

Contents:

Editorial Comments.....page 1

Alcor Meeting Schedule.....page 2

Taking the Long View.....page 3

The Payment Problem: the 3% Solution.....page 4

Cryonics and the Problem of Unreality.....page 5

Cryonics Prize.....page 6

Passages from the Martyrdom of Man.....page 7

Making Cryonics Dues Depend Upon Age.....page 9

Donaldson's Science Updates.....page 16

CRYONICS is the newsletter of the Institute for Advanced Biological Studies, Inc. Published monthly. Free to members of IABS and the Alcor Life Extension Foundation. Individual subscriptions \$15.00 per year. Group rates available on request. Please address all editorial correspondence to IABS, Inc., 4030 North Palm #304, Fullerton, CA 92635, or phone (714) 990-6551.

Contents copyright 1982 by Institute for Advanced Biological Studies, Inc. except where otherwise noted. All rights reserved.

 (1)

EDITORIAL COMMENTS

I received only a few submissions for the Marryman Memorial Cryonics Prize and I print all of them as a matter of policy. The most likely reason for the small response was that I did not set a good enough topic for the prize. Very likely those who had lots of ideas about the problems of cryonics and their solutions were off trying to institute those ideas, rather than writing a prize article. I have awarded the prize to Simon Carter, whose contribution came out as the best of the 3 submitted.

I know of several ideas other cryonicists have put privately and I would have enjoyed seeing a public argument for them. In particular, I would have liked to see an article in favor of "undertaker level" cryonics and another article arguing in favor of unperfused suspensions. We have also only heard indirectly about the merits of political action (i.e. approaches to State Senators) in solving our difficulties with the UAGA, and the recent set of papers for a proposed alternative suspension arrangement prepared by Bianchi should be defended in CRYONICS (so far we have only got

to hear an attack on them).

Foreign Subscription Rates

IABS has received a steadily increasing number of foreign subscriptions to CRYONICS. In the past we have honored these subscriptions at our standard rate of \$15.00 per year. However, the steadily growing list of overseas customers is forcing us to abandon this policy. It costs IABS approximately \$1.50 in postage for each overseas issue which we mail individually. In order to offset these costs we are raising our rates for foreign subscriptions (excluding Canada and Mexico) to \$30.00 per year. Group rates are available on request and should provide a substantial savings. Members of the Cryonics Society of Australia will be unaffected by this rate increase.

Questionnaire

Response to the questionnaire in the July issue has been very good. We have found the results to be fascinating and we hope to be sharing them with you in the October issue of CRYONICS. We would like to sincerely thank all of the people who took the time to fill out and send in the questionnaire. We especially appreciate the extra effort some people made to provide us with detailed comments or helpful suggestions. We hope the insights gained from this poll will help us to better serve both you and the cryonics movement.

Help!!!

Since its inception CRYONICS has been produced in large measure on a couple of aged (broken down, if you're less charitable) typewriters. Alas, one of these machines has died, and the other has deanimated several ties with more or less irreversible cessation of function looming in the distance. What we need is either a new typewriter (or a really high quality used one) or better still a word processor. The latter would greatly expedite the production of CRYONICS and allow for more flexibility and better feature reporting. Anyone who is willing or able to help us with this somewhat urgent matter should send contributions to IABS, 4030 North Palm, #304, Fullerton, CA 92635.

(2)

When Not to Go Greyhound

Recently, Mike Darwin received a little mailer from Greyhound bus lines announcing a new list of items which they forbid passengers to take with them on the bus. Mike found this list quite surprising because on several occasions he had taken one or more of these now prohibited items along (we'll leave it to the reader to decide just which of the forbidden nine items Mike considers essential for travel).

- Corpses
- Snakes, live
- Fuel tanks (used)
- Neon signs
- Animal heads
- Human blood (unless packed in wet ice)
- Worms, live (unless specially packed)
- Automobile windshields

Bull semen (unless specially packed)

All of this raises the question of whether Mike was responsible for part of the list, or whether there are a lot more active cryonics people out there than we realized.

ALCOR LIFE EXTENSION FOUNDATION
4030 NORTH PALM #304
FULLERTON CALIFORNIA 92635
(714) 738-5569

SEPT-NOV 1982 MEETING CALENDAR

ALCOR meetings are usually held on the first Sunday of the month. Guests are welcome. Unless otherwise noted, the time of day for the meeting is 3:00 PM.

The OCTOBER meeting will be at the home of:

(SUN, 3 OCT 1982) Bill and Joanne Jameson
 624 W. Elm Ave.
 Fullerton, CA 92632
 Tel: (714) 871-1298

DIRECTIONS: W. Elm Ave. is an East-West street midway between
Commonwealth Ave. (to the North) and Orangethorpe Ave.
(to the South). 624 is west of Harbor Blvd. (Hwy 72.)

The NOVEMBER meeting will be at the home of:

(SUN, 7 NOV 1982) Eugene Hartnell
 7801 Slater Ave. Apt. #1
 Huntington Beach, CA 92647
 Tel: (714) 847-0936

DIRECTIONS: Take Interstate 405 (San Diego Fwy) to Beach Blvd. (Hwy
39) in Huntington Beach. Go South on Beach Blvd. approx.
2 miles to Slater Ave. Turn right (West) on Slater.
7801 is about two blocks on the North side of the street.

(3)

Taking The Long View: A Digression Upon Trees

submitted by Simon Carter

Plant a tree -- is there any more certain an undubious good? Good for the soil, good for the watershed, good for the atmosphere (trees eat CO2), good for the shade, good for the fruit, good for the firewood, the lumber good for aesthetics (Baker Roshi notes that nothing so affects people's opinion of a city neighborhood as the presence of absence of trees), good for the continuity, good for climbing and tree houses, a cheap, easy, enjoyable investment with nonstop rewards. -- SB

The Oak Beams of New College, Oxford by Gregory Bateson

I owe this story to a man who was I think a New College student and was head of the department of Medicine at the University of Hawaii, where he told it to me.

New College, Oxford, is of rather late foundation, hence the name. It was probably founded around the late 16th century. It has, like other colleges, a great dining hall with big oak beams across the top, yet? These might be eighteen inches square, twenty feet long.

