

## CRYONICS

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### EDITORIAL MATTERS

In the center of this issue is the 1983 index to CRYONICS magazine. It goes without saying that preparation of such an index is a monumental task. Thanks for this outstanding effort go to Steve Bridge, my co-editor. Some apologies to Steve are also in order. The 1983 Index was ready for press many months ago, however, this editor delayed its appearance due to the press of other business. In fact, I was saving the Index for an emergency month: a time when a frantic schedule or lack of submissions leaves us hungry for copy. It says something about the state of cryonics in general and CRYONICS in particular that it has been at least six months since such a time.

This month, owing to the heavy load of preparing for the Lake Tahoe

presentations, all of us here at ALCOR are swamped. So...you get the 1983 Index at last! We hope it's as helpful to you as it has been to us...in more ways than one! --M.D.

We have learned that there has been some misunderstanding concerning Jerry Leaf's article Perfusion: Acute Vascular Obstruction and Cold Agglutinins, in the March, 1984 issue of CRYONICS. Jerry was not recommending normothermic or room temperature shipment of suspension patients. The article was intended to point out that simple external cooling introduces a number of complications (vasoconstriction, cold agglutination...) which interfere with good cryoprotective perfusion.

In field situations where a patient deanimates remote from bypass equipment and extracorporeal circulation or total body washout is not possible, then packing the patient in ice with or without CPR is the only alternative. It is important to point out that despite the fact that cold agglutination occurs in suspension patients treated in this fashion, cryoprotective perfusion is still possible and reasonable distribution of cryoprotective agent has been achieved. Of course, such perfusions compare poorly with those where the patient has been adequately supported from the time "death" was pronounced and perfusion was begun before cooling to temperatures at which cold agglutination occurs. The purpose of Jerry's article was to inform on the ideal way to pursue stabilization and perfusion when it is possible, and the consequences when it is not.

This month we welcome a new contributor to our pages: Dick Marsh, a director of the Bay Area Cryonics Society and a Professor of Broadcast Communication Arts at San Francisco State University for 24 years. We hope to see Dr. Marsh's column on Bay Area activities on a regular basis! We urge all of our readers to drop Dr. Marsh a line if you enjoy his reporting and urge him to keep up the good work!

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#### MOVIE REVIEW: ICEMAN

When I consider all the genuinely remarkable, cinematically worthy things that HAVE happened in cryonics I am almost moved to retching at the waste of money represented by Jewison Productions/Universal Studios release of ICEMAN. Indeed, if what was spent on this piece of garbage was funneled into basic organ preservation research we would probably HAVE suspended animation for the central nervous system in a few years! To say that the film was terrible is a little like describing a session with bamboo slivers being shoved under your fingernails as "uncomfortable."

In every respect except the remarkable wordless portrayal by John Lone of the Iceman himself, this movie is a waste of the money of its investors and of the money and time of anyone who manages to sit through it. A third-grader with a learning disability could come up with a more consistent and credible story line. It is so bankrupt that its "creators" had to end it with what can best be described as a classical deus ex machina.

Everyone who worked on the narrative for this film, from producers, to writers, to the director and the editors must have been on cocaine and LSD. We are given to believe that a mining company that can afford to carve out an entire subterranean city in the arctic wastes, complete with its own "vivarium" looking like something out of Walt Disney Productions Jungle Book, is smaller than Genentech (a rather small company). Indeed, so massive is this research/mining station that one gets the impression that it could easily contain Manhattan several times over. It is certainly large enough to contain what appears to be a MAJOR medical facility, capable of reviving the Iceman, who has been dead 40,000 years (and also

later incapable of treating a deep stab wound, such as is routinely seen in an emergency room of any size). For reasons left unexplained (probably because they are unexplainable), this company employs an anthropologist and a cryobiologist who seem to spend their time wandering around engaged in idle discussion when they aren't tooling up to thaw out Neanderthals. As for the technical aspects of returning the Neanderthal to life from the frozen state: they are a mixture of gobbledegook and stupidity. It is quite obvious that wherever the producers had to economize, probably to afford their drug buys, the research department was at the top of the list. At one point we are informed that DMSO is not a cryoprotectant but can "carry cryoprotectants into tissue." This will no doubt be major news to cryobiologists and cattle breeders everywhere who have been using DMSO as a cryoprotectant for over 20 years. In one absolutely laughable scene in the film the "cryobiologist" is having difficulty identifying an unpleasant odor. Suddenly, she blurts out "DMSO!" This is laughable because anyone, cryobiologist or not, is unlikely to EVER forget what DMSO smells like--even on the basis of only one experience. The only thing more hilarious is when she is asked how the DMSO could have gotten into our "Iceman" and she replies:"maybe it was something he ate."

As for the case of indigestion I was suffering by the end of this film it certainly was not caused by something I ate, but rather from something I saw: two hours of nauseating garbage with a nonexistent plot, infantile dialogue, and absent scientific credibility.

By now you may be wondering if cryonics was discussed at any point in the film. The answer is yes, and no. Since nobody seems to be able to get our name right or to understand that we're counting on FUTURE repair capabilities it's really hard to say what they were talking about. One of the closer approaches occurs when the anthropologist Sheppard is angrily confronting the "cryobiology" research staff over their continued biopsying and study of the Iceman in order to uncover the mysterious cryoprotective agent which saved his life. The lady

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"cryobiologist" makes an impassioned plea for cancer patients everywhere by pointing out that someday soon there will cryovans on every street corner, no doubt augmented by a hovering cloud of helicopters just waiting to snatch up the dead and dying and freeze them away. Anthropologist Sheppard is unmoved by such visions and proceeds to trot out every hackneyed antilife, anticryonics argument you've ever heard: "What about overpopulation? What about the poor people who can't afford freezer space? What about going on to complete our destiny by dying a good and beautiful death?" Keep in mind that Sheppard is supposed to be the sympathetic character, the nice guy who is our friend. With friends like that who needs enemies?

Since this movie isn't worth seeing, I'll go ahead and "spoil" it for you and give away the ending. After various misadventures and stupid oversights our Iceman (played talentedly\* by John Lone) and our anthropologist (played vacuously by Timothy (Ordinary People, Taps) Hutton go out on a "dream walk" in search of the Iceman's long vanished family. While strolling along amidst avalanches, the Iceman latches onto the skids of a company helicopter, is carted into the sky and then lets go to magically fly away above the clouds. This, by the way, was the most credible part of the entire film: at least he had the good sense to get the hell out of it!

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\*Lone's performance was the only worthwhile thing in the entire movie. He should receive an Academy Award for delivering such an outstanding performance under such adverse circumstances.

## HUMAN FROZEN TO LIQUID NITROGEN TEMPERATURE FOR 11 MONTHS SURVIVES!!

"Human life can now be frozen and suspended indefinitely." So opens an article which appeared in the April 24 1984 issue of the Star tabloid newspaper. The difference between the Star's story and last month's story from the Weekly World News (on the East German freezing of an entire human) is that the Star happens to be telling the truth!

There's really no mystery here, and it isn't really a technical breakthrough as much as it is a social and psychological one. For what the Star's article is about is the birth of the first human being to have been frozen and stored as an embryo. Since the Star paid a hefty exclusive rights fee to the family and physicians, they were the first to report on the story in detail. Indeed, the major media were NOT very interested in the story and covered it briefly if at all.

