. Pulling the stabilization equipment was newsworthy but keeping east coast members informed and the correction of a serious error was not? It was May before one tiny paragraph appeared in Cryonics (which by the way would have fit into any of the aforementioned blank spaces) stating that the New York group would retain the "kit."

Two or three of us had communicated by phone and fax to Alcor the new dates and times of our meetings voted on in December of 1990. It was March and Cryonics was still printing incorrect information. It was not until

the April issue that the errors were corrected.

In future I will know (as I would advise everyone) that anything regarding the content of Cryonics should go directly to Ralph Whelan, the editor. This will save time and reduce errors. I know of at least one woman who showed up for a nonexistent meeting because of the erroneous information in the magazine. She even called Alcor and was given the incorrect information over the phone.

To our delight Ralph Whelan suggested that since there were so many sign-ups during the Membership Drive that perhaps we could be reimbursed for our expenses for the meeting. A few weeks later we were indeed reimbursed \$350 and it was a refreshing vote of confidence to receive the support from Alcor.

Roads are Made By Walking

I-Con was fast approaching and their staff was frantic. Gerry and I arranged (after numerous calls from me and personal visits from him) to have a manned (or womanned) booth for the two days of the conference. We arranged to have a TV monitor and for me to do the slideshow/lecture in one of their lecture halls. Bill Seidel and Ralph Whelan generously provided us with materials to hand out and a tape for the TV monitor. I also made up new versions of previous conference handouts. We got thirteen new names for our mailing list, almost all solid scientific types.

Kevin Brown manned the booth while I presented the slideshow/lecture, with Gerry officiating questions and answers. At least 35 people attended my slideshow in its entirety, with others wandering in and out. Science fiction author Larry Niven attended. He said that "of course a science fiction writer has faced these questions before, if only in his own head. My peers have been mining the implications of longevity/immortality for. . . well, my lifetime anyway." Overall it was fruitful and well worth doing.

Courtney and I attended the Alcor Southern California meeting in early May where Coordinator Kit Status was discussed again. Mike Darwin announced that he was still looking for someone in New York who was "reachable and accountable" to store the equipment. I thought we were, even without a paid staff. I, on the other hand, was proud of our progress and

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discussed it with numerous people on an individual basis.

It was also in May that we were told we could purchase the Pizer Tank at near cost plus shipping, so New York sent a check to Alcor and received the Pizer Tank shortly thereafter. Courtney and I transported one portion of the Tank from California to New York with our luggage and Curtis and Gerry picked it up on their next visit to Manhattan. We continue to make payments against the balance.

In mid May I did a BBC interview for "Women's Hour" and played the tape at the May Alcor New York meeting.

There was going to be an Alcor Transport training session in California in June and Gerry and Curtis attended the class at their own expense. The week long course was a huge success. Everyone was enthusiastic. Gerry and

Curtis returned to New York as Alcor Certified Trained Transport Technicians. They expressed their delight at the thoroughness of the course and at the impressive job Mike Darwin and Jerry Leaf and the attending physician had done. New York is fortunate to have two EMT- and Alcor-trained techs. Soon after that, Curtis donated a set of Video Instructional Tapes for EMT which would help in our training sessions.

At the June meeting, we decided to initiate additional fund raising efforts to upgrade the field equipment and purchase training apparatus to train new people for peripheral tasks and to maintain current skills. Three additional members have expressed a desire to be Alcor-trained and we hope to sponsor a training trip to Southern California for these members in the coming months. In the mean time, dues from the meetings and directed donations were continuing to pay off the \$1200 debt. Courtney suggested we make meetings more interesting with talks by individual members on various aspects of cryonics.

By the July meeting, Curtis had built a squid apparatus which we would test to see if it may be, in fact, better than Alcor's current device for recirculating fluids and speeding up cooling rate. Doug Lamm, one of our local members, was compiling a handbook of local laws, medical regulations, locations of ice, and anything that would be useful to local members during a life-threatening situation. Doug plans to give a presentation at a future meeting.

Also at the July meeting, Gerry, Janet, and Curtis reported on their trip to Canada (Huiying went, too). They wanted to be supportive of the efforts of another remote group trying to get their start. They also made a stop in Boston to attend the MIT Nanotechnology Study Group and to exchange ideas with our friends in the Boston Alcor Group.

I drafted a letter for people living in and around the Northern Seaboard area to raise \$7,500 for the necessary equipment. I ran the letter by Alcor staffers in California and officers of the New York group. I got the go-ahead and licked, folded, stuffed, stamped, and labeled them for the "missing 79." Carlos Mondragon, President of Alcor, asked staffer Joe Hovey to provide labels to an additional 120 names who were members and associate members in the area. My letter went out to everyone on July 8th. We achieved 10% of our goal by the July meeting.

Near the end of July, having heard nothing further on the drafting of a charter agreement for satellite groups, Gerry, Courtney, Curtis and I sent suggestions for a list of coordinator responsibilities and guidelines to Alcor. Subsequent to that, Kevin added his suggestions. We knew everyone had been inordinately busy and we thought it might get the ball rolling. It did apparently, and all the satellite groups are now reviewing a first draft charter agreement.