Some five or ten years ago, so I am told, some busy entomologist went up into the roof of the dining hall with a penknife and poked at the beams and found that they were full of beetles. This was reported to the College Council, who met in some dismay, because where would they get beams of that caliber nowadays?

One of the Junior Fellows stuck his neck out and suggested that there might be on College lands an oak. These colleges are endowed with pieces of land scattered across the country. So they called in the College Forrester, who of course had not been near the college itself for some years, and asked him about oaks.

And he pulled his forelock and said, "Well sirs, we was wonderin' when you'd be askin'."

Upon further inquiry it was discovered that when the College was founded, a grove of oaks had been planted to replace the beams in the dining hall when they became beetly, because oak beams always become beetly in the end. This plan had been passed down from one Forrester to the next for four hundred years. "You don't cut them oaks. Them's for the College Hall."

A nice story. That's the way to run a culture.

"Let those who complain that too much money is being spent on abstract knowledge while people are starving remember this: the alternative to knowledge is savagery. Their very existence as stowaways on the voyage of civilization is owing to advances in science which permit some to live without doing their share of work. Let them be tolerant, lest by encumbering the useful ones they destroy the thing which keep them alive."

-- David O. Woodbury
"The Glass Giant of Palomar" (1939)

submitted by Hugh Hixon

(4)

Charles Hartman
514 North Western Avenue
Stuart, Iowa 50250

June 24, 1982

Dr. Thomas Donaldson
PO Box 18
O'Connor, ACT 2601
Australia

RE: CRYONICS PRIZE
(1) THE PAYMENT PROBLEM
(2) THE 3% SOLUTION

One of the most important problems for cryonicists to solve is the one posed by the question (spoken or unspoken) "How can I pay for it?"

THE PAYMENT PROBLEM breaks down into (1) How to come up with the (extra) money for suspension membership, insurance premiums, etc. and/or (2) How to come up with the \$75,000 for the placement into suspension and/or (3) How to arrange for the investment of funds so that when the scientific and technological capability for revival to life, health, youth in utopia exists, the wealth is there to pay for it and it is done.

THE 3% SOLUTION involves getting into an economic position so as to benefit from providing a wide range of necessary items to a broad market -- and being able to transfer "rights" to an income stream derived from the ongoing process of meeting this broad market to the right people.

NOW, BEFORE GOING ANY FURTHER, LET ME SAY THAT NOT EVERYTHING CAN BE EXPLAINED SUFFICIENTLY IN THIS SMALL SPACE. LET ME ALSO SAY THAT WHAT I'M ABOUT TO EXPLAIN WORKS, AND TO MY MIND, IS THE BEST HOPE FOR ALL OF US.

PLEASE CALL ME AT (515) 523-1116 (keep trying) and I'll call you back at my own expense and send you all kinds of literature and get you plugged into this money-making group or come see you myself -- or write 514 North Western, Stuart, Iowa 50250, USA. And I'll do this for the best of reasons -- to insure my successful life.

Let us suppose that in 5 years Charlie Hartman will have a business organization which makes \$100,000 plus a year, \$50,000 of it whether he (or anyone) works in the business. This is entirely possible for anyone who wants it. Further, suppose that Charlie Hartman has arranged upon his legal incompetency (a good term for suspension) or "death" this can be "inherited" by a fellow suspension member of BACS (or other suspension organization).

Any volunteers to be my "trustee" or "heir"?

This BACS member should make similar provisions such that the business gets handed down -- growing all the time -- until Charlie Hartman is revived to wonderfulness and reclaim it.

Wouldn't that be great?

(5)

Remember, in this short space I can't possibly tell enough -- I will say that scientists such as we are should investigate this with a mind that is skeptical . Many are aware of the company which in only 21 years of existence did what it took the fabulously successful McDonald's Corporation 22 years to do -- reach \$1,000,000,000 in sales. I cannot say enough good about it. This international provider of basic commodity items is continually expanding and has never grown less than 30% per year. It's looking for people to associate themselves with it. For less than \$100 (most of that guaranteed refundable) you can join with Charlie Hartman. Some experts say that at the present rate of growth, by the year 2000 AMWAY will be larger than Sears Roebuck, Coca-Cola, and Eastman Kodak combined. English, Australian, Canadian, European, and other countries are where it is right now, in addition to the US.

The 3% (which is what convinced me to get into it) is the closest thing to perpetual money I've seen and is a reward for helping other succeed in reaching certain levels of business success.

Each of you now reading this can now become successful in life, and I can make good money by helping you do so. Please do look into this 3% solution by calling me -- as far as I know, I'm the only distributor who is a cryonicist, so I am uniquely able to judge it.

by C. Hartman

CRYONICS AND THE PROBLEM OF UNREALITY

by Simon Carter

I have been involved in cryonics in Australia for several years. As a university student without much money, it took me quite a while to arrange BACS entry, but I did have the opportunity of visiting the Trans Time facility and was enthused. It took me a long time to realize that the rest of the world was not going to follow in my footsteps; a number of years later, whilst I have interested some people in the idea, none of my earnest discussions have resulted in a new cryonicist. I consider that far too much effort is being placed upon large scale publicity; cryonics being so small and outlandish (even, in a bizarre twist of logic, macabre) we have little hope of swaying others to our way of thinking, especially as we are reliant upon the media to interpret (one thing a reporter on cryonics does NOT do

is report) and disseminate our viewpoint. It is UNREALISTIC to waste too many resources upon publicity, far better to concentrate on interesting one's own circle of acquaintances. Regular publicity can be gained by sending news releases to the media, yet in my experience this results in the merest trickle of responses (and half of them cranks!). Could it be that too many cryonicists, aware of what they have and disappointed at an uncaring world, have placed too much value on publicity? Why not concentrate on saving oneself rather than converting the barbarian hordes?

