Cryonics insights and information for members and friends of the Cryonics Institute
Hello and welcome to the latest edition of the Cryonics Institute Magazine!

It’s mid-summer, which means elections are coming up and it’s time to start considering our candidates for CI’s Board of Directors. CI is uniquely democratically run and thus our members have a vested interest and a special role in determining how CI is managed. Our leadership is comprised of fully-funded members who plan to be cryopreserved themselves in the future. This gives our leadership team a personal incentive to constantly improve CI and to insure we continue as a strong and viable organization far into the future.

CI Directors serve for three-year terms, with four positions open for election each year. The four directors up for re-election this year include myself (Dennis Kowalski - President/Chief Executive Officer), Andy Zawacki - CI Chief of Operations/Secretary, Stephan Beauregard - CI Communications and Social Media, and Steve Luyckx - Chief Business Officer/Assistant Treasurer. All of these Directors have announced their intentions to run for re-election. Thanks to each of them for their ongoing contributions to CI, and best of luck in the September election.

I’m proud of our current team of Directors, but I also encourage you to consider running for the Board yourself at some point. Whether you decide to run for election yourself or not, please remember that CI is a member run organization and that there are many other ways to volunteer and help out. Donations of time and money are always welcome and they make us stronger. If you do want to run for office, please submit your request before the due date of July 30th to Andy@cryonics.org. If you are not sure about the requirements to run for office please give us a call at 586-791-5961 or email CI in advance of the due date for more information and instructions. If you would like to volunteer time or donate money please see http://www.cryonics.org/donate/ or send me an email at Dennis@cryonics.org.

Things keep moving along at CI and our progress has us looking at expanding into additional facilities.
to meet the pace of growth. We are currently entertaining several offers at multiple locations to accommodate the increase in current patients and future patients. I will keep everyone posted as we learn more.

Recently there has been a lot of discussion about the formation of a new international cryonics organization, so I feel it is important to address this issue publicly because there seems to be some confusion about CI’s position regarding this endeavor. To be clear, in spirit, CI wholeheartedly supports international cooperation between entities as well as establishing basic standards for standby and long-term storage facilities. I believe we have shown excellent leadership in these areas and more throughout our history.

CI has a long track record of interacting with people both supportive and nurturing to cryonics as well as those who are toxic or even detrimental to our goals. We feel strongly that it is just as important to address our critics in open and healthy debate as it is to work with our supporters. By fostering solid and trustworthy relationships with key people within the cryonics community, we have been able to develop a healthy network to communicate and cooperatively develop ideas that are mutually beneficial to everyone.

CI has also been steadfast in explaining and endorsing standards that are the most likely to produce positive outcomes and superior suspensions. Our freely available Standby Manual is just one step in this direction to support all members of the cryonics community. In addition, we support international efforts to improve standby, fund cryonics research, encourage cooperation and work with and advise international organizations and standby groups. Any efforts that advance these goals are well within CI’s mission.

That being said, our Board of Directors and most CI members are uncomfortable with any effort that attempts to take authority away from CI and place that decision-making ability into the hands of an outside group or umbrella organization. The term umbrella organization infers there is now an oversight group with direct authority over CI. This is not the case, and it is important to establish that CI has not formally or otherwise entered into any such arrangement as part of an international cryonics group.

We do not support any real or perceived outside authority over the Cryonics Institute other than our own Board of Directors, our bylaws and the local laws and regulations that are set forth in the state of Michigan. This structure has served our members and organization with effective systems, procedures and internal checks and balances for over 40 years with great success, which is evident in our continued growth and long-term stability.

I don’t wish to discourage anything that may produce positive results that are mutually beneficial to CI and the cryonics community as a whole, but I also want to be clear that CI doesn’t endorse anyone without establishing trust and seeing the proof of concept first. Trust is not something we take lightly. It is earned over time among people and organizations that have common goals and mutual respect for one another. With that in mind, we will definitely be following the developments regarding this new organization that are now in progress and considering our options moving forward.

Finally, on a personal note, I hope that you are happy with our progress to date at CI and endorse the direction that we’re heading in. If you like what you see, then I would like to ask for the privilege of your vote to continue for another term as a CI Director.

Thank you to everyone for being part of this exciting journey we call cryonics. We have a bright future together and I’m looking forward to sharing it with you this September at the 2017 AGM!

Respectfully yours,

Dennis Kowalski
CI NEWS
What’s happening at the Cryonics Institute

A roundup of what’s new at CI and in the world of cryonics!

CI Online Promo Banner Debuts
Look for the new CI Promo Banner on our Facebook and other Social Media pages, courtesy of Social Media and Communications Director Stephan Beauregard

New AGM Dinner Spot
For those of you attending the 2017 Annual General Meeting, please note the “Night Before” Dinner/Social Event has moved to Sajo’s, rather than at Ike’s restaurant, which had been the location for many years.

The informal dinner will be held from 6pm till 10pm Saturday Sept 9th, 2017. Everyone is welcome, but please remember, guests are responsible for their own checks.

SAJO’S.net 36470 Moravian Clinton Twp, MI 48035
A Billion-Dollar Opportunity!

According to an article in the New York Times, Jeff Bezos, the founder & chief executive of Amazon.com wants to give away One Billion $US to fund worthwhile projects. He is asking for suggestions where to donate the money. For us, one of the best places for him to make his contribution would be to the Cryonics Institute for Cryonics Research!

So why don’t we cryonicists send him our suggestions to make a donation to cryonics research? The more he hears from cryonicists the better!

Suggestions can be submitted [here].

The full New York Times article [here]:

---

CI Facility Adds New Video Monitors

CI added new monitors to the Perfusion Room and Cooldown Area, featuring custom-built cryonics animations.

---

PERFUSION ROOM

<table>
<thead>
<tr>
<th>TIME</th>
<th>23:04</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEMPERATURE</td>
<td>-4.6°C</td>
</tr>
<tr>
<td>PRESSURE</td>
<td>110mmHg</td>
</tr>
<tr>
<td>FLOW RATE</td>
<td>2.13LPM</td>
</tr>
<tr>
<td>REFRACTIVE INDEX</td>
<td>1.426</td>
</tr>
</tbody>
</table>

LN2 Vapor Cooldown System

<table>
<thead>
<tr>
<th>TIME</th>
<th>18:04</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEMP</td>
<td>-103°</td>
</tr>
</tbody>
</table>
What’s happening at the Cryonics Institute

Landscaping Improvements
A new splash of color for the front of our Clinton Township facility.