Zoe Elizabeth Leyland began life in a Petri dish 20 months before her birth on March 28th, 1984. She was delivered by Caesarean section and weighed in at 5 lbs. 13-1/2 oz. Zoe is one of four frozen embryo pregnancies with two other deliveries expected later this year. The first frozen embryo baby was due in October of 1983, but the mother miscarried at 24 weeks. Zoe's mother, Loretto Leyland, was unable to conceive normally due to a blockage of her fallopian tubes through which the fertilized egg normally travels to the uterus. The "test tube" fertilization and embryo freezing was carried out in Melbourne, Australia under the direction of Drs. Carl Wood and Alan Trounson of Queen Victoria Medical Center.

Zoe Leyland was frozen as an embryo largely to ease logistic problems which currently accompany in vitro or so-called test-tube conceptions. In the past, in vitro fertilization has been carried out by first superovulating the would-be mother and then recovering several mature eggs from her by a surgical procedure known as laparoscopy. While laparoscopy is a comparatively minor procedure, it is abdominal surgery and it carries with it both discomfort and some risk. Once

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the eggs have been harvested, they are then incubated with sperm to produce conception. Embryos fertilized in this way are screened for vigor and normality and then transferred to the mother's womb.

There are a number of problems with this approach. First, as previously mentioned, each attempt at implantation of an embryo must be preceded by superovulation, laparoscopy, and fertilization. The stresses of these procedures may well contribute to a reduced rate of successful implantation of the embryo at transfer a day or two later. Secondly, regardless of how many eggs are recovered with each superovulation and subsequently fertilized, there is only one chance for an implantation to occur. Obviously, if there were some way to store eggs for future use, many attempts to achieve implantation could be made on the basis of one superovulation. Such an egg storage technique would also greatly reduce the cost of the procedure making it affordable to a larger number of people.

Unfortunately, there is currently no known technique for cryo or otherwise preserving mammalian eggs. However, for almost a decade techniques have been around for freezing mammalian embryos. In fact, within a few years of their development by David Wittingham (London, England) these techniques were finding widespread application within the cattle and livestock breeding industry. Application of these techniques to human embryos thus became almost inevitable in order to solve the logistic problems encountered with simple in vitro fertilization.

At the time the Star article was written the Melbourne group reportedly had 190 human embryos in liquid nitrogen storage! The Star article, which was both well written and lavishly illustrated shows the embryos as being housed in an MVE A-2600 dewar (the wide mouthed cousin of the MVE A-2542 ALCOR uses for neuropatients).

While the birth of Zoe Leyland marks no great technical milestone it certainly marks profound social and legal ones. Does a frozen embryo constitute "life in being" under the law (as embryos in their mother's wombs do) and can such embryos be named as trustees? (This question has special importance for cryonicists because it may be a way around the law against perpetuities.) Is destruction of such an embryo a felony, as destruction of a child in the womb is in some states? What are the legal rights of the embryo? No doubt society will soon be faced with such questions. For better or worse, the answers will almost certainly affect patients currently in cryonic suspension.

United States physicians are expected to follow the Australian lead later this year. Dr. Richard Marrs of the University of Southern California Medical School at Los Angeles expects to transfer a frozen-thawed embryo within the next few weeks. One reason why USC is entering the field is the increasing number of multiple births they are experiencing with in vitro fertilization: an awkward consequence of improved technique. Dr. Marrs hopes to keep the overall success rate high and eliminate the multiple births problem via serial attempts at embryo implantation.

With these developments, one thing seems certain: freezing of human embryos is going to have much wider application in the next few years. This promises to greatly change the way most of us look at reproduction and define human life.

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"Often the test of courage is not to die but to live."

-- Alfieri

"Despair is the conclusion of fools."

-- Disraeli  
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#### NEW CAPABILITY IN SOUTH FLORIDA \*

by Mike Darwin

For the past four years the Cryonics Society of South Florida has been slowly moving toward a "state of the art" cryonics capability. After much hard won progress with several false starts the Florida group has achieved a major milestone: setup of a good, working, state-of-the-art perfusion facility. In a period of just two weeks CSSF went from virtually no facilities to being on-line with a perfusion capability which is exceeded only by Cryovita's in Southern California.

On Friday, April 6th, Hugh Hixon and I arrived in Hollywood, Florida to begin setting up over 60 boxes of equipment which had been shipped from Cryovita during the preceding six months. As is usual in cryonics, the job which awaited us proved to be considerably more complicated than first anticipated. Upon arrival at CSSF's facility in the heart of Hollywood (Florida) we were confronted with a physical plant which required considerable repair and rework if it was to serve as a perfusion facility. But before any real work could be done, we were confronted with the necessity of sorting through and removing over 400 cubic feet of documents, papers and stored items. Much of this material needed to be discarded, but

some of it had to be saved. Our first reaction bordered on despair: just disposing of this material would be a major additional project in and of itself!

Nevertheless, we dug in, and with the help of CSSF member Doug Platt we plowed through the screening and refuse removal operation in about two days. Since the "cryonics" floor of this five story building had been untenanted, it was being used more or less as the "attic" of the other four floors. It is simply amazing how many items can accumulate in 1600 square feet of space which no one is using!

On the Sunday following our arrival, we conducted a training session which covered the basics of intravenous technique and medical packaging. The training session was very well attended with over 10 people present, all of whom showed enthusiasm and a willingness to learn. Both Hugh and I were particularly impressed with the number of questions asked. Indeed, questions came in an almost nonstop barrage and were of the quality every instructor wants but rarely gets. We were pleased at the overall quality of the people who attended the training session and at the aptitude and self-confidence which several of them showed.

On Monday we began to work in earnest on setting other areas of the physical plant in order. Just bringing the plumbing up to snuff required better than a full day's work. We did everything from repair toilets to plumbing in a hot water heater. We also cleaned. Since this space had been more or less unoccupied, it had received no routine cleaning. For the first week we were there it seemed like all we did was mop, scrub, spackle and paint. Slowly, things began to take shape.

After our first two days work hauling trash we had pulled the physical plant together sufficiently to begin unpacking equipment and setting up the operating room and laboratory. We tackled the O.R. first. One of our top

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\* The photos which accompany this article appear in the center section of the magazine.  
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priorities in organizing the O.R. was to secure three 24" deep double-door steel office supply cabinets to hold supplies. These cabinets were arranged along one end of the O.R. such that when their doors were open free access could be had to all the cabinets at once. These cabinets proved invaluable to organization and readiness. We had shipped out about 150 cardboard bins to contain various small items which would need to be readily accessible and well organized. On Monday evening, our third working day in Florida, CSSF volunteer Ross Hartman and I began assembling these bins, labelling them and unpacking supplies into them. Every item, from pump tubing connectors, to stopcocks, to 18 gauge needles was given its own bin on a shelf in the cabinets and was labelled both with its name, and its catalog reorder number to simplify inventory control and future restocking. Just unpacking items and putting them away in their proper places took nearly two "man days" of effort. Keep in mind that we are talking about 12 to 15 hour long days! Once these cabinets were in place any item could be accessed simply by walking a few feet to what amounted to an entire 15 ft wall of shelving and picking it from its proper bin. The cabinets were organized according to the general areas of activity they contained supplies for: i.e., one cabinet was for cardiovascular and bypass supplies such as tubing packs, cannula, connectors, monitor lines, perfusate temperature probes and so on. Other cabinets contained sterile surgical linens, intravenous solutions and drugs, and special items such as patient temperature probes and a thermocouple thermometer.