As time has gone by I have found myself less tolerant of pseudo-cryonicists, these people who are always present, never signed up, and are usually to be seen brandishing the latest OMNI, and heard earnestly pushing some scheme to promote cryonics far and wide. I have met several of these people -- five, nearly six years later they have still not taken one practical step towards signing up -- they are however significantly closer to death. These people are an utter waste of time, if they are ever going to join they will do so in their good time. As a rule of thumb I suggest that it takes between one and two years for a person new to cryonics to complete all arrangements. It does take time, money must be earned, effort expended, and the mind must adjust. If the person has made no steps after several years, then abandon all efforts and treat as pseudocryonicists.

(6)

Where we should concentrate our publicity is not on adults but on children and young teenagers. As a long term thing we should present our opinion to the coming generation -- we really should be giving an alternative to the pro-death attitudes being pushed everywhere else. I once gave a talk to a couple of classes at a local school and found them fascinated (far fewer dumb questions than I receive from adults) yet several were still quite fixed on the notion of heaven, God, afterlife, etc. I find that we should try more talks and publicity to elementary and high schools, Scout and Cub Scout groups, Girl Guides and the like. Might Trans Time and Cryovita offer tours to small school groups?

CRYONICS PRIZE
P.O. Box 18, O'Connor
ACT 2601, AUSTRALIA

A.M. Roe
178 Brighton Avenue
Kearny, N.J. 07032, USA

The major problem as I see it is with public awareness and acceptance of cryonics as a viable alternative to the finality of earthly existence because of:

- 1) Poor public relations.
- 2) The subject of cryonics is too disturbing for most to even consider.
- 3) Cost of the suspension procedure and maintenance thereafter is prohibitive.

the solution I propose is a slick Madison Avenue style publicity campaign using mass media hype (radio, the least expensive and reaching a large listening audience; TV is the best but most expensive; periodicals).

Cryonics should be marketed and promoted the same ways as any other product or service. The promotional gimmicks used to get the message across should be upbeat and emphasize the positive aspects. The promo's should be repeated frequently in order to be successful. A good idea would be to get famous personalities to publicly endorse cryonics in a commercial advertisement, i.e.:

Frank Sinatra endorses Budweiser Beer and The Chrysler Corp. O.J. Simpson, football player/actor endorses Hertz Rent-A-Car. Brooke Shields, model/actress endorses Calvin Cline jeans.

Or try out a clever jingle or catch phrase, i.e.:

Have you played Atari today?
Things go better with Coke.
Get a piece of the Rock, Prudential Insurance.

In short, turn cryonics into an industry. Go commercial. Hire a well trained and motivated sales force.

Actually, you'd have to show that the freezing damage that seems to occur on thawing (particularly to the brain) can be minimized or is treatable or reversible. Enclosed is a related article that suggests "brain damage repair" is coming!

Submitted by:
A.M. Roe

(7)

PASSAGES FROM

THE MARTYRDOM OF MAN

by Winwood Reade

When man first wandered in the dark forest he was Nature's serf; he offered tribute and prayer to the winds and the lightning and the rain, to the cave lion which seized his burrow for its lair, to the mammoth which devoured his scanty crops. But as time passed on he ventured to rebel; he made stone his servant; he discovered fire and vegetable poison; he domesticated iron; he slew the wild beasts or subdued them; he made them

feed him and give him clothes. He became a chief surrounded by his slaves; the fire lay beside him with dull red eye and yellow tongue awaiting his instructions to prepare his dinner, or to make him poison, to go with him to the way and fly on the houses of the enemy, hissing, roaring, and consuming all. The trees of the forest were his flock. . . He made the sun paint his portraits, and gave the lightning a situation in the post office.

Thus man has taken into his service, and modified to his use, the animals, the plants, the earths and the stones, the waters and the winds, and the more complex forces of heat, electricity, sunlight, and magnetism, with chemical powers of many kinds. By means of his inventions and discoveries, by means of the arts and trades, and by means of the industry resulting from them, he has raised himself from the condition of serf to the condition of a lord. His triumph, indeed, is incomplete; his kingdom is not yet come. The Prince of Darkness is still triumphant in many regions of the world; epidemics still rage, death is yet victorious. But the God of Light, the Spirit of Knowledge, the Divine Intellect, is gradually spreading over the planet and upwards to the skies. The beautiful legend will yet come true; Ormuzd will vanquish Ahriman; Satan will be overcome; Virtue will descend from heaven surrounded by her angels, and reign over the hearts of men. Earth, which is now a purgatory, will be made into a paradise, not by idle prayers and supplications but by the efforts of man himself, and by means of mental achievements analogous to those which have raised him to his present state. Those inventions and discoveries which have made him, by the grace of God, kin of the animals, lord of the elements, and sovereign of steam and electricity were all of them founded on experiment and observation. We can conquer Nature only by obeying her laws, and in order to obey her laws we must first find out what they are. When we have ascertained, by means of science, the method of Nature's operations, we shall be able to take her place and perform them for ourselves. When we understand the laws which regulate the complex phenomena of life we shall be able to predict the future as we are already able to predict comets and eclipses and the planetary movements.

Three inventions which may perhaps be long delayed, but which possibly are near at hand, will give to this overcrowded island the prosperous condition of the United States. The first is the discovery of a motive force which will take the place of steam, with its cumbrous fuel of oil and coal; the second, the invention of aerial locomotion which will transport labour at a trifling cost of money and of time to any part of the planet, and which by annihilating distance will speedily extinguish national distinctions; the third, the manufacture of flesh and flour from the elements by a chemical process in the laboratory, similar to that which is now performed within the bodies of animals and plants. Food will then be manufactured in unlimited quantities at a trifling expense, and our enlightened prosperity will look back upon us who eat oxen and sheep just as we look back upon cannibals. Hunger and starvation will then be unknown, and the best part of human life will no longer be wasted in a tedious process of cultivating the

fields. Population will mightily increase, and the earth will be a garden. Governments will be conducted with quietude and regularity of club committees. The interest which is now felt in politics will be transferred to science; the latest news from the laboratory of the chemist or the observatory of the astronomer or the experimenting room of the biologist will be eagerly discussed. Poetry and the fine arts will take that place