At the August meeting we began to show cryonics videos as the last item on the agenda. Curtis and Gerry bought a \$42 inflatable woman, which they donated for training sessions. I wish I had a video tape of them walking into the porno shop and telling the owner they wanted the doll to use in an experiment. In the ledger, Kevin calls it the "inflatable transport training and experimentation module." Curtis and Gerry bought the doll, but somehow I don't think the porno shop owner bought their story. "Zsa Zsa" or "Miss IceCapades 1992," as Curtis calls her, will be filled with water and used as a "patient" for "practice cooldown" training until we are financially flush to purchase a Resusci-Anne.

One of our new members, Stanley Gerber, enrolled in the State EMT

Certification Course. We would soon have a new member on our Transport and Stabilization Team! On September 3rd, I drafted and received approval for a follow-up fund raising letter.

The Art of Freezing

Three of the people at the March Membership Meeting had been an artist, his wife, and the curator of the New Museum of Contemporary Art, here in New York. We were informed that the artist John LeKay was purchasing a dewar from Alcor to display at the Museum exhibit The Interrupted Life, to be held from mid-September until the end of the year. The curator interviewed Saul Kent, JoAnn Martin, and me for the exhibition catalogue.

Eight of the New York cryonicists attended the opening night of the exhibit. There's a monitor on a pedestal near the dewar and Bill Seidel put a voice track to a

** PHOTO SPACE **
** CAPTION --

"Curtis Henderson and Janet Pinkney"

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** PHOTO SPACE **
** CAPTION --

"Kevin Brown, Alcor New York Treasurer"

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6-minute video loop which plays continuously. It is one of the most popular pieces in the exhibit. On average 1500 people file through the museum every week. Three days later, after our regular Sunday meeting, eight more of us took subway and taxis to go to the museum. The Alcor dewar with its brilliant phoenix rising from the flames is the only glimmer of hope in the exhibit's grim examination of death and dying. Indeed, it is the only piece which is in fact about life, not death. I'm not convinced the staff there would agree with me. I don't think they really "get it," but I hope some of the people who wander through will understand.

The Beginning of a Beautiful Friendship

We are preparing for regular training sessions on the first Sunday of each month at our coordinator's residence. The first session is planned for October 6th and we're sending out announcements. It is scheduled the date that Huiying and Gerry's first child is due, so there may be additional announcements that day. We are fortunate that Gerry and Huiying have set aside a very nice space in their newly purchased house (an attached garage with direct access to the house) for storage of the New York equipment and as a location for regular training sessions. They are closing it off and it will not be used as a garage, but rather as a classroom.

Money is continuing to come in slowly but steadily for acquisition of

equipment. We have a high number of professionals among our ranks and more people "willing to get their hands dirty" than ever before. We have another Membership Drive Meeting scheduled for November, with Mike Darwin as our featured speaker. We will build our own shipping container this fall, and we will have a working paramedic on our team in January.

We have a lot of ideas floating around but we simply do not have the time nor the people necessary to enable us to put them into action. As you can see, we've been busy. We've taken a great many positive steps here in New York, (my list is not complete by any means) with many yet to come. If I were in a fatal accident would I be confident that I would be taken care of in the manner which I have come to expect? Not yet, but the gap is closing.

If you are among the "lost 79" please don't be shy. Let's work side by side to save our lives. We need you. And, I humbly suggest. . . you need us. As Jim Morrison said, "The future's uncertain and the end is always near." But remember Casablanca: ". . . this [could be] the beginning of a beautiful friendship."

As you can see, there are obstacles to overcome and problems to solve associated with being a member of a satellite group. I'd like to stress that both the satellite groups and Alcor S.C. have a responsibility for getting the facts and keeping each other informed. If you are reading this magazine, you know that cryonics has never been easy. We are a small society of immortalists, scattered around the globe, and the need to be mutually supportive is critical. The life you save may be your own!

If you are one of these lost and lonely which make up fully 50% of our organization worldwide, my message to you is this: don't give up, find others who are like-minded and pull together. A discussion group is a rational way to begin. Alcor the star is barely within the threshold of human vision and if Alcor the organization seems at times to be barely within the threshold of human imagination or communication, don't despair. I have a feeling they are going to be more accessible and more visible in the future. . . and therefore, so will our dream.

And now I have to go, there's someone on the phone who says he once attended an Alcor meeting in New York and he keeps getting letters from some stranger named Brenda.

Knowledge, Cryonics, and Pascal's Wager: One View

by Thomas Donaldson

Sometimes, in debate or discussion, one special argument against cryonics appears. The argument is that the cryonics idea is "merely a variation of Pascal's Wager." Pascal's Wager is the argument for belief in Christianity put forth by Blaise Pascal, the early French philosopher and mathematician, in the 17th Century. It goes (my own free interpretation): We wish to be immortal. Nowhere else is immortality promised than in Christianity. Therefore, choose to believe rather than deny, since denial will lead simply to death while Christianity may even turn out to be true.