The operating room itself is very well equipped. Several years ago CSSF purchased a recent-model American Optical Co. heart-lung machine and

they have spent nearly \$15,000 on quality cardiovascular surgical instrumentation. The O.R. has a solid state electrocautery unit (which is very important for controlling bleeding during surgery in suspension patients since they are massively anticoagulated), suction, Blanketrol heater/cooler, microhematocrit and general purpose centrifuges, a reconditioned medical operating table (as opposed to the previous embalming table, which was NOT adequate for perfusion), electromagnetic flowmeter, pressure monitor, refractometer (for evaluating cryoprotective agent concentration), and portable O.R. light. Of course, they have many, many other items including such important pieces of equipment as a sternal saw, kick pails, Mayo stands and other necessary O.R. furnishings. The laboratory, which is separate from the O.R. is also well equipped. During our second week we set up the balances, and made inroads into setting up a Radiometer pH/blood gas system. In a few months Jerry Leaf will visit South Florida to complete set-up and calibration of the blood gas unit and attend to several other minor details. CSSF also has available to it a wide range of laboratory glassware and other equipment for preparation and filtration of perfusate.

Our second Saturday in South Florida was spent in a "hands on" training session where team members got to see and to some extent participate in using the skills which were discussed in classwork on the preceeding Sunday. It also proved to be a trial of the existing electrical wiring, as the equipment load triggered the circuit breakers. The Saturday session consisted of anesthetizing a mongrel dog and carrying out the entire transport protocol (except chest compression: dogs cannot be given CPR as humans can owing to different anatomy). Briefly, what was done is that the animal was anesthetized, intubated (a tube placed in the windpipe) to allow use of a manual respirator, and an intravenous (I.V.) line started to introduce medications into the bloodstream. The first I.V. was via a peripheral stick into a foreleg vein. Several members of the CSSF team got to try their hands at starting an I.V. in this fashion. Once the I.V. was in place and properly secured the team began figuring out medications to give and calculating the appropriate medication dosages (based on weight).

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Team members administered all medications (except the anesthetics which were handled by Hugh and I) and adjusted the rates of various I.V. drips.

Simultaneous with administration of the medications, the animal was packed in ice and cooled externally. A temperature probe was placed rectally to monitor internal temperature and a gastric line was put in place to administer antacid to prevent ulceration of the stomach during hypothermia. The animal was also hooked up to the CSSF cardiac monitor in order to determine when to stop cooling and begin rewarming.

When the animal's temperature reached 22 C, bilateral femoral cutdowns were undertaken and the animal's left femoral vein and right femoral artery were cannulated to allow circulation of the blood through a heat exchanger. The animal was then put on partial bypass and extracorporeally rewarmed to about 32 C, at which time bypass was discontinued and external rewarming commenced.

Rewarming turned out to be the usual tour-de-force we have come to expect. The animal did not begin breathing until over 15 hours after the start of the procedure and thus required constant manual ventilation during this time. The CSSF team proved to be real troopers and stuck with it until late at night. The final vigil was conducted by Hugh Hixon, Bill Faloon, Saul Kent and myself. Naturally, I ended up on the air mattress sitting up with the beast until sunrise the next morning when he extubated himself and began to walk around!

The animal survived the procedure, and in fact made it back to Los

Angeles in reasonably good health over a week later. Unfortunately, the animal succumbed to unusual anesthetic complications secondary to a minor surgical procedure which was undertaken to treat a femoral wound infection.

The next day, Sunday, the team met for another training session. I have only vague memories of this session since I had only had two hours sleep the night before. Everyone assures me it went well, but I really couldn't say.

It is a measure of the team's enthusiasm that they asked to meet again for another training session on Wednesday, since everyone felt they needed more experience with the heart-lung resuscitator and a general review of procedures. This Wednesday training session went well, with everyone looking forward to the next session to be conducted by Jerry Leaf in a few months. This next session will allow for more extensive hands-on work by team members and will end with sacrifice of the animal--thus allowing for more invasive procedures to be carried out.

Much of the rest of the second week was spent weighing out perfusate components, and preparing the facility for "mothballing" to await the next training session--or its first cryonic suspension. This included a major caulking and water-diversion project, since the building has a number of leaks, and it rains frequently.

The final day in Florida was spent doing some last-minute rewiring, since the training session had demonstrated that the existing wiring was not adequate to handle conveniently the heavy loads imposed by the heart-lung machine, the heater/cooler used to chill the heat exchanger in the extracorporeal circuit, and two window air conditioners! This task proved to be not so difficult as we thought, nevertheless, pulling wiring through conduit and rewiring a major portion of the floor (including reinstalling overhead fluorescent fixtures) is never a pleasant business.

Another frantic wrap-up project was the construction of a new dry ice box for patient cool-down. Unlike the previous CSSF box, this one could be moved onto the elevator in the building where the facility is now housed. This dry ice box is known informally as the 24-hour wonder since it was assembled by me (with some help from Hugh) in under 24 hours to the accompaniment of much cursing and shouting. As far as we know this is the first (and I hope the last) dry ice chest to be constructed in one day! Considering that my first one

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(built when I was 14 years old) took a month to complete this was no mean achievement!

Friday morning, two weeks after our arrival we climbed aboard a jet bound for Indianapolis and fell asleep! Looking back on the experience, Hugh Hixon commented appropriately enough that it was like a suspension which lasted for two weeks! Certainly, I can recall few times in my life when I've worked harder and longer on a single project. But then, it was worth it. When I took a final look around that room I realized that we had just been involved in an incredible "first of its kind." For the first time a group of people decided they wanted a cryonics capability and they ordered one--and got it. In contrast to the slow, aching gains of every other group in the past CSSF simply ordered a complete physical capability. Both the fact that they did so, and that it was possible for them to do so says much about the progress we've made.

CSSF still relies on Cryovita for providing perfusion personnel. However, deployment of a new physical capability was not the only exciting development which occurred during our busy two weeks in South Florida. Stay tuned for further details. The best may be yet to come!

NEW ALCOR SUSPENSION ARRANGEMENTS IN THE WORKS



At the May ALCOR Board of Directors Meeting it was decided to approve a new approach to suspension arrangements. This approach will utilize highly specific agreements for suspension arrangements between the member and ALCOR. Much of the direction regarding the kind of services a member wants (which is now contained in the Application, such as neuro vs. whole body, conditions of suspension and so on) will be incorporated into the agreement. Additionally, the Relatives and related affidavits will be modified to tighten them up and grant ALCOR broader premortem rights (visitation, access to medical records and so on). A special transmutation of community property agreement will also be made available so that those people who are married and plan to pay for their suspensions with life insurance can have the spouse transfer his/her share of ownership in the policy to the member. We plan also to have simple model Last Will and Testament forms available as well as model Power of Attorney forms. We anticipate having easy to follow instruction sheets with each document which will also have a question and answer section pointing out some of the hazards and advantages of various choices in executing the document.