in the heart which religion now holds. Luxuries will be cheapened and made common to all; none will be rich and none poor. Nor only will man subdue the forces of evil that are without; he will also subdue those that are within. He will repress the base instinct and propensities which he has inherited from the animals below; he will obey the laws that are written on his heart; he will worship the divinity within him. As our conscience forbids us to commit actions which the conscience of the savage allows, so the moral sense of our successors will stigmatize as crimes those offenses against the intellect that are sanctioned by ourselves. Idleness and stupidity will be regarded with abhorrence. Women will become the companions of men and the tutors of their children. The whole world will be united by the same sentiment which united the primeval clan, and which made its members think, feel, and act as one. Men will look upon this star as their fatherland; its progress will be their ambition, the gratitude of others their reward. These bodies which now we wear belong to the lower animals; our minds have already outgrown them; already we look upon them with contempt. A time will come when science will transform them by means which we cannot conjecture, and which, even if explained to us, we could not now understand, much as the savage cannot understand electricity, magnetism, or steam. Disease will be extirpated; the causes of decay will be removed; immortality will be invented. And then, the earth being small, mankind will migrate into space, and will cross the airless Saharas which separate planet from planet and sun from sun. The earth will become a Holy Land which will be visited by pilgrims from all the quarters of the universe. Finally, men will master the forces of Nature; they will become themselves architects of system, manufacturers of worlds.

Man then will be perfect; he will then be a creator; he will therefore be what the vulgar worship as a god. But even then he will in reality be no nearer than he is at present to the First Cause, the Inscrutable Mystery, the God. There is but a difference in degree between the chemist who today arranges forces in his laboratory so that they can produce a gas, and the creator who arranges forces so that they produce a world; between the gardener who plants a seed and the creator who plants a nebula.

WINWOOD READE

Winwood Reade was born at Murrayfield near Crief (Great Britain) on 26 December 1838 and died at Wimbledon on 24 April 1875. He was a (largely unsuccessful) author and novelist of the Victorian period. In 1862 he first visited Africa, where he was an observer of the Ashanti War; he made a second visit to Africa in 1868. He wrote one book about his travels to Africa in 1873, AFRICAN SKETCH BOOK. The other book he wrote after his travels, became, posthumously, outstandingly successful. It was THE MARTYRDOM OF MAN, a long prose epic about the rise of humanity, and it too may have come from thoughts forced upon him by his travels.

THE MARTYRDOM OF MAN today seems excessively grandiloquent, as readers will see when they read it. Its most notable claim to fame among immortalists is that Winwoode Reade predicted, in very clear language, biological modification of humanity, the discovery of immortality, interstellar travel and colonization, and planetary engineering, ALL IN 1872! We would not ever be too far off in reading into some of his remarks intimations of nuclear power.

THE MARTYRDOM OF MAN went into many editions and was popularly read as late as the 1930's. Among its many traits is an uncompromising attach upon

Christianity and all other religions; critics and intellectuals therefore attempted to ignore it as much as possible, and its popularity seems to have spread very much by word of mouth. Standard biographical references to Reade, when they mentioned him, were hostile on theological grounds. Reade counts as one of the earlier frank atheists.

HOW WE CAN MAKE CRYONICS DUES DEPEND ON AGE

Most readers of CRYONICS will know that I have urged for some time that dues for cryonics society membership should depend on age and state of health. Many readers (though undoubtedly not all) probably agree with me, but know quite vividly the main reason why no cryonics organization has yet instituted any such scheme, which is quite simply that doing the modified arrangements would at least appear to constitute insurance, therefore come to the attention of the California Commissioner of Insurance and other state and Federal regulators, who would proceed to render the scheme completely impractical.

For readers not yet aware of cryonics and its problems, the problem with state regulation in immediate terms is that the California Insurance Code requires much paperwork and office overload and a capital on the order of \$500,000 before an insurance company can gain approval to operate in California. Nor is it possible to set up an insurance company outside the state, or establish contracts and agreements which would achieve the same aim as an insurance policy, without also incurring the wrath of state regulators. For a small cryonics group, a capital of \$500,000 is out of the question, especially since it could not consist of any physical plant or suspension facilities.

The main purpose of this article is to describe some ideas for effectively achieving the same purpose as we might wish to achieve by insurance, while at the same time not having an insurance company in fact. However I feel I should begin by summarizing the reasons why I feel that dues SHOULD increase with age, particularly since even if many cryonicists agree with me many other cryonicists do not.

Let's take stock over the last 12 years of cryonics. During this time, we have paid about \$100 per year in dues as suspension members of a cryonics society. There are about 8 people in suspension, in one form or another; of these, ONLY TWO were longstanding members of cryonics societies. Those who follow cryonics affairs closely will know that a major part of the dues of the Californian cryonics organizations goes to the responsibility fees charged by Trans Time; these fees essentially give Trans Time a regular income so that its facilities can remain open and read IF one of us should die. Another major part of the dues go to the costs of keeping the cryonics society itself afloat. This means, in essence, that over the last 10 years all of the members have paid dues of \$100 a year in order that SIX people who were not even members could be frozen.

The problem extends much further than this. For instance, a high percentage of people who join cryonics societies as suspension members suffer from some health problem. One major cryonics activist has a disease condition which will severely curtail his expected future lifespan. Other cryonicists have conditions which impair their insurability without quite so severe a truncation. For instance, one has a history of melanoma, another has diabetes, and a third (to my knowledge) has a history of peptic ulcers.

Long ago in the very early days of insurance in England (about 1700 to

1750) before of course people had any idea about actuarial statistics, companies were formed to establish life insurance and charged rates which did not

(10)

depend on age. The obvious happened: large numbers of ill and old people joined, and few younger people also joined. The companies all either went bankrupt or changed their policy. In cryonics, of course, our situation is not QUITE so bad, in that the actual cost of suspension is paid by life insurance or an estate, and life insurance certainly already depends on age. However the fact that the young and healthy members currently subsidize the older members or those who are less healthy remains true.

I believe, in fact, that this fact underlies the chronic money problems of at least one cryonics organization, BACS, of which I am a member. As of now, dues are barely covering costs for BACS. A considerable need exists for more money, but most of the membership resists any rise in the membership fees. Of course we would expect people to resist increases in membership fees, but here there is an extra sting to the resistance: most of these people are quite simply incurring only a small risk of death, while at the same time they are asked to pay most of these fees precisely in order to freeze and to keep frozen people who are NOT members and who either never joined, or only did so while in terminal illness. People show a lot of sales resistance to cryonics, and we hear from them that "they really believe in the idea, but don't want to sign up just yet." For a younger person, this is not such an unreasonable decision and we should recognize that. Why should he pay \$100 a year for 30 years in order to keep the doors open for people who never even joined in the first place?