Those who complain against cryonics by drawing a comparison with Pascal's Wager have noticed the similarity. We could even get a short statement in favor of cryonics simply by replacing "Christianity" in the above by "cryonics." There may even be people who choose cryonics simply on these grounds; I hope they are few.

The Pascal's Wager argument (for Christianity) falls down badly today because we now know of many sets of ideas promising immortality: Christianity, Islam, Hinduism, Buddhism, and many other splinter sects of the above four. And Wicca, too, for those devoted to it now.

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Could it really only be an argument for belief in something? If so, it looks kind of weak.

But there is another deeper reason why it fails as an argument against cryonics. The reason it fails is that it is true. But let's look at it closely to see what it really says.

The logic of Pascal's Wager goes like this:

(*) I want X.

Nowhere else is X promised than from Y.

Therefore I shall adopt (or follow, pay, do, etc.) Y.

Stripped down so much, the major problem of comparing any act to Pascal's Wager (as an argument against it) shows up very clearly. The problem is: we are, all of us, making such wagers every day of our lives. Scrutinized, (*) does not merely pass immediately from our want (for X) and our action (Y). There is a second premise, that Y promises X while nothing else does. We use Pascal's Wager every day, every time we make a decision about any matter which has consequences we do not fully know. Virtually all decisions we make have such uncertainty. (If they were certain, we would not feel we were deciding anything. We would simply be making a calculation!)

How do we make such decisions? Well, by our understanding of how the world works: that is, our knowledge. That is, if we buy a particular house we do not do so merely because we need a place to live (X = lodging) and this one (Y) was the first one to appear. Instead we make some careful evaluation of the house (is it likely to fall down soon?), the property (large, small, polluted, dangerous or not?), its location (in a slum or out in the country?), and its cost (can we afford it?) and so on. All of this evaluation requires knowledge, even if that knowledge does not compel a choice. Even drifters who can neither rent nor buy a room have a choice of which bridge to sleep under. And yes, unfortunately, some people are so badly off that they must choose the first lodging available. Often that is a sign that they are rapidly losing any power of choice and sinking into death.

And there are more instances: Investment decisions (including storing your money under a mattress!) have exactly the same Pascal's Wager character to them. In fact, you are making such wagers when you wake up and choose whether or not to get out of bed in the morning.

Any argument against adopting any course of action (Y) solely because the pro-Y argument are a Pascal's Wager therefore fail badly, not because they aren't true, but because the claim that they are has no content at all. What decisions can we make which are not Pascal's Wagers?

To claim that choosing cryonics is simply an example of "Pascal's Wager" fails because almost everything we decide to do reduces to those terms. But this argument also has a lesson for us: there is no abstract,

purely logical way to argue for cryonics. Any cryonicist who wants to do so, or anyone who chooses cryonics, will need knowledge to help their evaluation. Even now, when some cryonicists seriously believe we can make unnecessary any knowledge of physiology, biochemistry, or biology in deciding about modes of repair, we cannot do so this when we decide about the possibility of repair. The condition of our brains after legal death and cryonic suspension must involve us in biological issues. Even if we propose to upload ourselves, choice of a method to do so must involve us deeply in brain physiology.

FDA Assault on the Life Extension Foundation Continues

by Mike Darwin

This may be old news by the time it reaches you, or it may (if we're lucky) be no news. Most of our readers know who Saul Kent is. For those who don't, a short precis is in order. Saul is a long-time cryonicist, one of the founders of the first cryonics society (the Cryonics Society of New York), a long-time Alcor supporter, and the son of Alcor patient Dora Kent (whose suspension resulted in an international media spectacle and false accusations of homicide and grand theft against some members of the Alcor Suspension Team). Saul has been a vigorous supporter of Alcor and cryonics, donating many hundreds of hours of work and many thousands of dollars of money.

In addition to his work on behalf of cryonics, Saul is the President of the Life Extension Foundation, based in Hollywood Florida (no relation to us, the Alcor Life Extension Foundation). Saul and his partner Bill Faloon have contributed hundreds of thousands of dollars to basic anti-aging research, and have published a highly informative newsletter, Life Extension Report. Saul and Bill have been in a long-standing battle with the U.S. FDA over the activities in promoting and selling vitamins and nutrients, and more recently, over the activities in informing the public about the possible uses of approved drugs for unapproved uses (for example the use of the antiparkinsons drug deprenyl for life-span extension).

Recently Saul and Bill were notified through their attorneys that the Grand Jury in Miami was about to return numerous indictments against them, and that the U.S. Attorney's Office intended to arrest them off the street (as opposed to letting them come in and surrender) and make every effort to either deny them bail, or set it so high that it was not possible for them to make bail. This is a highly unusual threat and a highly unusual procedure. Normally non-violent, non-flight-prone defendants are never arrested in this fashion when

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they have counsel, the crimes are not violent ones, and they are willing to voluntarily surrender. Such "on the street" arrests are dangerous and uncontrolled and law enforcement usually chooses to avoid them. They are used only for "show value" when the government wants to send a message of intimidation and terror to others involved in similar activity.