2017 TEENS & TWENTIES CONFERENCE
Young Cryonicists in attendance at the 8th annual Teens & Twenties Conference, held Friday-Sunday, May 26-28 in Deerfield Beach, FL. The event was hosted by the Life Extension Foundation for fully-signed up cryonicists aged 18-30.

Photo courtesy of Alex Vidal from the Young Cryonicists Facebook Group.
What’s happening at the Cryonics Institute

Cafe Press & Twitter Updates
CI’s Cafe Press store has earned $127 in donations to cryonics research. In addition, our Twitter account is at 1,995 followers!

New Media Kit Photos Promote CI

CI’s online media kit is a resource for photos and other collateral for use by journalists producing stories about the Cryonics Institute. As such, it is an important “First Impression” for prospective members who may never have heard of cryonics or the Cryonics Institute before reading a story about us in the media. We’re happy to report our new series of illuminated cryostat photos look suitably impressive and have already been published in a number of stories. Keep an eye out for our photos in the media, and let us know of any stories you run across by mailing the link to cryonicsnews@gmail.com.
Get the world’s premier publication on prolonging youth & longevity for one year absolutely FREE!

Packed with the latest medical findings, research results, and innovative treatment protocols, Life Extension Magazine® is the ultimate resource on staying healthy and living longer. Call now and get a one year subscription (12 issues) absolutely FREE ... that's a whopping $59.88 off the newsstand price! And it's brought to you by the global leader in the field of preventing age-related disease for over 35 years.

Stay healthy with the highest-quality supplements money can buy.
Life Extension® is the only supplement brand solely dedicated to helping you live a longer, healthier life. Our premium-quality products are based on the latest clinical studies — made with pure, potent ingredients at the same clinically validated dosages used in those studies. Your body deserves the best. Insist on Life Extension.

Don’t just guess what your body needs.
Our expert team of Wellness Specialists can answer your health-related questions every day of the year. And they’ll gladly create a regimen of nutritional supplements, diet, and exercise that’s customized for your needs.

Get more with Your Healthy Rewards.
With our FREE rewards program you earn valuable LE Dollars back on every purchase you make.* No membership required. For details visit www.LifeExtension.com/Rewards.

Subscribe to Life Extension Magazine® for FREE today!

Call toll-free 1-866-491-4992 to speak to a live operator at any time.
Or, log on to www.LifeExtension.com/CI
You must mention Discount Code AVD725A to get these savings. • Offer expires 12/31/17
CI MEMBERSHIP
JULY 2017

Members .................. 1,407
Assoc. Members ............ 196
Patients ..................... 153
Pets .......................... 139
DNA/Tissue .................. 250
SA ............................. 217

TOTAL ........................ 1,756
**Annual General Meeting**

The annual meeting offers an excellent opportunity to see the facility, learn more about cryonics, meet members and guests from around the world, get updates on the Cryonics Institute & Immortalist Society and to talk to Officers, Directors & Staff.

The Annual General Meeting usually lasts about 2 hours, featuring reports from CI Board Members, guest speakers and a few other surprises. The Immortalist Society Meeting will follow directly after the CI AGM, and typically lasts about 45 minutes.

CI will be providing light snacks and beverages at the meeting, but no formal dinner arrangements. Guests are invited to dine prior to the meeting or, preferably, socializing with new friends and associates after the meeting concludes. The ConCorde Inn has a restaurant on-site, and there are several excellent dining locations nearby.

**Location**

⭐ Please note, the 2017 AGM will be hosted at the ConCorde Inn in Clinton Township, MI, **not at the CI Facility.**

The ConCorde features an impressive meeting room, an outdoor seating area adjacent to the hall, plus a lounge, pool & fitness center and other amenities we’re sure everyone will enjoy. Rooms at the ConCorde Inn are on a first-come, first-served basis, so please make your reservations now.


**Facility Tours**

Tours of the CI facility will be available prior to the meeting from approximately 12:00 p.m. to 2:00 p.m. on Sunday. The facility will be closed to both members and the general public outside of these scheduled times, so if you would like to visit, please plan accordingly.

**Night Before Dinner and Social**

CI will be hosting a “Night Before” Social and Dinner event at 6pm on Saturday, September 9 at Sajo’s Restaurant. Everyone is welcome, but please remember, guests are responsible for their own checks.

SAJO’S.net

36470 Moravian Clinton Twp, MI 48035

**RSVP**

CI’s AGM is open to the general public, but we request that we be informed if you will be attending. For driving directions, more meeting information and to confirm attendance, send email to CIHQ@aol.com or phone (586) 791-5961.
BOARD OF DIRECTORS ELECTIONS

The Cryonics Institute is a member run organization, electing our leadership positions from among our membership. Board Members serve three-year terms, with four positions up for election each year on a rotating basis. Board positions are open to Voting Members only. To qualify as a Voting Member of the Cryonics Institute a CI Member must be age 18 or over and either be a Lifetime Member or have been a Yearly Member for at least three years. Additionally, only CI Members with an executed Cryonic Suspension Agreement and having full funding for the Cryonic Suspension Agreement may be Voting Members.

Interested parties can submit their Ballot statements if they wish to be considered for election to the CI board of directors. Ballot statements must be postmarked or received by email at CI Facility no later than August 1st 2017. If the candidates wish to be included on the paper ballot before the election they must submit a bio of 150 words or less before this date. Please see previous issues of CI Magazine for examples of candidate statements.

Invitations and ballots are mailed out and the ballot statements for each candidate are included in the mailing. (ballots are only mailed out to voting members) Voting Members will receive their packets in the mail sometime in August and the returned ballots are to be counted on September 10, prior to the CI Annual General Meeting. Registered votes not received at CI Headquarters prior to the official ballot-counting time and date (8:00 a.m on September 10, 2017,) are at risk of not being counted, so please return your election votes as soon as possible after you receive them in the mail. Because of the timing, we do not encourage members to bring their ballots with them to submit in person at the meeting, but prefer to have them mailed back in advance.