As a member of a cryonics society, and someone who has been through this particular hole, I see the flaw in that argument; cryonics is the only game in town, and death is MUCH worse than paying \$100 a year. But what that candidate member is saying is essentially that he or she proposes to exploit us, the member in that OUR money will keep the society afloat until HE needs us. We have no reason to let them try that on.

What these facts mean is that it is very much to our interest as members of a cryonics society to sign up as many young members and members in good health as possible, and AS FEW OLD PEOPLE as possible. The longer we can expect such people to remain members, the more of an asset they will be; while on the other hand people who join in poor health or shortly before dying are much more of a liability than an asset. Perhaps someday this situation will change; but the fact is, that dues payments and Entry Fees from the cryonics societies are a major source of income of both the cryonics societies and commercial organization(s), indispensable for keeping afloat. Members who join young are therefore assets while those who join when old are liabilities to everyone else.

One counterargument against charging much higher fees to the old is that if we did so, they would then simply join some other society. While they would certainly join some other society, this is an advantage rather than a disadvantage of the proposal. By offering much lower rates to the young, we would be getting ALL the younger cryonicists, while the hypothetical "other cryonics societies" will only get (by all precedents so far) a trickle of old members who are likely to soon die. They would therefore sink under the weight, while our own situation would get better and better as the average age of our members fell.

I particularly want to mention here the situation of those cryonicists who are NOW old or in poor health. If anything it is even more to THEIR interest than to the interest of the general run of members to enroll a maximum number of young and healthy members. If you are old and sick now, do you want to be cared for by people who are only just barely healthier than yourself?

(11)

Nor am I suggesting any policy changes which will affect your costs: I am proposing that Annual Dues depend on AGE AT ENTRY, not present age, and it would be entirely consistent with these proposals to leave the rate of dues payable by existing members unchanged. I am concerned with what NEW members should pay, not what old members should pay.

Given that the need to increase intake of younger members is granted, and the corollary (almost immediate) that we must charge dues which increase with age, we have a set of criteria which any proposal for changing our dues structure must meet:

1. The proposal must leave us with at least one viable organization able to perform the physical suspension and storage.
2. The proposal must leave us with at least one viable organization able to take the legal responsibility for suspension and storage (that is, a cryonics society).
3. The proposal must allow the cryonics society to charge rates which increase with age and deterioration in the health of the member.
4. The proposal must be established with minimal cost and paperwork.

On this basis, I shall review the law of insurance, with particular reference to Californian law of insurance.

In the California Insurance Code insurance is defined (Clause 22) as a contract whereby one undertakes to indemnify another against the loss, damage, or liability arising from a contingent or unknown event. For insurance law in general, insurance is considered to be a contract which transfers risk from one party of the contract to another. If we examine the definition with a literal mind, we notice that not every contract in which risk is transferred falls under the control of the Commissioner of Insurance: this is clear, since commodity speculation and most commercial arrangements do involve transference of risk but do not involve the Commissioner of Insurance.

Furthermore, and highly pertinent for our purposes, there are two different cases in Californian law, and one specific clause of that law, which may help us to construe matters quite differently.

First, Division 1, Part 1, Chapter 1, Clause 119.1 states that legal insurance specifically is not to include "retainer contracts made by an individual lawyer or law firm with a fee based on an estimate of the nature and amount of services that will be provided to that specific client." Unfortunately the legislators had not thought of cryonics when they framed this law! but it still may provide extra ammunition.

Of much more direct interest are the two court cases which took place in

California on the applicability of insurance law to certain arrangements which transferred risk, Transportation Guarantee Company, Ltd v. Jellins, and California Physicians Service v. Garrison.

Transportation Guarantee Company v. Jellins too place before the Supreme Court of California on 16 November 1946. Jellins was the defendant. Transportation Guarantee Company as part of its business contracted to maintain, fuel, oil, and garage trucks or other vehicles given to its care. TGC also agreed to keep the trucks under its care insured for liability, property damage, theft, etc., and the maintenance contract states that "liability of Contractor for damage or destruction of said motor vehicle is confined to such damage or destruction as is due to a breach by the Contractor of any of its express obligations herein contained." We notice

(12)

that this agreement did in fact transfer risks from one party to another, and relying on this, Jellins, the defendant in the case, had refused to pay TGC for maintenance and garaging of trucks on the ground that TGC was operating an unlawful enterprise, to wit, acting as an insurance company without complying with the Insurance Code (a shrewd fellow, this Jellins!).

The Court's judgement found for the plaintiff. The content of the judgement should interest us very closely. According to the court, "In construing the contracts in question it must be borne in mind that nearly every business venture entails some assumption of risk. . . . We are satisfied that a sound jurisprudence does not suggest the extension, by judicial construction, of the insurance laws to govern every contract involving an assumption of risk or indemnification of loss; that when the question arises each contract must be tested by its own terms as they are written, as they are understood by the parties, and as they are applied under the particular circumstances involved." Justice Schauer went on to quote two previous related cases to this same effect, that the assumption of risk or agreement to indemnify against loss is not controlling; one of these cases is California Physicians Service v. Garrison, to be discussed below.

As it developed, it turns out that the plaintiff had NOT actually fulfilled its obligation to keep the trucks insured, and therefore by the other clauses of the contract would have been obliged to make good their loss if they had incurred damage. The Court felt that even this did not make the contract one of insurance nor prevent the plaintiff from recovering payment from the defendant. The court found that the fact that TGC hadn't entered into any insurance was irrelevant: the defendant had incurred no loss because of that breach, and the obligation of the plaintiff to repair the trucks or make good the loss did not turn the plaintiff into an insurer. "Such obligations are similar to those ordinarily undertaken by a lessor of motor vehicles" (12, 13).