Obviously, this undertaking represents a tremendous amount of work. We have a great deal of information to communicate and it will not be easily put into print in a simple, direct format. We believe that such a paperwork package in lay terms is essential. We have now seen the results of better than 8 people trying to "cut their own arrangements" using their own lawyers and the BACS (Bianchi) paperwork. The results have ranged from the comic to the disastrous. They have without exception been financially very costly. We don't pretend our paperwork will eliminate these problems, but it may well reduce them dramatically for everyone but those who wish to establish private, nonALCOR trusts.

Perhaps the biggest change in our paperwork arrangements other than a direct agreement with the member is a change in our internal accounting practices which was also approved by the Board at the May meeting. This change in policy will allow for separate internal accounts for over the minimum in suspension funding. In other words, what this means is that if you have over your minimum required funding of \$35,000 for neuro or \$100,000 for whole body the overage will be maintained on a separate accounting basis for your care and your care alone. All funds at the minimum will be pooled and no separate accounting will be maintained.

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It is possible that this maneuver could cost us our tax-exempt status (although not our nonprofit status) though this is by no means clear. If you, as a General Member of ALCOR have concerns or questions about this change in policy please contact us at once! We want your opinions and your guidance on this issue: and believe us, we are listening.

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CONCERNED ABOUT THE QUALITY OF CARE YOU'LL RECEIVE

If you're worried about what's going to happen to you after your cryonics arrangements fall into place, then consider ALCOR. At ALCOR we're trying to anticipate the problems; not just deal with crises as they arise. So, if you're making cryonic suspension arrangements for the first time or if you want to modify existing arrangements, contact ALCOR today. And remember, ALCOR has no high priced entry fee like other organizations.

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BAY AREA UPDATE by Dick Marsh

This is the first in what may become a regular feature in CRYONICS. It will be a series of brief reports aimed at keeping the scattered members of the cryonics community aware of what is happening in the cryonics scene in the San Francisco Bay Area. Your comments and suggestions are welcome.

Generous research donation. The brightest news at the moment is the report by Dr. Paul Segall that the Life Extension Foundation of Hollywood, Florida, has contributed \$5,000.00 to BioPhysical Research and Development (BPRD), the small Berkeley-based company headed by Dr. Harold Waitz, for its Hamster Suspension Program. This program is also funded by both BACS and Trans Time.

Dr. Segall explains that "the funding has allowed the formation of a team of three senior scientists and three pre-med students who are studying hypothermic asanguineous perfusion in hamsters." These researchers have had some success in their attempts to replace the blood of cold hamsters with solutions containing cryoprotectants such as glycerol.

Working at BPRD's own facility in the Physiology Department at the University of California, the team has made "significant progress." They have explored the use of ketamine anaesthetic, developed improved kinds of very small cannulas, and automated the formerly manual procedures of introducing blood and blood substitutes and of artificial respiration.

"In preliminary experiment," Dr. Segall reports, "a hypothermic hamster was perfused with an 0.3M glycerol solution for 5 minutes, and then allowed to rest without perfusion with this solution in its vascular system. Its heart beat slowly but steadily while glycerolated at temperatures within a few degrees of the ice point. When the animal was re-warmed and transfused with whole blood, its heart beat increased to more than 60 per minute. However, primarily due to surgical errors, the animal was never recovered.

"While this is not a long exposure to glycerol, especially at low temperatures, it indicates that the toxicity of this cryoprotective agent may well be limited. This glycerol concentration (0.3M) is equal to that found in the body fluids of frogs which can withstand several months of suspended animation with a third of their body water frozen into ice."

Publicity. The Hamster Suspension Program has not only yielded useful scientific information but also generated valuable publicity for cryonics. Its presence on the University of California campus has stimulated considerable interest and led to an article in the February 28, 1984, issue of the "Daily Californian" describing the project and its goals as well as its relationship to cryonics and life extension.

Further publicity -- overseas in nature -- was generated recently when a crew from Tokyo Broadcasting System visited the Trans Time lab to film an interview with Art Quaife. They expressed interest in purchasing right to some of Trans Time's own videotape footage.

In another publicity-related event, two of San Francisco's most respected newspaper columnists have sounded off on death -- one wisely and one not so wisely -- and have received letter from the BACS media representative. Neither letter was published, but the columnists, whose position gives them opinion-forming power, were made aware of the existence of a strong anti-death sentiment in the

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community. Both columnists replied with respectfully worded personal notes.

Art Hoppe, usually very progressive and intelligent, went neanderthal in a recent issue of the "San Francisco Chronicle" and devoted his column to a satirical piece in which he ridiculed the idea of "a committee to end death." In his conciliatory reply to the criticism which this nonsense evoked from the BACS representative, he repeated the tired old argument that "impending death sweetens life."

Herb Caen, on the other hand, included a strong statement in a recent column praising life and lamenting death. His reply to the letter of approval sent to him was a masterpiece of eloquent brevity. In its entirety, the letter said: "Long live life!"

Cryonics Building Fund. Trans Time Director John Day has reported optimistically on the growth of the Cryonics Building Fund. This fund, which exists independently of both BACS and Trans Time, now totals nearly \$25,000. It has several purposes: (1) Providing a permanent facility for Trans Time. (2) Providing a tax advantage and income for the investors. (A portion of the property will be made available rent-free to Trans Time. It is expected that this will result in a healthy tax deduction. Another portion, it is expected, will be profitable rental property. In this connection, note the number of investment advisors who recommend real estate as a prime area of investment.) (3) Increasing the stability and vitality of cryonics organizations in the Bay Area. (4) Motivating a solid core of skilled people interested in cryonics to protect and enhance the value of the property.

The fund will be managed by Franklin Resources, Inc., of San Mateo. If you wish to take advantage of this excellent investment opportunity or if you wish more information, get in touch with John Day, Cryonics Building Fund Custodian, 7710 Huntridge Lane, Cupertino, CA 95104, (408) 255-8460.

Stock Offers. An offering notice of 1250 shares of Trans Time stock at \$20.00 a share was mailed to qualified buyers in April. In addition, the development of a proposed public issue of stock moved forward. The plans for this issue are to be modeled after those prepared by companies such as Genentech, which has some parallels with Trans Time.

Cryonics in Yugoslavia? A comprehensive letter about the possibilities and advantages of suspensions and BACS suspension memberships has been sent to an interested family in Dubrovnik, Yugoslavia.

Training Session with Southern California Personnel? At the March 25th meeting of the Trans Time Board, Art Quaife proposed that a training session be held with personnel from Southern California in order to refresh the technical skills of our suspension team. Paul Segall moved -- with a second from Norm Lewis -- that Trans Time undertake a cost analysis for a combination training and large animal research session along with Cryovita personnel to take place in the early part of the summer of 1984.

Twelfth Anniversary! At the same meeting, Jerry White noted that March marked the twelfth anniversary of the incorporation of Trans Time and then generously broke open a bottle of champagne, which the board members enthusiastically shared. It has often been said that a journey of a thousand miles begins with a single step. What enormous reach of time

begins with a twelve-year interval?