Look for a special election edition of CI Magazine with profiles of your 2017 Board candidates in August.

2017 Silent Auction

CI will be conducting our Second Silent Auction at the 2017 AGM, allowing attendees to bid on a number of items. All monies raised will be donated to the Cryonics Institute, so we’re hoping this will be a fun and rewarding addition to our Annual Meeting as well as a great way to raise donations.

The success of this project will depend in large part on the items received, so we’re actively looking for nice items for this auction. Interested individuals, companies or other sponsors who would like to participate by donating items or by helping to solicit donors can contact:

stephan@cryonics.org

Stephan is also looking for positive volunteers who will be attending the AGM to help with the event.

* Please see CI Magazine, Issue 1 - 2017 for the complete auction rules.
Take your place in the revolution against aging and death.
August 9-13, 2017 | San Diego, CA
www.raadfest.com

Inspiration | Information | Celebration

Join us for the largest ever gathering of radical life extension enthusiasts to:

* Become a more empowered and effective advocate.
* Interact with leaders of radical life extension.
* Have a blast celebrating our unlimited future together with music and performances.
* Learn the latest scientific advancements.
* Connect with like minded people.
* Gain vital insights to extend your health and well-being.

Keynote Speakers

Dr. Michael West
BioTime Inc, CEO

Suzanne Somers
Best selling author
Co-founder ForeverHealth.com, Partner in Lifewave Technology & Medical Energetics, Lecturer & Entertainer, Entrepreneur.

Dr. Robert Reis
University of Arkansas, Professor of Geriatrics, Biochemistry/Mol.Biol., and Pharmacology

Dr. Michael Rose
University of California, Director and Professor at the Department of Ecology and Evolutionary Biology

Dmitry Kaminskiy
Deep Knowledge Ventures, Managing Partner

Presented by

A not-for-profit 501(c)3 organization

REGISTER NOW
Cryonics Protocols at the Cryonics Institute: Research and Practice

By Aschwin de Wolf and Chana Phaedra

Part 1: Patient Monitoring and Standby

Introduction

In this 4-part series we will review cryonics protocols at the Cryonics Institute, discuss recent research to validate and improve cryonics protocols, make recommendations to improve those procedures, and discuss future research directions in the field. Each installment will cover a single topic out of the following four: (1) Patient Monitoring and Standby, (2) Stabilization, (3) Cryoprotection, and (4) New Research and Future Developments.

Patient Monitoring

Preparation for a good cryonics case begins as soon as the member makes cryonics arrangements. From the perspective of the member it is important to keep the cryonics organization up to date about basic personal information such as current address, contact information, and funding/insurance status. This may seem obvious, but for some (frequently older) members their cryonics arrangements may not always be at the top of their mind and a cryonics organization may find itself with contact and emergency information that is no longer relevant. From the perspective of the organization, ensuring enough resources to provide services is paramount. Since the probability of a member needing cryonics service increases with age, cryonics organizations can use actuarial life tables to estimate the probability of a member needing its services or the expected case load for a given time period. For an example of how to use actuarial tables to predict caseload trends for a cryonics organization, see Mike Perry’s “Tracking Caseload Trends” (Cryonics Magazine, Spring 2006).

Checking in with older and sick patients is not only important to prevent surprises such as unattended sudden death but also allows the cryonics organization to assist the member with topics such as designing or updating cryonics-friendly Advance Directives and to provide guidance to family and/or local team members in case the patient dies. If a member has made arrangements for standby and stabilization with an organization such as Suspended Animation, a lot of responsibility will fall on that organization, but in the absence of such arrangements timely and informed communication between older and sick members and the cryonics organization can make the difference between a good cryopreservation and a “straight freeze”, cryopreservation without protection against ice formation as a result of many hours or days of circulatory arrest before cryonics procedures can begin.

While a straight-freeze cannot be said to automatically prevent the revival, rejuvenation, and repair of cryonics patients, obviously the less burden one puts on future science and technology, the better. Thus each case involving the use of cryonics should involve the use of the best process reasonably available and feasible. This will understandably vary somewhat given the conditions and resources present at the time an individual patient begins undergoing the process leading to them being cryopreserved by a cryonics organization. In some situations, however regrettable, this will be limited to a straight freeze. In many other cases (in fact the large majority of them), however, with some reasonable foresight and preparation, an effort that results in less damage to the cryonics patient can be carried out. We hope this four part series involving topics useful in carrying out cryonics procedures will greatly help to do just that.
Time and Temperature

To understand the importance of minimizing time between pronouncement of legal death and the start of cryonics procedures we will introduce two terms; ischemia and vitrification.

Ischemia refers to insufficient blood flow to an organ of the body. It can also mean a situation where blood flow is “normal” but the blood contains inadequate nutrients and oxygen for normal functioning of the tissue/cells to which the blood is being supplied.

For example, when a blood clot prevents blood flow to the brain and, thereby, oxygen and nutrients stop being supplied to the area affected by the blood vessels that are blocked by the clot, we call this a stroke. (There are other causes of strokes but the general principle in them is also the same). In the case of cryonics, ischemia occurs at a global (i.e., whole body) level when the patient experiences sudden clinical death due to accident or illness or is pronounced legally dead by a physician after a terminal disease. Due to the heart and lungs stopping their usual life sustaining action, nutrients and oxygen are, of course, not delivered to the body and cells burn them up in a “last ditch” effort to try to survive.

One of the least recognized aspects of cryonics, but obviously a very important one, is that severe enough ischemia not only begins the process of decomposition of the brain but also affects our ability to cryopreserve the brain (or the whole body) without ice formation. This will be explained below and covered in more detail in future installments of series of articles.