A classic example of such a gestapo tactic arrest was the recent Wall Street busts, in which stock brokers were seized in their offices and led away in handcuffs in a media blitz and in front of their colleagues. There is no legitimate security reason for such arrests with white collar "criminals." Indeed, even in the Dora Kent case where this author was

accused of premeditated homicide, a capital crime, I would have been given the courtesy of arrest via coming into the police station with my attorney.

Over the years we have chronicled on these pages the numerous examples of abuse and incompetence in the FDA. Their current targets are the banning of nutrients like Co-Q10, L-carnitine and so on. The FDA already raises the cost of most medications to prohibitive levels through the complex, arbitrary, and costly medications approval process. Right now the average cost of getting a new medication approved is \$231 million dollars! If you want to see the effects of that it's very simple: Deprenyl costs 25 cents per tablet in Italy and \$2.20 per tablet in the U.S.! Many drugs never see the light of day here because their cost of introduction can never be recouped.

Reproduced below is a graph/chart of the number of people in prison per capita as well as other data relating to the justice system in the U.S. I think you will find it enlightening. If you are wondering why Saul and Bill face imprisonment, and are wondering just how likely it is, take a look at these figures. We are right up there with South Africa and the now defunct Soviet Union. Florida seems to be the state leading the pack in worthless prosecutions, as a glance at any newspaper will quickly confirm: it leads the nation in drug arrests, it leads the nation in arresting clerks and record store owners for sale of "obscene materials," and it recently arrested entertainer Pee Wee Herman for "indecent exposure" while in a movie theatre (private property) where all the patrons were adults who had paid to see "indecent exposure" (and much, much more!) on the screen. The only question you need ask yourself is: "When will your turn come to either face imprisonment or knuckle under?" You may find out the answer much sooner than you think.

** GRAPH SPACE **
** CAPTION --

"Per Capita Prison Population -- Source for this data is the July-August 1991 issue of 'The Futurist' magazine, page 47. The above chart is stated as having as a source Penal Reform International, using data from the Council of Europe and the Australian Institute of Criminology."

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Saul and Bill seem about to be indicted and subjected to a lengthy, costly trial which could result in a prison term of decades. Indeed, they were offered a deal by U.S. Attorney Mellinger to shut down the Foundation, plead guilty to unspecified "lesser charges" and serve three years in Federal Prison.

I for one am damn sick of the FDA and the government FORCING me to do what they want me to do. I happen to think my judgment on most medical matters is better than theirs, and when I am in doubt I am quite confident I can find my own experts to advise me. In any event, whether I am right or wrong, freedom and the free market are based on people having the right to make both good decisions and bad ones. Freedom is meaningless if we are allowed to make only prescribed "good" decisions. Such freedom is NO freedom.

If you feel as I do, (and I know I speak for the rest of the Alcor staff and the other editors of Cryonics) please write your local congressman and, more importantly, write to Assistant U.S. Attorney Mellinger at the following address:

Assistant U.S. Attorney Mellinger
c/o Zuckerman, Spaeder
201 South Key Biscayne Boulevard, #900
Miami, Florida 33131

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Reviews

Unbounding the Future: The Nanotechnology Revolution
by K. Eric Drexler and Chris Peterson, with Gayle Pergamit
William Morrow and Company, Inc., New York. 304 pages.

Reviewed by BC Crandall

Unbounding the Future, the most recent effort of the Foresight Institute, is a popular introduction to the concept and consequences of nanotechnology. The book does little to satisfy "the howling demand" for detailed technical arguments supporting the feasibility of nanotechnology (which we can expect in Drexler's forthcoming "Molecular Nanotechnology: Molecular Machines and Manufacturing"), but it does a tremendous job of seeing where we are now and gazing into possible nanotechnological futures.

The book discusses:

- Molecular nanotechnology, the basics
- The scale at which all this goes on, with delightful scenarios
- Current research leading to molecular control
- Possible manufacturing techniques and products
- Medical applications
- Limits, and the potential for abuse
- Challenges of the coming social transformation

The text is easy to read, particularly the quasi-fictional scenarios that "bring to life" impressive but potentially dull facts. For example, at the conclusion of a tour of a museum-of-the future, in which you've physically encountered a simulation of a nanomanufacturing facility (through a full-body virtual reality suit), a "striking, dark-haired woman" engages you in conversation and scoffs at the primitive nanotechnological devices that seemed so miraculous to you just a moment ago. In one short paragraph the writers successfully characterize their description as possible, but hardly the last word in molecular manufacturing, and burn it into your mind with a brief flash of genetic desire.

Perhaps this reveals more about my own delight in romance (or at least my gender preference), but it's this humanization of technical particulars that make these scenarios matter to flesh-and-blood humans. And this is essential. Nanotechnology can all too easily sound like science fiction -- just science fiction -- and be dismissed as such. We need to imagine our futures with technical accuracy, but our futures won't be just technological. The human use of nanotechnology is as essential to contemplate as the mind-boggling capabilities of the technology itself.