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\*\*\* TYPIST'S NOTE: THE NEXT FOUR PAGES CONTAINED PHOTOGRAPHS. THE  
FOLLOWING TEXT APPEARED WITH THESE PHOTOS. \*\*\*

(PAGE 1)

CRYONICS CAPABILITY IN SOUTH FLORIDA  
(These pictures accompany the article beginning on page 5.)

Above: The Beginning: CSSF operating room at the start of the set-up.  
(Photos which follow by Hugh Hixon.)

CSSF Operating Room: Setting up an I.V. (Dayna Dye, Ed Schaerer, Doug  
Platt, Bill Faloon, Hugh Hixon, Ross Hartman, and Mike Darwin) Photo by  
Saul Kent.

(PAGE 2)

Left: Drug Dosages: Mike Darwin, Ross Hartman, and Bill Faloon.

Right: The Night Watch: Doug Platt.

Left: The Awakening: Saul Kent, Bill Faloon, Mike Darwin.

(PAGE 3)

The Day After: Man and beast; Mike Darwin with dog following rewarming.

Right: Introduction to the Heart-Lung Resuscitator: Greg Tupler, Saul  
Kent, Dayna Dye, and Mike Darwin.

(PAGE 4)

Above: Pulling Wire: Hugh Hixon rewiring CSSF facility.

Right: 24-Hour Wonder: Mike Darwin staining the dry ice shipping  
container.

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STEVE BRIDGE INTERVIEWS HIMSELF

or

Who is this Guy and Why is he still in Indiana?

Q: So tell us about yourself, Steve.

A: That's a probing question?

Q: Just to get things started.

A: I'm listed on the masthead as co-editor of CRYONICS  
magazine. By profession I am a children's librarian with the  
Indianapolis- Marion County Public Library. I also teach a class  
in Children's Literature at Indiana University-Purdue University  
at Indianapolis. I have a B.A. in Speech-Theatre from DePauw  
University and a Master of Library Science from Indiana  
University. I have been a professional librarian for 10 years.

I am unmarried and heterosexual (that means I'm fun, but not gay). I have red hair, blue-green eyes, am almost six feet tall and weigh about 155 pounds. How's that?

Q: More than enough. How did you get involved in cryonics?

A: Strictly through personal contact. I had been vaguely aware that such an idea existed, through science fiction stories and films; but until 1975 I had no idea that people were really doing it. I met Mike Darwin at a meeting of the Indiana Science Fiction Association that February. We (along with Anna Schoppenhorst [now Tyeb], Carolyn Doyle, and Floyd Tolle) had each been introduced to this group by a fellow named Mark Sharpe; so I suppose we owe a joint debt of gratitude to him, wherever he is. I was stunned and fascinated by Mike's stories of working on suspensions; but I did not at first connect this idea to my own life. Mike and Anna and I became close friends and spent hundreds of hours over the following year discussing life in general and cryonics in particular. Eventually it soaked in that this really was a necessary thing for me to do. I recall quite clearly the evening that I moved from the ranks of talkers to the ranks of doers. Mike was going on (as he often did) about how if he only had one hundred dollars, he could start a cryonics group in Indianapolis. Having either become inspired or perhaps having just grown tired of this ploy, I called his bluff. "O.K., Mike, I'll give you \$100.00. Let's start a group." Somehow I thought that a little money was all it would take and that Mike would take over from there.

Q: I gather that you were wrong.

A: Quite. Over the next few years, I spent several thousand dollars and several thousand hours on our organization, The Institute for Advanced Biological Studies (IABS).

Q: That's quite a mouthful. Where did you come up with that name?

A: We had a skilled but very conservative lawyer who insisted

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that we have a formal sounding name to keep unwanted attention diverted from us. It certainly worked; we got almost no attention at all during the next four years, even when we wanted it. The credit or discredit for the actual name goes to me, I suppose.

Q: Who was involved at the beginning of IABS?

A: I was President of IABS. Our lawyer suggested we go ahead and form both a not-for-profit and a for-profit corporation at the same time; so Mike became President of the for-profit (slightly hysterical laughter from Mike) Soma Corporation. We were led to the lawyer in the first place by the good common sense of Floyd Tolle. We were naive enough to think that we were going to incorporate ourselves. I can see in retrospect how dangerous that would have been. There are things now that I would do differently; but I would still use a lawyer. Judson

Horning, Joe Allen, and Allen Lopp were also original IABS Board Members. Unfortunately, Judson and Floyd are no longer part of cryonics, but Joe Allen and Allen Lopp have remained involved with Alcor. Anna and Carolyn Doyle were under 18 so they could not be on the board ; but they helped us in many ways as members. Anna is now an Alcor Board Member. Carolyn has just graduated from Indiana University School of Journalism and is not currently involved; but we might get her back someday. Others came and went over the next few years, but none who are currently part of any cryonics group (there are a couple who might become so again, however).

Q: There was a lot of ballyhoo when you bought the IABS house. How did that work out?

A: Allen Lopp and I made the down payment on a large brick house at 2901 N. Pennsylvania St. in Indianapolis. We managed to get a zoning variance to do animal research and really felt like we had some stability. In many ways that was a great deal for us. It gave us an operating base and gave a home to Mike, Allen, Joe, and later Anna. It was large enough for meetings and open presentations. After we had owned the house only a short time, we got pressured into a deal by a local insurance company that had been trying to get that piece of property for bargain basement prices. We ended up with a good profit and the rent-free use of the house for seven years. After the move to California the house was turned over to the owner and razed. We only saved a few bricks.

Q: Why didn't IABS survive in Indianapolis?

A: We asked ourselves that question hundreds of times. In essence, it was a classic case of a good idea not catching on with enough people. We pushed fairly hard; but we were unable to find a formula to get people involved without spending the hundreds of hours that had been required for most of the rest of us to "convert." We were trying to do research and perform the constant organizational duties necessary and no longer had the time to throw ourselves into other people's lives. So we ended up with the same group of people, plus three or four others, doing all of the work, and several hangers-on getting in the way.

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We also learned that cryonics can attract some very dangerous people. One person who was a member for a brief time had been a chemist and salesman of mind-altering substances and was later (after he left IABS, thank goodness) arrested for keeping two women chained to his bed. Fun, Fun.

And then I ran into that old monster --Burnout. My biggest problem was handling the widely divergent personalities in the group and trying to forge a workable organization. In the process, I was not delegating authority well and was letting stress pile up. The group began more or less self-destructing at that time. Fortunately, by this time Mike had become close friends with Jerry Leaf and thought that California showed greater promise. The idea that two or three small groups might accomplish more working together than working apart seemed pretty

reasonable. I think events have shown that was a wise move. Mike and Allen moved with the laboratory, etc. in September, 1981.

Q: What was good about being part of IABS?

A: Without IABS I might never have become as involved as I am now. I might never have even signed up, although I hope I wouldn't have been that dense. Being involved with cryonics and the people in it altered my entire view of life. Everything I read, see, or hear is now filtered through a mind-set that includes the possibility that I will be alive some hundreds of years in the future. You start viewing books about the future in an entirely different light. You begin listening for different issues when politicians speak. You begin altering your behavior to enhance your health and short-term survival. You set aside large amounts of money for suspension. I even find myself saving more money for possible retirement, partly so I can protect my cryonics funds, but also because I now think more about my own future than I used to.