“Vitrification” refers to the cryopreservation of an organ without freezing. To most people this is a counter-intuitive concept because we think that as soon as biological tissue is lowered below the freezing point of water that ice formation necessarily has to occur. The very good news for those interested in cryonics is that such ice formation is largely avoidable for organs like the brain and may be eliminated altogether if the blood that is in the circulatory system and also the separately existing liquid parts of the cells are replaced with a so-called vitrification solution. A vitrification solution contains high concentrations of “medical grade anti-freeze” which cannot be frozen and which turns into a glass at cryogenic temperatures. The current vitrification agent used by the Cryonics Institute is named VM-1 (Vitrification Mixture-1) and was developed by the researcher Dr. Yuri Pichugin while he was doing research for CI in years past. (Information on this mixture can be readily found at: http://www.evidencebasedcryonics.org/2008/03/31/vitrification-agents-in-cryonics-vm-1/)

As can be deduced from the very basic information just given, the mandate of every credible cryonics organization is to minimize ischemia and minimize ice formation in their patients to the maximum degree practically feasible in any particular case. As we will discuss below, if a cryonics organization fails to minimize ischemia it will become challenging to prevent ice formation, even when a vitrification solution is used. This is very important to understand.

One important distinction is that between warm and cold ischemia. For example, if a patient dies unattended at home and spends several hours at room temperature before being discovered, that is warm ischemia. That is to say, while the patient will start to cool down somewhat in most settings from their normal body temperature of slightly over 98 degrees Fahrenheit, that cooling will both be slow and will not proceed below the temperature of the room they are in at the time of their clinical death (i.e., when their heart and lungs stop working). If a patient is cooled down rapidly after pronouncement of legal death but spends 48 hours on water ice during shipping that is cold ischemia.

Both forms of ischemia produce poorer outcomes for the patient compared to immediate intervention with cryonics procedures at the moment of clinical/legal death. When the patient’s temperature remains at body temperature, or stabilizes at room temperature, however, metabolism remains relatively high and these adverse changes occur at a much faster rate than they otherwise would if more efficient cooling of the individual occurs. Cooling the patient with, for example, immersing them in water which has its temperature reduced by ice reduces metabolism, thereby slowing the rate of ischemic damage. Some people invoke the so-called Q10 rule that says that for every 10 degrees Celsius
drop in body temperature, metabolism drops by 50%.

Since its inception in 2008 our company Advanced Neural Biosciences has conducted extensive research to understand the effects of ischemia on the quality of preservation in collaboration with/financial and other support by other organizations such as the Cryonics Institute, Alcor, and Longevity as well as the Immortalist Society.

There are three notable effects when there is a delay between cardiac arrest (i.e. pronouncement of legal death) and the start of cryonics procedures.

1. As the duration of ischemia increases, replacement of the blood of the patient with a cryoprotectant will get progressively much more difficult to accomplish due to clotting of the blood and accumulation of fluids that constrict the vessels.

2. As the duration of ischemia increases, the patient’s vessels become leaky and their organs, including the brain, start to swell (swelling of an organ is, generally speaking, called “edemas”). In whole body patients severe abdominal distention is observed as well.

3. As the duration of ischemia increases the “blood brain barrier” (which is the highly selective membrane barrier protecting the brain) breaks down which can further exacerbate swelling (“edema”) of the brain.

One of the most basic findings in our lab has been that if cardiac arrest is followed by immediate rapid cooling the adverse effects associated with ischemia (e.g., ice formation, swelling, etc.) are greatly reduced. This is why some cryonicists point out that the quality of our procedures are ruled by time and temperature. The goals are to cool the patient as quickly as possible and minimize the time spent between cardiac arrest and the completion of the full protocol of cryonics procedures. This mandate requires some sort of a local response team or a remote standby team at the patient side at the time of their legal/clinical death.

Standby

If we recognize the importance of time and temperature, there can be little doubt that starting cryonics procedures as soon as possible without delay and very strongly preferably immediately after the pronouncement of legal death is necessary to arrest decomposition of the brain/body and optimize the chance of ice-free cryopreservation. Again, as mentioned, any delay begins the “clock ticking” towards the time that serious complications in trying to carry out a “first class” cryonics protocol will be difficult, if not impossible, to overcome.

A typical Cryonics Institute member has four options to ensure a timely cryopreservation will occur: (1) Execute a contract with an organization, such as Suspended Animation, that offers standby and stabilization services; (2) Establish a local response team (which can include a local funeral director) that can perform a basic series of stabilization procedures after pronouncement of legal death; (3) Relocate to the area of the Cryonics Institute after a diagnosis of terminal illness or rapid decline. (4) Utilize a combination of those options just mentioned. In this article, we will only focus on local standby procedures (Option 2) because this is the only scenario that can routinely minimize the time between pronouncement of legal death and completion of cryonics procedures. In theory, it is also possible to obtain the advantages of a local case remotely by conducting cryoprotection of the patient where the patient is pronounced legally dead, but this will require a procedure called “field cryoprotection” which is not a routine procedure at any of the major cryonics organizations yet. We will review the rationale of evidence of this procedure in our third installment (“cryoprotection”) of this series.

One of the most formidable challenges in cryonics remains to establish proper monitoring and logistics to ensure that there are no delays between the pronouncement of legal death of the patient and the start of cryonics procedures. In research we conducted for the Alcor Life Extension Foundation we found evidence of breakdown of the blood brain barrier in a rat model after only 30 (!) minutes of ischemia at body temperature. When administration of stabilization medications was delayed by more than 30 minutes we did not observe any differences between administration or omission of these medications. For example, the
anti-clotting medication heparin is effective in preventing the formation of blood clots after cardiac arrest but cannot dissolve blood clots that have already formed. We will review more research findings in our article about stabilization.

In our experience, many individuals and local groups spend a disproportionate amount of time on the acquisition of standby equipment and learning protocols at the expense of figuring out how to avoid a scenario where the patient dies unattended or without the presence of a person with the legal authority to pronounce the patient legally dead. As a consequence, a well-equipped cryonics organization or local group will find itself well prepared for a case without being able to respond in a timely manner or having to respond without sufficient personnel. This is a particular challenge in cases where the response team consists solely of volunteers and/or paid professionals with other, and possibly conflicting, obligations. Help of any kind isn’t very effective if it isn’t available at the time it is needed. This can be thought of as similar to “calling the fire department after the building has already burned down”.

If a professional standby and stabilization organization such as Suspended Animation is not always able to respond in a timely matter it may seem daunting for a cryonics organization that does not offer standby or a group of volunteers to do so. There are a number of things that the organization, however, can do to close the gap between pronouncement of legal death and the start of cryonics procedures in many cases:

3. Ensure that are multiple professionals with the authority to pronounce the patient legally dead in the vicinity of the patient. Preferably, such professionals should be present during the decline of the patient.