A company which undertakes to keep specified trucks in repair incurs a risk, since it may happen that the trucks need no repair at all, or it may happen instead that they need [COMPLETE REPLACEMENT (*)]. The point for our purposes is that listed in (9) above: that transference of risk does not imply that the agreement is one of insurance.

The second major case in the California courts was California Physicians Service v. Garrison, who was Insurance Commissioner of the State of California. CPS went to court asking for a declaratory judgement that the

business of CPS was not insurance under the supervision of the Insurance Commissioner. CPS was organized by the California medical profession in 1939 to help deal with the costs of medicine to their patients. Its bylaws stated that "beneficiary members" would be individually enrolled for a registration fee plus a fixed sum per month; in return for this payment, each beneficiary member would be entitled to secure when needed and for a period not to exceed one year for any one illness or injury, medical and surgical services from those doctors who are "professional members" of CPS. "Professional members" in this case were those doctors qualified to practice and who had joined the scheme agreeing to do so. Amounts paid by the beneficiary member to the CPS were to be full payment for the services in question and the doctors involved also agreed not to add any additional charges for their service.

Garrison, the Insurance Commissioner, didn't like this idea at all. He argued that all of the elements of insurance were present in the plan. The CPS argued that rather than insurance it was rendering a personal service compensated by a pooled fund and that the doctors who were members were assuming all the risk of providing or not providing the services.

* TYPIST'S NOTE: THESE WORDS WERE CHOSEN BY THE TYPIST TO FILL THE AUTHOR'S OBVIOUS OMISSION.

The court decided that CPRS was specifically not assuming any risk, but acting only as a distributor of funds. CPS also does not undertake to provide medical care in its own right, but rather states that "the services which are offered. . . are offered personally to said members by the professional members of CPS." Compensation to the doctors who are members of the scheme will be variable, depending upon the incidence of sickness and the number of members paying their dues, and thus all risk was assumed by the doctors who were members. Justice Edmonds cites a large number of other cases in other staes in support of the decision. For instance, Commissioner of Banking and Insurance v. Community Health Service Inc, 129 NJL 427, 30 a.2d 44, a corporation made contracts with doctors by which they agreed to render professional services for a fixed sum paid to them by the corporation and which varied with the number of members but not with the amount of service provided by the doctor. In another out of state case, State ex rel. Fishback v. Universal Service Agency 87 Wash 413, 151 P. 768 the court reached similar conclusions, and as in CPS v. Garrison the fact that no risk was assumed by the corporation implied that no contract of insurance had been made.

From these two cases and the restriction in the meaning of "legal insurance" we see that a contract to provide a regular service does not constitute insurance. Furthermore, a corporation which collects regular dues from its members and agrees to pay them, or some proportion of them, to another Corporation or person in return for service is not itself acting as an insuror.

What, then, are the services provided by cryonics organizations, as distinct from their (possible) indemnification against loss? The major services provided by BACS and ALCOR to their members, and Trans Time to the members of these organizations, is that of constantly being ready to suspend them. The service is analogous to that provided by a telephone answering service: it may be that no calls are received, but the answering service is standing ready to receive them. It appears to be accepted practice for telephone answering companies to charge different rates

dependent upon the volume of business expected, and similarly for law firms on retainer to charge different rates for the same reason. The best way,

then, by which cryonics dues could vary with age and state of health would be for them to involve payment for this service of readiness.

Furthermore, it even helps our case to recall that Standby is presently charged for separately. For those members of BACS resident within the Bay Areas, for instance, a deposit of \$500 is required for Standby; this Standby service is not the same as the readiness granted to all members, but actually pays for mobilization of workers and equipment in order to meet an emergency.

A good deal more needs to be said about arrangements for the suspension of nonmembers. One central problem consists of the fact that merely to keep afloat, Trans Time has needed suspensions; this problem is not a problem with the way Trans Time in particular is run, but instead is a problem with the underfunded state of cryonics organizations. Indeed, the only cryonics organization which does not appear to need suspensions has a level of readiness and ability to actually PERFORM a suspension considerably less than that of Trans Time. There are also deeper reasons as to why we all, as members of cryonics organizations, have reason to ACTIVELY DESIRE for there to be suspensions. In brief, suspension is not just a theoretical endeavor; all of the California organizations have learned a great deal out of every suspension. Either we learn these things by practicing on the members of BACS and ALCOR, or else we learn them (including all of the mistakes and errors which can be made) by practicing on nonmembers. We therefore do not wish to totally stop the flow of suspensions of nonmembers, at least for some time.

(14)

However in order to be consistent, not only should our fees be less for the young, but one way or another they should be MORE for the old. It might therefore be argued that the yearly dues paid to a cryonics organization by members constituted payment on an insurance policy for the amount otherwise payable by relatives of nonmember suspendees.

I believe that any argument is certain to fail. Let's look at it the way the law, made and construed by cryonicists, is likely to see the case. If you are a member of a cryonics organization already, no fee would be payable beyond the expense of the suspension itself. It is only by being a member in good standing that you have any right to oversight of your suspension after your death; by agreeing to oversee your suspension the cryonics society does not incur any risk. It specifically undertakes to pay nothing either to your estate, nor does it undertake to indemnify you in any way for your death. Its situation is close to that of a private cemetery, for which neither the cost of burial nor the cost of upkeep is charged to dues. For someone who is a NONmember, the legal case is even better: not being a member, he or she had no right to suspension in the first place, and having no such right cannot insure it because of a lack of insurable interest.

It is a fact that a certain proportion of the income of BACS, at least, goes to pay some of its officers for their time and effort in maintaining correspondence and records. The percentage of fees going to this purpose also constitutes a readiness fee, and the best way to avoid insurance regulation would be to change the way this is done too. My suggestion would be to hire these officers, either as individuals or as a Corporation,

to provide secretarial services for a fee; this fee should depend on a fixed percentage of the total intake of BACS in dues, rather than a standard rate. In this way we avoid any suggestion that BACS is incurring any risks as an insurer in return for payments from the members.