The first two thirds of the book provide high-quality fuel for technically sound fantasies. But what is most important, to my mind, is the material in the last chapters where they plunge into the fickle waters of public process and social transformation. "Every interesting new technology, particularly in its early days, is a chaotic mix of competent workers and charlatans." And it is in the midst of this chaos that our

poor accelerated species must make sense of and act on the possibilities racing toward us. It would be foolish not to expect and anticipate significant social upheaval as a consequence of "molecular manufacturing. [It] won't come trickling out of conventional factories as computers did, [rather, it] will replace factories and replace or upgrade their products."

Drexler and company are well aware that change, particularly such fast-paced and thorough-going change as they envision, will not be easy. "In comparison to many of the projections of the twenty-first century, though, nanotechnology may lead to comparatively comfortable change." But only because most such projections ignore the effects of exponentially expanding technological capacity -- including nanotechnology.

The book is an excellent stimulant for the techno-political imagination, and I'd recommend it to anyone who's in high school or has ever been to one. The writing is lively and thoughtful and the references to technical research are all up to date. Nanotechnology is a cresting wave; "Unbounding the Future" is an accurate and exciting snap shot of its gathering strength.

That said, I must confess that, although I agree completely with the writers that our only viable option is to guide the technology (any attempt to stop development would merely confine nanotechnology to military labs), I wonder about the source of this guidance. I'm uneasy with statements such as, "prudent people have only accepted new technologies when they offered an improved mix of risks and benefits." The immensity of what is not known, by even well informed individuals, about the manifold consequences of a single act, should be enough to make us question the source and value of our own, or any one else's choices. Our recently acquired tool of analytical judgment, valuable as it is, will not, in and of itself, shine a light on the path we need to tread. Far from being the ultimate technical challenge, the advent of nanotechnology could be, if not the ultimate, certainly an unprecedented challenge to the wisdom and compassion of our species. "Thorough, inexpensive control of the structure of matter" is heady stuff indeed!

Perhaps, in light of the immense

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power of this technology, the most we can hope for and work toward is a chance to buy our genetic existence a little more time. Once nanotechnology has provided the means to establish multiple extraterrestrial settlements, we should expect the occasional ecosystem collapse brought on by life in the evolutionary fast lane. But as long as the ecosystem that crashes isn't the only ecosystem, the survivors can shed a tear, and then return to directing their own evolution -- with perhaps a bit more caution.

But to return to the challenges of today: however you perceive/conceive the mind-body matrix, don't sit back and think the Foresight Institute has the insight and wisdom to guide this transformation without your help. Read the book. Agree. Disagree. Use this fuel to imagine and create a world you and your friends can live and thrive in. The genome needs your intelligence, your compassion, your wisdom. In the matter we trust.

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BC Crandall is the co-editor of Nanotechnology: The First Foresight Conference (MIT Press, winter 1991), the editor of Nanotechnology and the Culture of Abundance (forthcoming), and the Vice President and co-founder of Prime Arithmetics, Inc.

History of Old Age: From Antiquity to the Renaissance
by Georges Minois (translated from the French by Sarah Hanbury Tenison)

book review by Thomas Donaldson

Cryonicists with our position of being one of the very smallest minorities will certainly see that we can understand neither the past nor the present by looking only at an imaginary "average people." And so, even if for thousands of years average lifespans remained short, significant numbers of people even in ancient Sumer and Egypt lived into their nineties or even longer (the age at death of Ptah Hotep, Vizier to Pharaoh Izezi circa 2450 BC, reached 110 years). Of course such longevity never appeared among the lower-class peasants; but particularly in the upper classes, lives were neither brutal nor short, even so long ago.

What Minois has done is to look through all the old sources and try, systematically, to write a history of old age all through these times: from Egypt, to Roman times, medieval Europe, and finally the Renaissance. Certainly we take a far more statistical attitude to aging than ever before. We can count the percentage of people over 60, 65, 70, and 80 year-by-year, classifying causes of death for those who did not survive. Minois had no such compendia to go on; other than a small number of archaeological studies of cemeteries (too small, really, to give information any more firm than the fragmentary discussions of ages in the writings of the time), Minois basically had to comb through everything written in those times, looking for well-based attributions of age.

His book is not just a simple accounting of lifespans. He tries, too, to work out just what others felt about aging in these times, what the aged felt themselves (and in such times, the only writers we have lived in the prosperous classes and so lived to ages quite similar to ours). Nor does he try to obscure the problems of aging. But he takes no clear personal position on the problem, either. Instead, he has written a book of dispassionate history, not at all an easy thing to do on such a subject.

So what, then, has been the history of aging up to the Renaissance? To describe this, we must really distinguish at least three separate streams. What did the old think of themselves and aging? Again, what did all those who were not old think of age and the old who lived among them? And finally, what social roles did these old people play (or not play)?