4. Place basic stabilization equipment at the location of the patient or in a nearby vehicle.

5. Cooperate with hospital staff to permit interventions that benefit subsequent stabilization procedures such as leaving IV lines in place and the administration of medications to prevent blood clotting such as heparin.

A succinct way to summarize the essentials of the above would be to say “right time, right people, right equipment, right procedures.” If a cryonics organization fails to incorporate this mandate into its daily operations, most of the research that is conducted to improve cryonics cannot be translated into meaningful action. In our second installment of this series we will break down into more detail what initial stabilization of cryonics patients entails and what our research can contribute to optimize these procedures.

Health Tracking Wearables in Cryonics Patient Monitoring: A Case Study

In January 2017 the authors of this article were provided the opportunity to consult and assist in the cryonics case of former American Cryonics Society President (and one of its founding members) Edgar Swank. One of our first recommendations was to use a health tracking device to monitor the condition of the patient remotely. Since this was a first, and because of our own familiarity with the device, we decided to equip Edgar with a FitBit Charge 2.

The FitBit Charge 2 is a commercial device readily obtainable from the company online, on Amazon, or through local cell phone carriers. Meant originally for the fitness industry, we have been able to adapt it for cryonics use due to its ability to provide constant monitoring of an individual’s heart rate coupled with the ability to use a phone to send this information to a remote location.
In anticipation of fitting Edgar with the FitBit wristband, we spent some time the morning of January 7, 2017, obtaining a FitBit Charge 2 and a phone to “sync” it with in order to collect continuous heart rate data. After successfully setting up the phone app and ensuring that we could also remotely view data via the web application, we were taken to the White Blossom Care Center in San Jose, California to fit Edgar with the band.

We were able to quickly fit the wristband monitor to Edgar’s left wrist without any problems. We then set up the phone at his bedside with Bluetooth on so the data would sync regularly. (For those not familiar, Bluetooth is a wireless technology that was designed to take the place of “hard wired” cables in sharing data between devices). The phone was left plugged in so there would be no need of charging it. The FitBit charger was left on the same nightstand, plugged in and ready to charge the FitBit should it be necessary. It is possible to monitor the battery life of the FitBit remotely, and we found that it would not need recharging until almost a week of use. This is consistent with reports that say that a FitBit Charge 2 only needs to be recharged every five days or so.

We began collecting data immediately. The Figures below present the data as viewed from the remote website application, which is all we had access to after returning to Portland, Oregon.

On January 7, as shown in Figure 1, a stable heart rate of approximately 80-90 bpm (bpm means “beats per minute”) was collected over the evening.

On January 8 (see Figure 2), heart rate continued to be stable in the 80-90 bpm range until noon, when it rose to approximately 100 bpm for the rest of that day until 6am the following day.

On January 10, heart rate remained stable between 80-90 bpm until 1 pm, when it sharply rose to above 100 bpm, and jumped further still at 6 pm to approximately 105-115 bpm. (Figure 4)

On January 11, heart rate appeared variable throughout the day with a large spike up to 130 bpm at 5 pm followed by a brief absence of signal before resuming at around 100 bpm, but with increased variability. (Figure 5)

On January 12, heart rate maintained a highly variable pattern around 100 bpm throughout the morning, then spiked to over 150 bpm before plummeting to approximately 60 bpm until 4 pm, when an absence of signal indicates probable cardiac arrest. Afterwards, short bursts of activity are seen on the monitor coinciding with the application of manual chest compressions applied to Edgar Swank’s chest, then one notes a much longer burst of activity appears which coincides with the application of the AutoPulse Resuscitation System by the personnel of Suspended Animation, Inc. While AutoPulse normally assists medical teams in providing CPR on regular patients, it is used in cryonics patients to provide CPS (named CardioPulmonary Support since the end goal of cryonics is not immediate

On January 9, heart rate remained stable at approximately 90 bpm. (See Figure 3)

On January 11, heart rate appeared variable throughout the day with a large spike up to 130 bpm at 5 pm followed by a brief absence of signal before resuming at around 100 bpm, but with increased variability. (Figure 5)

On January 12, heart rate maintained a highly variable pattern around 100 bpm throughout the morning, then spiked to over 150 bpm before plummeting to approximately 60 bpm until 4 pm, when an absence of signal indicates probable cardiac arrest. Afterwards, short bursts of activity are seen on the monitor coinciding with the application of manual chest compressions applied to Edgar Swank’s chest, then one notes a much longer burst of activity appears which coincides with the application of the AutoPulse Resuscitation System by the personnel of Suspended Animation, Inc. While AutoPulse normally assists medical teams in providing CPR on regular patients, it is used in cryonics patients to provide CPS (named CardioPulmonary Support since the end goal of cryonics is not immediate

Figure 1 Edgar Swank heart rate data January 7, 2017
Figure 2 Edgar Swank heart rate data January 8, 2017

Figure 3 Edgar Swank heart rate data January 9, 2017

Figure 4 Edgar Swank heart rate data January 10, 2017
resuscitation but the ability to help maintain tissue viability until adequate cooling can be carried out and desired substances can be introduced and circulated through the patient's body).

Two of the advantages of AutoPulse Resucitation System use in a cryonics setting are that it provides a more precise compression regimen than humans can ordinarily maintain but it also frees up personnel for other tasks as well as taking over in what is normally the very fatiguing work of providing chest compressions. (See zoll.com/autopulse for further info on the use of this device. One may also see numerous videos of this device on YouTube).

Overall, we believe that remote physiological monitoring seems to be a very useful adjunct to cryonics patient care. It seems to be encouraging that having access to real-time continuous heart rate data in patients that are nearing clinical death can provide a cryonics team with valuable information to supplement what is gathered from hospice care workers and others involved in the regular “on-site” assessment of a patient. We are hoping that collecting such continuous data across multiple cases will inevitably allow us to search for patterns in the decline of patients that are nearing clinical death that may be more difficult to observe otherwise by the relatively brief taking of the patient's pulse at various times throughout the day as is done in traditional hospice and other medical settings. Some literature already exists on this topic and we hope to combine our observations with a reading of those clinical papers to further validate efforts on behalf of cryonics patients to provide as an efficient and effective effort towards maximizing the goals of giving each individual the best cryonics care possible consistent with the circumstances present at the time of their clinical death.