In order to avoid insurance regulation BOTH Trans Time and the cryonics society should arrange their affairs properly. What is most important here is that neither Trans Time, nor the cryonics society, should be seen as contracting to indemnify a member against loss. A plan to make dues increase with the age of the member therefore requires some changes in Trans Time's policy also. Here are some suggestions:

First, Trans Time should contract with the cryonics society not in respect to any individual members, but for a fixed percentage of the income of that society from Entry Fees (both for live and deceased members) and from Annual Dues. This would of course remove any linkage between the income of Trans Time from its readiness fee and the risk that a particular member might have to be suspended. It would also remove any linkage between insurance and the cryonics society, since the cryonics society would not be accepting any risk at all from its membership, but only acting as an agency in collecting readiness fees from the members and paying them over to the commercial organization. Furthermore even though the cryonics society makes its Annual Dues and Entry Fees depend upon age at entry of the Member, it is important that at no time should Trans Time insist, in its agreements with the cryonics society, that fees should have any dependence state of health or age at Entry. Trans Time can of course insist that the total amount payable exceed a particular sum, but should not specify how this amount should be collected.

These suggestions have nothing to say about the exact scale of fees Trans Time should charge the Society or the Society should accept. However they do contrast with the present situation in BACS at least, where Trans Time does not receive a fixed percentage of the total collection, but instead a fixed percentage of the Dues and Entry Fees collected FROM EACH MEMBER. If Dues and Entry Fees were to depend on age without any other change, this would then

(15)

mean that Trans Time was much closer to acting as an insurer, precisely the situation we want to avoid. Without buying in to any arguments about the proper scale of fees, I do emphasize, though, that this change in how the fees payable are computed can't make any difference to the actual income of Trans Time.

Secondly, Trans Time should be careful to insure that at no time are the costs of suspension and standby made any part of the readiness fee. These services should be billed separately and at the time at which they take place. There is some room for business judgement here as to what the readiness cost may be: it is true, for instance, that the occurrence of suspensions would certainly tend to reduce the readiness cost, and the cost of suspension can reasonably include extra costs for the cost in capital of keeping equipment and manpower ready to suspend. What should NOT happen, however, is for any of the readiness fee to include cost of suspension! Furthermore, members of the cryonics society should NOT receive any discounts on the cost of either Suspension or Standby by virtue of the fact that they are members (there is at least one court case in which a funeral company was found to be operating an insurance scheme precisely because it offered discounts to members of its burial scheme (State ex rel Atty Gen v.

Smith Funeral Service, Inc. 177 Tenn 41, 145 S.W. 2d 1021 (1940)).

Given that we institute these proposals, then, what about the suspension of nonmembers? I'm going to argue that Trans Time can expect a continued flow of nonmember suspension patients, who will all eventually be thawed out, and that this should not worry us.

As most concerned cryonicists known, a high percentage of those patients in suspension, indeed more than half of them, are currently maintained not by payments from their cryonics society but by periodic payments by their relatives. These relatives arranged to have their kind frozen and knew at the time that they had made no arrangements for longterm care. They did it anyway. We have only just dealt with one case in which this happened, to the considerable cost of Trans Time and even of BACS. Our interest as members of a cryonics society is specifically NOT to do anything for these people: they never joined. Furthermore, whatever there is to be learned from their suspension (and in this we do have a considerable interest) it will have been learned by freezing them, not by keeping them frozen. Our interest will therefore be satisfied so long as these people continue to arrive asking for their relatives to be suspended; almost every current suspension patient was frozen without longterm arrangements, and this past history should convince us that the supply of experimental subjects should not dry up for the near future.

Of course Trans Time, which would be responsible for their disposal if the money stopped, has an interest in seeing to their ultimate care. There are obvious ways, some of which are already instituted, by which Trans Time can protect itself. In particular, it can require payment in advance and a deposit to cover the cost of disposal. If the relatives don't wish to pay the (hopefully large) Entry Fees asked by BACS or ALCOR, it is open to them to band together with the relatives of the other orphan patients and found their own cryonics society. As for ourselves, it is simply not in our own interest to continually accept members who have provided to us no corresponding resources or benefits.

To summarize, the proposal is for the cryonics society to charge Entry Fees and Annual Dues which increases with the age at entry, and for the commercial organization to charge the cryonics society a Readiness Fee which depends solely on the total intake by the cryonics society of Entry Fees and Dues. The commercial organization would also charge fees for Standby and Suspension which specifically would not depend on whether or not the patient was a member of a cryonics society at the time of his/her deanimation.

(16)

Finally, here is a summary of why neither organization would incur insurance regulation. The cryonics society would not incur insurance regulation because it is acting solely to collect fees and transfer them to the commercial organization, and by doing so incurs no risk nor does it undertake to indemnify anyone for loss. The commercial organization will not incur insurance regulation because it is providing a service of readiness, to wit, incurring the capital cost of maintaining its equipment in repair and personnel available in case needed, rather than selling off its equipment and embarking upon another line of business entirely. By doing this the commercial organization undertakes neither to suspend the member, nor to actually mobilize personnel and equipment in case of need: these services would be charged at the time of service.

CHOLESTEROL AND LIPOPROTEINS IN THE BLOOD OF 90-YEAR OLDS

One popular means of watching one's health is to minimize intake of cholesterol. A related characteristic of blood chemistry, which many scientists have felt correlates to our resistance to heart disease, is the level of HDL (high-density lipoprotein) cholesterol. Many books suggest, as part of their ideas on how we might increase our lifespan, that we undertake dietary or drug regimens directed at decreasing our LDL cholesterol and increasing our HDL cholesterol (cf. for instance LIFE EXTENSION: A PRACTICAL SCIENTIFIC APPROACH). Many papers on other health practices, such as marathon running, present measurement of HDL cholesterol as part of their evidence that their proposed health practice will increase longevity.

However there have been few direct measurements of the impact of HDL cholesterol upon longevity in normal adults (of course, people with medical conditions which greatly increase their blood cholesterol levels show high mortalities, but that is not the same thing). A recent series of reports by Glueck et al (METABOLISM 24 (1975) 1243; J. LAB CLIN MED 88 (1976) 941 and others) has suggested that in families with inherited high levels of HDL there is a corresponding longevity in excess of the norm. If true, this would be quite important for all immortalists, since it would mean the existence of at last one documented chemical test which would predict longevity.