The very first point Minois makes is that at no time in this span of history did the old themselves think well of their age and condition. Sometimes they railed at it. Sometimes they were resigned. Minois reports that he found no true happiness coming with age; even old authors writing apologies for aging betray themselves as they write (see his analysis of Cato's *De Senectute*). To the aged themselves, old age is "an unmitigated evil and a dreary time of waiting for oncoming death." Sometimes they tried to find cures. Minois describes attempts to cure aging as far back as the Egyptians. Galen, a famous Greek writing in Roman times, actually attempted the first scientific (i.e. not religious or magical) explanation of aging. Roger Bacon, in Medieval times, sought a cure for aging; Cornaro writes of how good nutrition and exercise can prolong lifespan to 100 years; and all through the Middle Ages the myth of a Fountain of Youth

persisted.

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Yet at the same time, the feelings of younger people around them went in both directions. The old were ugly, evil, and depraved; or they were on the other hand wise, happy, and serene in their aging. Minois quotes Simone de Beauvoir, particularly, on this issue. This public attitude to aging, she suggests, forces the aged to take on the face of the wise, happy, and serene. Any sexuality, love, or jealousy, any hint of the same desires as the young, or even any precipitate act, makes those around them (who are not themselves old) treat them either as grotesques or buffoons. Minois finds this assessment to remain true throughout the entire period of his investigation. (We would say now that ageism prevailed.)

Sometimes, particularly among primitives and peasants, the aged even took on a supernatural character: as people standing at Death's door, they had some inkling of the world beyond. Other times (Roman, Greek, or the Late Middle Ages and Renaissance), old people were quite openly derided and maltreated, unless their finances or social status still gave them some ability to fight back.

These attitudes seem to have waxed and waned as other conditions changed. For instance, one of the most interesting historical discoveries Minois made was that there were periods in the Middle Ages when old people became (relatively) quite a high percentage of the population, 10% or more. (This meant, of course, that their social and political power increased too). Unfortunately such changes never happened through any improvement in the human condition. Instead, plagues like the Black Death attacked younger people with much more force than they attacked the old. Or else, they were times of war, with all the younger men busily killing one another off.

In fact, the European Middle Ages provided Minois with far more documentation than earlier periods, and he finds more oddities in the history of old age as a result. For instance, it turns out that many monks and nuns lived to relatively high ages, probably because conditions in a monastery were more healthful. (As for the nuns, it seems that throughout this entire period death rates among women exceeded that among men, due to mortality in childbirth. But even beyond this, women could die of the same things men died of).

To my own mind, besides such curious historical perceptions as the times at which old people played larger roles in the Middle Ages, one interest of Minois' work is that it provides a different viewpoint to the only other historical work I know of on this subject. That is Gerald Gruman's long paper, "A History of Ideas about the Prolongation of Life." [Gruman, Gerald, "A History of Ideas about the Prolongation of Life from Antiquity to 1800," Transactions of the American Philosophical Society 56(Part 9) (1966).] Gruman's conclusion was that Western (as compared particularly with Chinese) thinking on the issue of prolongation of life had consistently urged resignation and surrender rather than any attempt at prolongation. Without trying to settle this issue historically, the difference should be flagged and considered seriously.

Minois makes another point about his entire period which might pique our interest. This is that even in the Renaissance the people involved had no special concept of Old Age (as distinct from old people). If asked about the "stages of life" a man or woman would pass through, someone of

Egypt, Greece, Rome, or the Middle Ages would have simply listed: "Infancy, Childhood, Adulthood." A specific focusing on Old Age as a stage of life came quite recently, along with the notion of Retirement (in the periods I discuss, everyone was expected to work their whole lives).

I personally suspect that this new classification of Old Age and the Retirement which it brings is one more attempt by a youth-loving society to place the Old off into a corner where their problems (and dying) won't intrude on everyone else. And Minois also makes a point about the determined attempts by younger people to convince themselves that they, themselves, would never pass over into old age: that behavior has 5000 years of history behind it. There is nothing novel about it at all.

What, then, will it mean to us when we change ourselves so that we never age? I don't believe that this could happen in practice without a very great fall in birthrate too. Children, in the present sense, might become a very small minority, gathered together in a special place. For a short time, as we all aged, some people might become like the wise old people of preliterate society: people who actually remembered previous history. But over time these differences in aging would stretch out for almost everyone, so that both infants and elderly of today would think of themselves as much the same age, 100 years more or less.

So there would be no stages of life at all. Certainly there might always be exceptionally old people (2000 years old in a group where almost everyone has lived to 1000 years!). They would not differ obviously from anyone else, nor be held to any different standards: Jim or Harry, here before us from the 20th Century. To first meet such people might give others a shock of surprise and amazement, even then. (I don't believe issues of exact bodily form, uploading, etc., will matter to these suggestions . . . for those who focus on that issue.)