**Premedication in Cryonics Patients: Basics and Research**

*Disclaimer: Neither the Cryonics Institute nor any other...*
cryonics organization cannot provide medical care for living patients and must regard the care and medication of legally living members as the sole responsibility of members and their treating physicians. To avoid conflicts of interest and any potential legal/ethical issues and to avoid any impression whatsoever that the Cryonics Institute is attempting to engage in medical practice, the Cryonics Institute cannot advocate any particular and specific premedication protocols for cryonics patients. Again, all care and medication of members is the sole responsibility of those members and their treating physicians! The material that follows is for informational purposes only!

The subject of premedication in cryonics is a complicated and potentially controversial one. Following Michael Darwin, who has written an extensive treatment of the topic for the now defunct stabilization company BioPreservation in 1997, the most basic definition of premedication concerns pharmacologic treatment of the patient during the patient's critical illness with the aim of preventing or mitigating the changes that occur as a result of cardiac arrest and/or the delays attendant to the pronouncement of legal death.

For a detailed discussion of this topic we refer the reader to Darwin's paper. The paper may be found at http://www.cryocare.org/index.cgi?subdir=bpi&url=tech20.txt. One fundamental distinction we'd like to make here is between pharmacologic interventions that prevent a certain adverse event following cardiac arrest from occurring at all versus pharmacologic interventions that aim to reduce the magnitude of a specific kind of injury. A good example of the former is prevention of blood coagulation and a good example of the latter is free radical damage following ischemia.

An extensive collaboration with the Alcor Life Extension Foundation (which will be discussed in future installments of this series) has given us some insights about which medications could be potentially effective to be used for premedication of cryonics patients. We found strong evidence for sodium citrate and heparin. Both agents interfere with blood clotting, and sodium citrate may have some additional anti-ischemic properties. While sodium citrate is increasingly recognized as the most potent stabilization medication in cryonics, this agent cannot be given when the patient is still terminal because it will induce immediate cardiac arrest. Heparin, on the other hand, is routinely given to patients where blood clotting is a (potential) problem and should be given the highest priority in a cryonics premedication regime, provided good cooperation exists between the patient, the doctor(s), the hospital, and cryonics organization.

We have not found strong evidence for any other medications, vitamins, or nutrients to be used in cryonics premedication but the medical literature seems to indicate that taking a suitable multivitamin may prevent arrhythmia or sudden cardiac arrest in the dying patient and is a very inexpensive item. If not contraindicated or disapproved by licensed health care professionals in charge of the patient, the administration of aspirin could be another weapon against blood clotting during the dying phase and immediately after cardiac arrest. Melatonin is an over-the-counter supplement that the literature seems to indicate has potent anti-oxidant properties and that might also assist in managing sleep and moods in the dying patient. In short, heparin, aspirin, supplements to address vitamin, nutrient, and mineral imbalances, and a potent antioxidant like melatonin are some readily available substances that we believe should be able to improve the level of cryonics care in the typical patient. All of these substances will, of course, have to be given consistent with the judgment of licensed health care professionals in charge of the patient before the patient’s clinical death. Many times, however, as long as those professionals do not perceive any harm to be done (i.e., a multivitamin is frequently taken by many individuals with a variety of conditions and, as mentioned, melatonin is a readily available over the counter substance which many individuals take on their own volition to aid in sleep and for other reasons), it may be easier to get those professionals to acquiesce in their use.
Worst mistakes in Cryonics

#5: Not notifying CI of Emergencies

There is no way that your cryonics provider can help you if they do not know about your emergency. Your family, friends, standby group or next of kin must immediately contact CI when you are having serious health issues or worse. Any delay in notifying us directly could result in a poor suspension. Those helping you must have simple and clear instructions, and contacting CI should be on the top of their list.

In case of an EMERGENCY, it is absolutely necessary that someone first contact Andy Zawacki or Hillary McCauley at Cryonics Headquarters. Every second counts & it is necessary, above all, not to waste any time if death is imminent.

A cryonics emergency can be a stressful and frightening time for the people involved. As a cryonics patient, your job is to make sure the people around you are prepared and ready to speak and act for you when you’re not able to speak for yourself. Having a lifeline they can call for help and instructions makes a stressful situation far more manageable.

In an emergency
Call 1-586-791-5961 Immediately!

For more information: http://www.cryonics.org/emergency-situations/
Who will be there for YOU?

Suspended Animation fields teams of specially trained cardio-thoracic surgeons, cardiac perfusionists and other medical professionals with state-of-the-art equipment to provide stabilization care for Cryonics Institute members in the continental U.S.

Cryonics Institute members can contract with Suspended Animation for comprehensive standby, stabilization and transport services using life insurance or other payment options.

Speak to a nurse today about how to sign up.

Call 1-949-482-2150

or email tabitha@suspendedanimationinc.com
Worldwide Cryonics Groups

**AUSTRALIA:** The Cryonics Association of Australasia offers support and information for Australia & nearby countries. caalist@prix.pricom.com.au. Their Public Relations Officer is Philip Rhoades. phil@pricom.com.au GPO Box 3411, Sydney, NSW 2001 Australia. Phone: +61 2 99226979 (home.)

**BELGIUM:** Cryonics Belgium is an organisation that exists to inform interested parties and, if desired, can assist with handling the paperwork for a cryonic suspension. The website can be found at www.cryonicsbelgium.com. To get in touch, please send an email to info@cryonicsbelgium.com.

**BHUTAN:** Can help Cryonics Institute Members who need help for the transport & hospital explanation about the cryonics procedure to the Dr and authorities in Thimphou & Paro. Contacts: Jamyang Palden & Tenzin Rabgay / Emails: palde002@umn.edu or jamgarnett@hotmail.co Phones: Jamyang / 975-2-32-66-50 & Tenzin / 975-2-77-21-01-87

**CANADA:** This is a very active group that participated in Toronto's first cryopreservation. President, Christine Gaspar; Vice President, Gary Tripp. Visit them at: http://www.cryocdn.org/. There is a subgroup called the Toronto Local Group. Meeting dates and other conversations are held via the Yahoo group. This is a closed group. To join write: csc4@cryocdn.org

**FINLAND:** The Finnish Cryonics Society, (KRYOFIN) is a new organization that will be working closely with KrioRus. They would like to hear from fellow cryonicists. Contact them at: kryoniikka.fi Their President is Antti Peltonen.