However although they received a lot of attention in the literature, the original authors of these papers have progressively tended to retract their original claims. Furthermore the family groups selected for the original study were so selected because of their high longevity, so that we would expect them to have a higher life expectancy than the norm in the first place. Given all of these problems, an even more recent study (H. Heckers et al GERONTOLOGY 25 (1982) 176-202) deserves our attention.

Heckers et al set out to study the levels of HDL and LDL cholesterol in the blood of a group of 70 female and 33 male 90-year olds and in a control group of 61 women and 48 men aged 70 years old. They selected both their groups randomly from the general population of their area, so as to avoid any special selection for an inherited predisposition to longevity as such. They then measured the levels of HDL and LDL cholesterol in the blood of these two groups.

Results were not favorable for the theory that high HDL levels predisposed to longevity. In the first place, the control group showed a slightly higher level of HDL cholesterol and lower level of LDL cholesterol than the

(17)

long-lived 90 year olds. This difference was not statistically significant but certainly does not support the theory of an association between longevity. Furthermore, the authors of this study found no correlation between HDL cholesterol levels and other measures of vitality among the 90-year olds (such as electrocardiogram).

We would indeed like some way of assessing whether or not the drug regimens we are taking for aging are having an effect. As of now, no good test seems to exist, and we cannot reasonably expect any such test to develop

until we are so old that it will matter only a little to us.

RAPIDLY AGING MOUSE?

One important way of studying any pathology is to find an animal species which suffers from this pathology to a greater extent or earlier than normal, and then attempt to work out why this pathology occurs in that variety of animal. By doing so, we might hope for clues about the same condition in human beings.

Of course all animal varieties suffer from aging, but we might attempt to find some variety in which aging happens much faster than in others of the same species. It is for the same reasons, of course, that scientists study not merely aging in normal human beings but also conditions such as progeria, in which aging may be accelerated.

Up to now, we have lacked any good animal model of accelerated aging. However an interesting paper from Japan, by Toshio Takeda et al (MECH AGING DEVEL 17 (1981) 183) describes a specially bred mouse strain which at least appears to age more rapidly than other mice. Takeda et al created this strain by systematic inbreeding and selection of a strain of mice which tended to age faster than others of the same litter. The original mice came from the AKR strain, itself one which does not live long.

Of course for the usefulness of such a strain everything hinges on the question of whether or not the mice produced are true models of rapid aging. Takeda et al constructed a set of indices to score the aging of their mice: among these were such criteria as age of onset of passivity and loss of reactivity, loss of skin glossiness, hair loss, eye diseases, and spinal changes. Naturally these changes all took place earlier in the accelerated strain. Takeda et al report also that their mice showed after autopsy a considerable increase in amyloidosis, reaching 100% after only 6 months of age, but amyloidosis was not one of their measures for testing aging rates. (Amyloidosis is a condition in which large amounts of a substance, called amyloid, are deposited in the tissues, changing their texture and their ability to function. Aging people and other mammals show amyloidosis as one of the worsening conditions as they age; some unfortunates also develop amyloidosis early, for reasons as yet unknown.

Whether these mice really do age more rapidly than others, or whether they simply have a new kind of pathological condition, remains to be discovered. It would be of very great interest, but also great difficulty, to breed an especially long-lived and slowly aging strain of mouse. However for cryonicists closely following aging research, the news of an animal model, if not of aging then at least of a kind of progeria, will surely evoke interest.

(18)

L-VASSOPRESSIN

Most readers will know of the spectacular experiments of deWied et al in which L-vasopressin, the pituitary hormone used medically to help diabetes insipidus, will actually improve memory function. At a recent conference, the 5th European Neuroscience Congress at Liege, Belgium, (Abstracts in NEUROSCIENCE LETTERS, Suppl 7(1981)), several scientists presented a variety of papers about this drug, both how it acts in the brain and its usefulness in treating various memory problems. Its effectiveness in improving memory in cases of amnesia due to brain injury was strongly confirmed and its metabolic

effects and interaction with the brain were clarified.

CH Vranckx, of the Psychiatric Hospital in Tienen, Belgium, reported confirmation of the suggestions that vasopressin will help in amnesias due to brain injury so long as the basic neural structures for memory processing remain. He reports trying the drug also in cases of schizophrenia, depression, and memory loss due to prolonged addiction to morphine. Unfortunately vasopressin definitely does not help in senile dementia or memory loss. On the other hand, the other conditions listed showed definite positive effects(S-308). HC Mantaunus, of the University of Leiege, Belgium, reports a study of the EEG in subjects receiving vasopressin , both normal volunteers and other patients suffering from amnesia. Mantaunus finds that vasopressin has objectively measurable effects on the EEG in all those receiving it, although these effects vary with such things as the way in which they received it (for instance, by injection or by nasal spray). The pattern of reaction to the drug differs from that of all other known brain stimulant drugs. Its effects will begin within a few hours after administration and continue after only one dose for as long as a week (S307). B. Bohus, of the University of Utrecht in the Netherlands, reports that the other pituitary hormone oxytocin will actually have an OPPOSITE effect to that of vasopressin, suppressing the ability to learn and remember (S306). Finally, two papers study the neural pathways by which vasopressin and oxytocin act in the brain. GL Kovacs, of Szeged, Hungary, finds that destruction of a part of the brain called the dorsal noradrenergic bundle will abolish the effect of vasopressin on memory, and MV Sofroniev reports work on the anatomy of those neurons which produce or contain these chemicals.

This work gives us a much better grounding in the action of vasopressin and suggest that it may be very useful as a memory aid if taken occasionally. The fact that oxytocin antagonizes the action of vasopressin is particularly interesting in the light of the fact that oxytocin is also a possible antiaging drug; like the other possible antiaging drug dilantin (usually taken for epilepsy) it seems to decrease the ability to remember. The fact that oxytocin acts against vasopressin should make any immortalist wonder about the possible effects on lifespan of longterm dosage with vasopressin. However brief episodes of dosage would probably cause no harm.

"You are permitted in time of great danger to walk with the devil until you have crossed the bridge."

- Bulgarian Proverb