Finally, I will have to say that Minois' book, though it contains a lot of interesting stuff, would have been far better if he had made it much shorter. The problem is that his discussion, far too often, turns into a long list, with short description, together with age of death, of men and women of one time or another who had lived to a high age. After a while this becomes extremely boring. Any reader can see that these figures give him the basic data for his conclusions; but they would have better been placed in Tables, with the more expository writing remaining. For this reason, although any immortalist reader will find the content of his book quite interesting, his exposition puts you off almost entirely. Personally I had to drive myself to read it through.

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Alcor News

It's Party Time

To reiterate the sentiments of last year, "Somewhere out there, a turkey has arrangements with Alcor. They are NOT suspension arrangements. It's time for the annual Alcor Turkey Roast and get-together. The date will be the first Sunday in December, the normal day for an Alcor business meeting. FORGET BUSINESS. The Turkey Roast is a time for serious socializing. Topics will be anything you can get through the door! See old faces! See new faces! Meet people who are seriously planning to live forever. Mark the weekend on your calendar with indelible ink and swear on your Alcor Emergency ID tag to come. No tag? Come anyway. You may come

away convinced you can't do without one. Remember, Alcor is its members. If you think this is going to be a memorable Turkey Roast, you're going to have to come and see for yourself!"

Once again this will be a Pot-Luck arrangement, so your ticket is your food. If you're wondering what to bring, or what other wonderful and helpful things you might be able to do, call Marce Johnson at (714) 962-7898 or Maureen Genteman at (213) 398-3464.

The celebration will start at 1:00 P.M. on Sunday, December 1st at the home of Saul Kent and Jo Ann Martin. Directions for reaching Saul and Jo Ann's are given below. It's a little hard to find, so if you get lost feel free to give us a call at (714) 780-3366.

For those interested, there will probably be a side trip (tour) of the Alcor facility. So don't even think about not coming. This will be more fun than anyone has a right to.

DIRECTIONS:

Saul Kent and Jo Ann Martin
16280 Whispering Spur
Riverside, California

Telephone: (714) 780-3252

Take the Riverside Freeway (Hwy 91) east to Riverside and get off going South (right) on Van Buren. Whispering Spur is south of the Freeway four miles, and 1.0 miles beyond Mockingbird Canyon Road, on the left. 16280 is the second house on the right, at the end of the white fence.

Help Us Help You!

Yes, it's that time of the year again. Time to sit down and decide just how much money you want to be caught counting when your 1991 calendar says GAME OVER. That's right: Santa Claws is coming for your surplus dollars, he doesn't have anything as noble or merry as vitrification research in mind, and he won't give up until we're all Nickelless.

But this is the season of giving, not taking, and the more giving you do to Alcor, the less taking Uncle "Wham Bam" Sam is allowed. That's just the way it works.

That's right, your donations to Alcor are tax-deductible, and with the new Operating Endowment Fund in place, your donations can work for us -- and for you -- indefinitely. Remember the Endowment Dewar from last month? Help us to fill that dewar, and we'll use it to build an organization with the strength and stability we all hope to never need.

As we mentioned last year at this time, Membership dues pay less than 25% of our day-to-day operating costs, never mind research or improvements to our Emergency Response capability. The balance is made up by donations and endowments. Every little bit counts.

Help us help you.

Worker's Extortion -- Er, Compensation

On 2 August a representative from the State Board of Industrial Relations paid a visit to Alcor. We had been negotiating (through an

intermediary) with the State Insurance Fund for some months in an attempt to obtain worker's compensation insurance for our staff, which we are legally required to do. Since we could not obtain this insurance from private carriers at any price, we are forced to rely on the State Fund.

The purpose of the visit on August 2nd was to issue a citation and impose a fine on us for not having worker's comp insurance in place. The "investigator" who came by said that he was also empowered to issue a stop-work order, empty the building and padlock the doors until we could provide proof of insurance. He decided instead to be "reasonable" and give us until Monday morning to get the insurance.

This put us in the position of having to go to the State Fund directly and ask for immediate coverage. As any negotiator could predict, this put them in the driver's seat. The highest worker's comp premium is the rate assigned to nursing homes: 13.5% of gross pay. This is the rate which the State Fund's underwriter assigned to Alcor. But he didn't stop there. They noted that in addition to our staff, we had nine directors. Although it was explained that these directors are not paid, and that those not on staff come to off-site meetings about 10 times per year, they insisted that directors be covered by their policy. They figured that a non-profit directorship is worth a salary of \$56,000. per year and plugged in a nursing home rate premium. Even when told that one director had recently died, they insisted on covering him too! The bottom line was an annual premium of over \$100K, or put another way, 120% of our payroll.

To immediately give us a certificate of insurance, they demanded a \$30K deposit, pending final determination of our premium. We gave them the \$30K check; this money was taken from the Operating Endowment, since we had no choice if we wish to keep operating!