**FRANCE:** SOCIETE CRYONICS DE FRANCE is a non profit French organization working closely with European cryonics groups. For more information: J.Roland Missionnier: phone: 33 (0) 6 64 90 98 41 or email: cryonicsnews.inpi@yahoo.fr

**GERMANY:** There are a number of Cryonicists in Germany. Their Organization is called “Deutsche Gesellschaft für Angewandte Biostase e.V.”, or short “DGAB”. More information on their homepage at www.biostase.de. If there are further questions, contact their Board at vorstand@biostase.de.

**INDIA:** Can help Cryonics Institute Members who need help for the transport & hospital explanation about the cryonics procedure to the Dr and authority in Bangalore & Vellore Area. Contacts: Br Sankeerth & Bioster Vignesh / Email: vicky23101994@gmail.com Phones: Bioster / 918148049058 & Br Sankeerth / 917795115939

**QUEBEC:** Contact: Stephan Beauregard, C.I. Director & Official Administrator of the Cryonics Institute Facebook Page. Information about Cryonics & perfusion services in Montreal for all cryonicists. Services available in French & English: stephan@cryonics.org
ITALY: The Italian Cryonics Group (inside the Life Extension Research Group (LIFEXT Research Group)) www.lifext.org and relative forum: forum.lifext.org. The founder is Bruno Lenzi, contact him at brunolenzi88@gmail.com or Giovanni Ranzo at giovanni1410@gmail.com

JAPAN: Hikaru Midorikawa is President Japan Cryonics Association. Formed in 1998, our goals are to disseminate cryonics information in Japan, to provide cryonics services in Japan, and eventually, to allow cryonics to take root in the Japanese society. Contact: mid_hikaru@yahoo.co.jp or http://www.cryonics.jp/

NEPAL: Can help Cryonics Institute Members who need help for the transport & hospital explanation about the cryonics procedure to the Dr and authorities in Kathmandu. Contact: Suresh K. Shrestha / Email: toursuresh@gmail.com Phone: 977-985-1071364 / PO Box 14480 Kathmandu.

NETHERLANDS: The Dutch Cryonics Organization (http://www.cryonisme.nl) is the local standby group and welcomes new enthusiasts. Contact Secretary Japie Hoekstra at +31(0)653213893 or email: jb@hoekstramedia.nl

* Can help Cryonics Institute Members who need help, funeral home, transport & hospital explanation about the cryonics procedure to the Dr and authority at Amsterdam with branches in other cities. Contact: Koos Van Daalen / Phone (24 Hours) +31-20-646-0606 or +31-70-345-4810

NORWAY: Can help Cryonics Institute Members who need help for the transport & hospital explanation about the cryonics procedure to the Dr, funeral home and authority at Sandvika. Contacts: Gunnar Hammersmark Sandvika Begegravelsesbyraa / Phones: 011-47-2279-7736

RUSSIA: KrioRus is a Russian cryonics organization operating in Russia, CIS and Eastern Europe that exists to help arrange cryopreservation and longterm suspension locally, or with CI or Alcor. Please contact kriorus@mail.ru or daoila.medvedev@mail.ru for additional information or visit http://www.kriorus.ru. Phone: 79057680457

SPAIN: Giulio Prisco is Secretary of the Spanish Cryonics Society. Website is http://www.crionicas.org.es. He lives in Madrid and he's a life member of CI and is willing to serve as a contact point for Europeans. He can be contacted at: cell phone (34)610 536144 or giulio@gmail.com

SWEDEN: www.kryonik.se.com or Facebook: Svenska Kryonikföreningen. Initially, the society will focus on providing information and assistance to those who wish to sign up for cryonics. Eventually, we also hope to provide practical assistance in cases, possibly in collaboration with other European groups.

SWITZERLAND: www.CryonicsSwitzerland.com or www.ria.edu/cs

CRYOSUISSE The Swiss Society for Cryonics. cryosuisse.ch To join, email info@cryosuisse.ch

UNITED KINGDOM: Cryonics UK is a nonprofit UK based standby group. www.cryonics-uk.org Cryonics UK can be contacted via the following people: Tim Gibson: phone: 07905 371495, email: tim.gibson@cryonics-uk.org. Victoria Stevens: phone: 01287 669201, email: vicstevens@hotmail.co.uk. Graham Hipkiss: phone: 0115 8492179 / 07752 251 564, email: ghipkiss@hotmail.com. Alan Sinclair: phone: 01273 587 660 / 07719 820715, email: cryoservices@yahoo.co.uk

Can help Cryonics Institute Members who need help, funeral home, transport at London. Contact: F.A. Albin & Sons / Arthur Stanley House Phone: 020-7237-3637


HELP US STAY UP-TO-DATE!

If you live in one of the countries listed, we’d appreciate of you would please take a moment to contact the groups listed in your country to confirm their details. Also, if you know of, or are considering starting a support, standby or other cryonics-related group in your area, please send details to cryonicsnews@gmail.com.

JOIN A CRYONICS GROUP!

The Cryonics Institute encourages members to join, or form, local cryonics standby, support and social groups. If you’re interested in joining or forming a group of your own, please check upcoming issues of the CI Newsletter to learn more about CI’s new Cryonics Groups program.
33 blood-cancer patients have dramatic clinical remission with new T-cell therapy

Chinese doctors have reported success with a new type of immunotherapy for multiple myeloma*, a blood cancer: 33 out of 35 patients in a clinical trial had clinical remission within two months.

The researchers used a type of T cell called “chimeric antigen receptor (CAR) T.”** In a phase I clinical trial in China, the patient’s own T cells were collected, genetically reprogrammed in a lab, and injected back into the patient. The reprogramming involved inserting an artificially designed gene into the T-cell genome, which helped the genetically reprogrammed cells find and destroy cancer cells throughout the body.

The study was presented Monday (June 5, 2017) at the American Society of Clinical Oncology (ASCO) conference in Chicago.