There was a great excitement in being a leader of something new. The group was small enough that we each got to try almost every aspect of the work. This is very bad for long-term efficiency, but it certainly trained me in a number of useful skills.

I also developed the closest set of friends that I had ever had. The sharing of the trials of beginning something new can draw people very close together. Of course we were already bound by a partially similar world view. But the sharing of self-discovery that we each went through was the most powerful thing that happened. We can never completely forget that.

Q: So why didn't you move to California?

A: Three main reasons or groups of reasons. One was that I was secure in my career and circumstances in Indianapolis. I like being a children's librarian; but the massive cuts in public services in California because of Proposition 13 several years ago devastated the library field there. There are many more librarians than there are jobs. With only a small savings, I would have had to move to California and possibly apply for jobs for many months. Also, I've grown up in Indiana and feel comfortable here. California has a rather different style of life.

The second main reason had to do with the burnout factor. I didn't wish to get back into a situation where I would be under that kind of pressure again. If this had been the Jaycees or some group like that, I could have dropped out with no second thoughts. Cryonics, of course, is a matter of life and death; so I couldn't pull away completely.

The third main reason has to do with my involvement. I did not and still do not want to be as tightly wrapped up in cryonics as are Michael and some other cryonicists. Some people are very excited about actually doing the freezing. While I am intellectually curious about the process, I am much more interested in being frozen. Under present conditions this requires work from me. I cannot just purchase a "cryonics

insurance agreement," and go on about my business as I would sometimes like to. If I want this at all I have to make it happen. Perhaps for something as universe-shaking as cryonics, this requirement is only fair. However, I have many interests in life and do not wish to devote it completely to cryonics. The main reason I would move to California would be to become deeply involved with Alcor --and I cannot persuade myself that I'm ready to do that. When I can resolve that conflict. I will probably go to California.

Q: Do you have any reasons in favor of moving to California?

A: Oh, sure. Warm weather, no ragweed (I have hay fever), my friends whom I miss, and the excitement that is always there in a new endeavor. But I'm not too excited about smog or earthquakes and I have many friends and family here as well.

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Q: What is the current status of IABS?

A: IABS merged with Alcor not long after the California move, although IABS still exists as an entity on paper. I'm not sure how long even that semblance of life will continue.

Q: How did CRYONICS magazine get started?

A: From the very beginning of IABS we knew that we needed a newsletter to promote ourselves and to help keep the organization together. We started with the IABS Newsletter, which was generally two or three pages and which was published irregularly --very irregularly. In fact, we only had 7 issues from September 1977 to August 1979 and then nothing at all for a year and a half. (Hmmm, maybe that's another reason why the organization didn't stay together.)

When in early 1981 it became clear to us that the organization needed to move to California and begin operating with a clearer focus, we considered the possibility of turning the newsletter into a more serious publication. At about the same time, we learned that Pat Dewey was no longer going to be publishing Long Life Magazine. This left The Immortalist as the only cryonics publication, which we felt was too short and too limited in the sort of material it would accept for it to be useful for us. So we committed ourselves to putting out a monthly magazine of our own. It is a great credit to Mike's effort that it has kept going for over three years. We are proud that we haven't missed a month since we started. Some of the issues have been as large as 34 pages and most have been at least 20. That can be quite a burden month after month.

Q: What do you really do on the magazine?

A: For the first six issues, Mike and I fully shared editorial duties and I did a large part of the final typing. After Mike moved to California, a larger burden fell on him; but I continued to do a large amount of writing, editing and typing for about a year, until Mike got access to a computer. For the last year I have contributed an occasional article and have supplied some



re-writing on a couple of others. Also, I do the Index each year. At the current time, my listing as co-editor is strictly a matter of generosity on Mike's part (as well as, I suspect, a subtle persuasion for me to move to California and once again take on a large part of the editing). Also, I should note that Mike's personal writing has improved markedly in the past year and he hasn't needed much re-writing done.

Q: Why don't you do more?

A: The distance from Indiana to California, of course, severely hampers the smooth communication necessary to co-edit a magazine. It is very costly to have telephone conversations several times a week and the mail is not particularly reliable (unless "reliably

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slow" counts). That limits my actual editing. But a more important reason is that I have spent so many hours per week on teaching during the past year and a half, that I have had less incentive, time, and energy left for cryonics writing. I will not be teaching this summer or fall, so I hope you will see a greater number of contributions from me in the future. I have ideas for several articles; as usual, it is just a matter of getting them done. In addition, Mike and I will probably soon get modems to link our computers via the phone lines. This will get me back into the editing loop.

Q: Why are you involved in cryonics now?

A: First, I am signed up for suspension; so self-protection decrees that I maintain some interest. But more than that, I stay with cryonics because I believe it to be essential to my future happiness. I do want to see the future. That has been the center of my involvement from the beginning. When I was a very young child I told everyone that I wanted to live to be one hundred and I wanted to change the world. Those lofty goals have even expanded with my knowledge of cryonics. I want to live for as many hundreds of years as I can, and I want to change the very basis of human existence. Both of those goals--one personal and one societal--are crucial to understanding my involvement in cryonics. I believe that longer life spans are one of the keys to the survival of the human race. Only the prospect of extremely long lives will give humans the incentive and perspective to make the long range decisions necessary for peace and health. My cryonics involvement is one way I can help make a difference.

Q: What else have you done for cryonics?

A: I am the co-author of our information booklet "Cryonics: Threshold to the Future"; and I have been the author of several pieces in the magazine, including (with Mike) "The High Cost of Cryonics," which was one of our most important articles. I was the primary author of the IABS suspension paperwork, which is now used by Alcor. I have given several thousand dollars in donations to IABS and Alcor. On a personal level, I think my friendship with Michael and others has been important. I make a lot of promises to do more in the future.

Q: When will that really happen?

A: Mike keeps getting me to say yes to more things. Since I'm not teaching for the next semester or so, maybe now will be the start of something.

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"All that a man hath will he give for his life."

-- Job. II. 4

"There is a tide in the affairs of men, which taken at the flood leads on to fortune."

-- Shakespeare, "Julius Caesar."  
Act IV. Sc. 3  
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#### WHY KEEP ON LIVING?

by Richard P. Marsh, Ph.D.

The purpose of life is to live. To live is to be awake. Sleep is death. Stay awake.

I am not recommending insomnia as a way of life, but merely warning against the waking sleep that is often confused with living.

What I do is unimportant. What I know I do is what matters. I can do things in my sleep, but I have to be awake to know that I am doing them.

When the Olympic Games were held in Tokyo, the brilliant athlete who represented Japan in the marathon ran superbly but did not come in first. Two weeks later he killed himself because he felt disgraced by not having won.

He didn't know how good he was. He was asleep.

The reason for extending one's life is not primarily so that one can do more things, run more and better marathons, score more often in the sexual sweepstakes. It is so that one can keep on being awake and get wider awake as time passes. Nothing sleeps sounder than a corpse, whether it has been incinerated, chemically preserved, or left lying around to rot.

Being awake -- really awake, not just in the zombie state -- means being conscious. What I do, my behavior -- running a race, getting elected, scoring -- is totally unimportant. The consciousness that goes with my behavior is what matters. If I feel good about what I do, fine. If I feel bad or, worse, don't even know I'm doing it, not fine.