We have vigorously protested the outrageous premiums we've been told we'll have to pay, and we were recently inspected by a team of underwriters from the State Fund, the purpose of said inspection being to "determine our correct premium." So far we are waiting to see what happens. The upshot of this will be simple: more regulation and higher costs. Under the best (best!) scenario we will still be hit with somewhere between \$3K to \$10K per year in premiums. They do at least pay minimal interest on that \$30K deposit we were forced to leave with them. We do not have the money for those kinds of expenses sitting around in our operating budget as "slop." Therefore, as you will read about elsewhere in this issue, we must pass the costs along to you. Dues will rise accordingly.

We wish there were some other alternative.

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ADVERTISEMENTS AND PERSONALS

The Alcor Life Extension Foundation and Cryonics reserve the right to accept, reject, or edit ads at our own discretion, and assume no responsibility for their content or the consequences of answering these advertisements. The rate is \$8.00 per line per month (our lines are 66 columns wide). Tip-in rates per sheet are \$90 (already printed and folded); or \$180 (printed one side) or \$270 (printed both sides), from camera-ready copy. Tip-in advertisements must be clearly identified as such.

MARY NAPLES, CLU and BOB GILMORE -- CRYONICS INSURANCE SPECIALISTS. New

York Life Insurance Company; 4600 Bohannon Drive, Suite 100; Menlo Park, CA 94025. (800) 621-6677.

EXTROPY: The Journal of Transhumanist Thought, #7. Memetics and cryonics, privately produced law, spontaneous orders (markets, agoristic computing, hypertext) neurocomputation, neologisms, transhumanism, reviews of Smart Drugs, and more. \$4 from Max More; P.O. Box 77243, Los Angeles, CA 90007-0243

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 NOVEMBER meeting will be at the home of:

(SUN, 3 NOV 1991) Virginia Jacobs
 29224 Indian Valley Road
 Rolling Hills Estates, CA

Directions: Take the Harbor Freeway (US 110) south to Pacific Coast Highway (State 1) and get off going west. Go along Pacific Coast past the Torrance Municipal Airport to Hawthorne Blvd. Turn left (south) on Hawthorne and go up into the hills past the Peninsula Shopping Center (Silver Spur Rd.). Hawthorne takes a long curve around to the left. Indian Valley Road is a little over two miles beyond the Center, on the left. 29224 is about 0.2 mi up Indian Valley Rd., opposite Firthridge Rd.

The DECEMBER meeting is the Annual Turkey Roast, at the home of:

(SUN, 1 DEC, 1991) Saul Kent and Jo Ann Martin
 16280 Whispering Spur
 Riverside, CA

Directions: Take the Riverside Freeway (Hwy 91) east to Riverside and get off going south (right) on Van Buren Blvd. Whispering Spur is south of the freeway four miles, and 1.0 miles beyond Mockingbird Canyon Rd., on the left. 16280 is the second house on the right, at the end of the white fence.

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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, followed by a potluck. Meeting locations can be obtained by calling the chapter's Secretary, Carol Shaw, at (408) 730-5224.

The NOVEMBER meeting will be held at the home of:

(SUN, 10 NOV, 1991) Eric Messick
 15139 Old Ranch Road
 Los Gatos
 Tel: (408) 353-4751

Directions: Take Hwy 17 to the Summit Road exit (at the crest of the Santa

Cruz Mountains). Go west on Summit, bearing right at Mt. Charley to stay on Summit. Go to Hutchinson Road and turn left. Take Hutchinson to Old Ranch Road and turn right. Go downhill on Old Ranch, and take the private road straight ahead when Old Ranch turns left. Go down the private road until you see a dome on the left, which is 15139. Park on the road.

The DECEMBER meeting will be held at the home of:

(SUN, 8 DEC, 1991) Roger Gregory and Naomi Reynolds
 2040 Columbia St.
 Palo Alto, CA
 Tel: (415) 493-7582

DIRECTIONS: Take the 280 north to Page Mill Road, and take Page Mill east toward Stanford. Go down to the bottom of the hill to Hoover St. (5th light). Turn left on Hoover to California St. and make another left. Go two blocks to Columbia and turn right. The house is in the second block, on the left.

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There are two Alcor groups in the Greater New York area. Details may be obtained by calling either:

Gerard Arthus, at (516) 689-6160, or Curtis Henderson, at (516) 589-4256

The Alcor New York Group meets on 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.

The meeting dates are as follows:

NOVEMBER 17	DECEMBER 15	JANUARY 19	FEBRUARY 16
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The Long Island Cryonics Discussion Group of Alcor meets on the first Sunday of every month, at 2:30 PM, at the home of Gerry Arthus. The address is: 17 Mystic Way, Stony Brook, L.I., telephone (516) 689-6160. Note that this is a new address.

The meeting dates are as follows:

NOVEMBER 3	DECEMBER 1	JANUARY 5	FEBRUARY 2
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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) 670-5235 (home). Meetings are at the home of Eric Klien; 28 Kenmar Dr., #272; Billerica, MA 01821. Take the 3 north to the Concord exit, and go right toward Billerica. The fifth street on the right is Kenmar. Go to the driveway one short of the end of Kenmar and turn left. Go to Building 28 (last building).

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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.