Behavior is nothing, consciousness is everything.

But, as far as I know, there is no consciousness without behavior, and no behavior without a body. No mind without a brain, no awareness without a central nervous system doing its thing, behaving, in time and space.

So I want to keep on living in order to keep on behaving so that I can be conscious. For this reason, I try to practice all the arts of life extension, and I have made arrangements to be frozen in the event of my death. When my body goes, my behavior stops and -- I believe -- my consciousness disappears. At least, I don't see much evidence to the contrary. So my body is extremely important to me, not for its own sake but because it is the seat of my consciousness. Of what I call "me" and "I."

In addition to preserving my consciousness by preserving my behavior, I want to find as many ways as possible of enriching my consciousness. All

states of consciousness are not identical. Some are preferable to others.

Some behavior enriches my consciousness. Some impoverishes it. For this reason and only for this reason, some forms of behavior are preferable to other forms of behavior. Maintaining a diet of chocolate bars and Coke impoverishes my

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consciousness. Adding orange juice and whole grain cereals enriches it. So I go easy on the chocolate and Coke and hit a little harder on the orange juice and cereals.

It keeps me awake.

The study of consciousness is an almost hopelessly complex and murky field, and I don't intend to get into it here. I may not be capable of doing it justice in any case. Probably nobody is. But I know consciousness is important in the same way I know that my nose itches. I don't have to argue about it. I just have to reach up and scratch my nose.

Of all of the many forms that consciousness can take, one is the most desirable. Writer John White called it "the highest state of consciousness." (1) Psychologist Abraham Maslow referred to it as "the peak experience." (2) Richard Bucke, M.D., named it "cosmic consciousness." (3)

It may be described as a state of ecstasy in which great energy and great tranquility flow out of a suddenly clarified perception of oneself and the world.

It is the opposite of despair, it has been associated with psychological health, and it is said to lead to acts of love and creativity. It's good stuff. It would be hard to imagine anything more desirable.

Because it is connected with increased energy, tranquility, and clarified, it could be called the E.T.C. state.

The trouble is, it has also been referred to as "the mystical experience." It has been the goal of many religiously inclined people. Consequently cryonicists, with their empirical orientation and their tendency toward atheism or at least agnosticism, may -- quite understandably -- be suspicious of it.

Too bad. Let's empty the bath water by all means, but let's not pour out the baby.

Let's fight superstition. Let's be suspicious of metaphysics and let's dump Church dogma. But let's not forget the ultimate reason for extending our lives: achieving the highest state of consciousness.

All of the intermediate states of consciousness are fine, too, and so are the behaviors that produce them: eating, partying, having your back scratched, scratching someone else's back, skiing down Everest, getting rich, etc., produce these pleasant intermediate states. I like the states and I try to do a lot of the things that produce the states.

All of those biotechnical marvels that R.C.W. Ettinger speculated about so imaginatively and instructively in "Man Into Superman," (4) a book that changed my life by turning me on to cryonics, are extremely desirable. Who wouldn't like to have the wings of a bird, the gills of a fish, the eyes of an eagle? But in themselves they are nothing, as perhaps Ettinger would agree, if they mean having the consciousness of a bird, a fish, an eagle.

What we all want is to have the highest possible human state of consciousness.

And this has too often been described in language that many intelligent people find repellent: "The mystical state." "Turning on." "Getting high." Bringing visions of self-deluded, white-bearded old men sitting on pillars in the middle of the desert, or scruffy-looking hippies draped in beads and dropping acid in a dirty room somewhere in Haight-Ashbury.

But, as General Semantics teaches, "the map is not the territory, and the word is not the thing." Forget the words that have been used to describe the highest state of consciousness. They get in the way. Go after the state itself.

Anyone who has ever had what Maslow called (in language more moderate than that used by hippies and religious extremists) a "peak experience" has no doubt about the utter worthwhileness of the experience. It doesn't need any verbal defense. If you've been there, that's enough.

You don't have to argue that orgasms are better than toothaches or that

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Beethoven's Ninth is moving. Not to anyone who has ever had an orgasm and a toothache or heard the Philadelphia Orchestra play the Ninth. It's self-evident.

But you may have to argue that a self-respecting atheist or agnostic should be seriously interested in a state of mind which has been called -- among other things -- "thing the mystical experience." Too bad. Some people are so awed by words that they take them too seriously and suppose that they have some sort of fixed and absolute meaning. But they don't.

They have the same connection to what they are supposed to represent as "rose" has to a certain sweet-smelling, red-hued blossom. And everybody knows what Shakespeare said about that. If that blossom were named "stinkweed" it would smell as sweet.

If "peak experience" were substituted for "mystical experience," the experience in question would be just as humanly valuable and few people would be repelled. More of them would allow themselves to have the experience.

But some would still resist. "Peak experience" sounds a little kookie. Even though Maslow carefully pointed out that peak experiences occur in nature, are not supernatural, and -- at least in principle -- are susceptible to empirical investigation.

So it might be better -- even if more unwieldy -- to say, "Well, the experience I'm talking about is the one that occurs when the serotonin levels in the brain are decreased permitting an increased flow of endorphins, enkephalins, and other neuro-transmitters and hormones leading to a physiological state which is subjectively perceived as extremely pleasant and which tend to produce a decreased rate of neurotic behavior and an increased rate of socially desirable communication behavior.

Nobody much would listen if you talked that way a lot, but at least you wouldn't sound like a hippie or a religious fanatic.

But that's the way it is. Certain physiological conditions in the brain and the central nervous system are accompanied by the most pleasing and productive subjective state a human being can have. That's why preserving the brain is so important.

That's why (see the title of this piece) any reasonable person would want to keep on living. It not only lets you do a lot of things that corpses can't do. It lets you feel a whole lot better.

It lets you feel, known, and be conscious at all. As far as I am aware, your mind is a total, permanent blank after your brain has been passed through a meat-grinder.

The importance of the brain as a material basis for subjective experience was emphasized by Swiss chemist Dr. Albert Hofmann, who first synthesized LSD and psilocybin, in response to the rather vague words like "spirituality" or threatened by scary words like "LSD," you may find this an enlightening statement.

It's true that a certain number of people have freaked out on LSD, but it's also true that a larger number have not and that some of these appear to have profited psychologically from their use of LSD.

But, as Hofmann readily agrees, LSD is not necessary in order to have a peak experience. So forget about LSD. Instead, look at some of the other brain-changers, some of the many behaviors capable of altering the chemistry which is associated with consciousness.

All of these tend to have in common the following:

1. They provide a shock, either gentle or fierce.

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2. They cause us to look at ourselves and the world in a different way. As a result our concept of reality alters and we experience a change of identity.

Ettinger has written in a fascinating and instructive way about the problem of identity in Chapter VII of "The Prospect of Immortality." (6) Without using the language of General Semantics, Ettinger develops an idea basic to that discipline -- namely, that our concept of reality is, in part, a result of what we abstract from experience and how we name, describe, verbalize our abstractions.

I am suggesting that certain behaviors have the power of shocking us, gently or fiercely, into changing our habits or abstracting and naming, thus producing different states of consciousness. Including, once in a while -- if one is lucky, the so-called "highest state of consciousness," the "E.T.C. state," the "peak experience." And including (much more often) various lesser but still desirable states -- "foothill" and "plateau" experiences -- that are not to be sneezed at and that bring great richness to our lives.

Actually, these foothill experiences are of the utmost importance since they are the primary means of improving what we usually refer to as "the quality of life." Without them, a greatly prolonged life would be a bore at best and a nightmare at worst.

The dim, intuitive awareness of this is probably one of the main reasons that so many people resist the idea of life extension. Who wants to continue the bleak stupor or the prolonged anxiety that so often constitutes life?

Many of the brain-changing behaviors that produce our foothill experiences -- and the occasional, crashing, unforgettable peak experience -- are widely known. Some are not. Edward Rosenfeld's "The Bog of Highs" (7) discusses 252. There are doubtless many others. Dr. William Glasser's "Positive Addiction" (8) discusses several ways of achieving the PA state (his term for the high state), but, from his experiences as a medical psychotherapist, he selects two for special treatment. These are running ("the hardest but surest way") and meditation ("the most popular way").

Some cryonicists, aware of the enormous importance of the body in the pursuit of physical immortality (it's the body that's going to be immortal, isn't it?), either run or engage in other forms of aerobic exercise such as race-walking, swimming, bicycling, hill-climbing, aerobic dancing, etc.

Cryonically, this makes sense. Until the state of the art is enormously advanced, it is reasonable to assume that a well-preserved body is going to survive the thaw more successfully than the sickly, decayed body of the typical old person. And aerobic exercise combined with a program of good nutrition, stress reduction, etc., is our primary means of achieving the all-important goal of dying young as late as possible.

But it makes sense in another way, too. The so-called "runner's high" -- a state of euphoria achieved by many runners and other aerobic exercisers -- can be a marvelous foothill experience and may at times be even peaklike. It may get us close to the highest state of consciousness.

Late one afternoon when my wife and I had just finished our daily run and were about to sit down to dinner, I commented on how pointless many of our busy little schemes for achieving satisfaction seem to me when I am

enjoying the euphoria and serenity which often follow aerobic exercise. She quietly asked: "What more do you need?"

Tell a runner he/she should stop running, and she/he may listen politely, but inside he/she will probably laugh at you. Or feel sorry for you. What the runner (race-walker, etc.) gets for what he/she does feels too good to give up because someone else prefers to go the way of all lard.

The second "positive addiction" discussed by Dr. Glasser is meditation.

If the word "meditation" gets up your hackles, consider being a little less defensive. Meditation has no necessary connection with Hindus, hippies, or

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holiness freaks. It is best defined as "sitting quietly doing nothing." So what if that is the language of Zen. Forget about Zen. Drop the conditioning which causes you to snap your mind shut when you catch a whiff of an Eastern breeze.

In fact, "drop the conditioning" is a chief goal of meditation. Meditation is a semantic process. It gives you practice in seeing old things in new ways. The result can be a change in identity as you drop your old conditioned-in classifications of the changing, relativistic flux of things both inwardly and outwardly and perhaps slide into some new and more rewarding systems of classification.

That's semantics.

And it can give you a peak experience.

It can also scare the hell out of you as you discover that things are not always what they seem. But rather what you make them seem by your way of conceptualizing them.

But meditation is not only semantic. It is also an important plank in an effective health program. It's stress-reductive. And since stress is a killer, anything you can do to reduce it is going to extend your life.

There are many other ways of getting high, most of them nice, a few not so nice. Mixed in with the nice ones in "The Book of Highs" is the rather nasty one of fantasizing the act of killing, said to have been used by the United States Army in training some of their troops. (KILL! KILL! KILL!) I suppose the Manson family got real high on that horrible night they did their thing so efficiently, although what they did went well beyond fantasy. But I believe that what they had must have been more of a pit experience than a peak experience. Hell, not heaven.

More to my taste are the two techniques mentioned by Maslow as most often reported to be the cause of their peaking by the "peakers" he studied: (a) classical music and (b) sexual intercourse when love is also present.

I've peaked out on both of those more than once and hope you have too.

Lots of other things, including the following, may also get you toward the top of the peak: rock, jazz, dancing, poetry, movies and theatre, the visual arts, guided fantasy (used by oncologist Dr. Carl Simonton in the treatment of cancer (9)), autogenic training (recommended by cardiologist Dr. Herbert Benson of the Harvard Medical School as one of several techniques for inducing "the relaxation response" and thus slowing your pulse, relaxing your muscles, and perhaps lowering your blood pressure (10)), marathon encounter groups (don't laugh -- they're coming back. . . in an improved form), group chanting (what you chant is irrelevant -- as long as you don't believe it -- but the act of rhythmically chanting may break up stubborn old perception patterns), outguessing the stock market, light shows, fasting, yoga stretching and breathing techniques (feels good), having a baby (not sure what this feels like, but I'm told it can be a trip), getting married, and communing with Nature in both her peaceful and her powerful forms. The night sky often does it for me: all those

stars up there twinkling majestically and serenely away.

The stars helped give Richard Bucke his first flash of so-called "cosmic consciousness." Cryonicists may well object to Bucke's language and his mysticism, but they may also respond to something in his attempt to explain the quality of his experience.

He no longer felt -- he tells us -- that he might someday achieve immortality. He felt rather that he was immortal now. It blew his mind.

And it gets me into my concluding fantasy:

Seconds ago (it seems to you), you were on your death bed, a few loved ones looking helplessly down at you. Now you are looking up into the faces of a small, attentive group of friendly strangers. In their eyes you see concern, warmth, and obvious delight.

You find them physically attractive. You are reassured by their manner, which

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strikes you as intelligent, competent, and sensitive.

One of them speaks. the voice quality is musical, the accent clear but subtly different from your own.

"Welcome to the Twenty-second Century. We hope you like it here. . . and that you enjoy the youthful, new body we have given you."

You are stunned for a moment. And then a big grin ripens on your face. You feel a vigorous pulse of energy.

"Well, I'll be -- the damned thing worked!"

You are not going to achieve immortality. You are immortal now. Your mind explodes with joy.

You have transcended death.

You are having the ultimate peak experience. You are awake.

#### FOOTNOTES

(1) John White, ed., "The Highest State of Consciousness," pp. vii-xvii.

(2) Abraham Maslow, "Toward a Psychology of Being," ch. 6.

(3) Richard Bucke, "Cosmic Consciousness," pp. 1-4.

(4) R.C.W. Ettinger, "Man Into Superman," (1972), passim.

(5) KALW-FM, Feb. 13, 1984.

(6) R.C.W. Ettinger, "The Prospect of Immortality."

(7) Edward Rosenfeld, "The Book of Highs," passim.

(8) William Glasser, M.D., "Positive Addiction," chaps. 5-6.

(9) Mike Samuels, M.D., and Nancy Samuels, "Seeing With the Mind's Eye," pp. 226-7.

(10) Herbert Benson, M.D. "The Relaxation Response," pp. 69-72.

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This index covers issues #30-41 (January-December) of 1983. Note that the cover for #35 (June) was incorrectly labeled "May." The format of this index lists the month of issue followed by the page number of the article. - e.g., "May:4." Titles (usually a shortened form) are in quotation marks and are only given where they seem useful. Subjects are in CAPITAL letters. Authors are listed only for major articles.

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