Graphene-based computer would be 1,000 times faster than silicon-based, use 100th the powers

A future graphene-based transistor using spintronics could lead to tinier computers that are a thousand times faster and use a hundredth of the power of silicon-based computers.

The radical transistor concept, created by a team of researchers at Northwestern University, The University of Texas at Dallas, University of Illinois at Urbana-Champaign, and University of Central Florida, is explained this month in an open-access paper in the journal Nature Communications.

Transistors act as on and off switches. A series of transistors in different arrangements act as logic gates, allowing microprocessors to solve complex arithmetic and logic problems. But the speed of computer microprocessors that rely on silicon transistors has been relatively stagnant since around 2005, with clock speeds mostly in the 3 to 4 gigahertz range.

Common antioxidant could slow symptoms of aging in human skin

University of Maryland (UMD) researchers have found evidence that a common, inexpensive, and safe antioxidant chemical called methylene blue could slow the aging of human skin, based on tests in cultured human skin cells and simulated skin tissue.

“The effects we are seeing are not temporary. Methylene blue appears to make fundamental, long-term changes to skin cells,” said Kan Cao, senior author on the study and an associate professor of cell biology and molecular genetics at UMD.
**Alpha Go defeats world’s top Go player. What’s next?**

What does the research team behind AlphaGo do next after winning the three-game match Saturday (May 27) against Ke Jie — the world’s top Go player — at the Future of Go Summit in Wuzhen, China?

“Throw their energy into the next set of grand challenges, developing advanced general algorithms that could one day help scientists as they tackle some of our most complex problems, such as finding new cures for diseases, dramatically reducing energy consumption, or inventing revolutionary new materials,” says DeepMind Technologies CEO Demis Hassabis.

[READ THE FULL STORY AT KURZWEILAI.NET](#)

---

**How Google’s ‘smart reply’ is getting smarter**

A significant new hierarchical approach to machine intelligence

Last week, KurzweilAI reported that Google is rolling out an enhanced version of its “smart reply” machine-learning email software to “over 1 billion Android and iOS users of Gmail” — quoting Google CEO Sundar Pichai.

We noted that the new smart-reply version is now able to handle challenging sentences like “That interesting person at the cafe we like gave me a glance,” as Google research scientist Brian Strope and engineering director Ray Kurzweil noted in a Google Research blog post.

[READ THE FULL STORY AT KURZWEILAI.NET](#)

---

**New 3D printing method may allow for fast, low-cost, more-flexible medical implants for millions**

Cuts time to create implants from days or weeks to hours, potentially saving lives

University of Florida (UF) researchers have developed a method for 3D printing soft-silicone medical implants that are stronger, quicker, less expensive, more flexible, and more comfortable than the implants currently available. That should be good news for the millions of people every year who need medical devices implanted.

Currently, such devices — such as ports for draining bodily fluids (cerebral spinal fluid in hydrocephalus, for example), implantable bands, balloons, soft catheters, slings and meshes — are mass produced and made through molding processes. To create customized parts for individual patients with molding would be very expensive and could take days or weeks for each job.

[READ THE FULL STORY AT KURZWEILAI.NET](#)
Membership Benefits
Why join the Cryonics Institute?

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

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

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

4) **Lower Prices for Spouses and Children**
The cost of a Lifetime Membership for a spouse of a Lifetime Member is half-price and minor children of a Lifetime Member receive membership free of charge.

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

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

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

8) **Cutting-Edge Cryonics Information**
Members have access to both the Cryonics Institute Newsletter and Long Life Magazine online, as well as our Facebook page, an official members-only forum (coming soon) and more.

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

10) **Support Education and Research**
Membership fees help CI to fund important cryonics research and public outreach, education and information programs to advance the science of cryonics.

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

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

To get started, contact us at:
(586) 791-5961 • email: cihq@aol.com
Visit us online at www.cryonics.org
Member Readiness Checklist

You’ve signed up for cryonics - what are the next steps?

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

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

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

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

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

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

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

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

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

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

☐ Keep up to date! Read CI Magazine and follow the simple “STANDBY WORKBOOK” exercise in each issue.
Letters Welcome

One of our goals for the CI Newsletter is to provide a forum for member outreach and opinion in addition to the existing online forums. If you have comments to share, feel free to write us at cryonicsnews@gmail.com. We may introduce a letters column if response is favorable, so if you do write, please indicate if your letter is approved for publication or not.

CI Standby Kits

CI offers pre-made Standby Kits complete with all required equipment and detailed instructions. These kits are perfect for an individual or a group planning local standby support.

Basic and Intermediate kits are available for sale now. To purchase a kit, please contact us at:

cihq@aol.com

FREE Memberships?!!

Did you know the Cryonics Institute offers FREE LIFETIME Memberships for minor children of paid Lifetime Members? Any minor children (under the age of 18) of fully-paid Lifetime Members are eligible for a permanent Lifetime Membership of their own. If you’d like to give your children the priceless gift of a second chance of life with you in the future, please contact us at 1 (586) 791-5961 and ask about Lifetime Membership Benefits.

CRYONICS QUESTIONS?

Need some help with your membership?
Want to understand your suspension options?
Need to fill out important cryonics paperwork?

CONTACT US!
Our team is here to help.
1-(586) 791-5961
After immortality......comes transhumanity.
And OUR generation can be part of it.

Robert C.W. Ettinger’s

“Man into Superman”  Part 9
What do you do in Heaven on Monday morning?  
What do you do on Tuesday afternoon?  
-Rabbi Sherwin Wine  
Birmingham, Michigan

While short-range, mundane speculations are both pleasant and important, certain whithers and whys of our Long View remain to be clarified, and if possible to be reconciled with religious philosophy.

Since I have no religious beliefs or training, it may seem insincere or presumptuous to offer theological opinions and religious advice. Yet I intend to do so, in appropriate places, for reasons which should become obvious if they are not already, and which I hope will be acceptable.

The Cryogenized Christian and the Gelid Jew

Since Christianity and Judaism are life-affirming religions, it is not surprising that initial clerical reaction to cryonics has on the whole been friendly. For example, when Professor James Bedford, a cancer victim, was frozen in 1967 and stored at first in Phoenix (symbolism coincidental, several clergymen in that city were interviewed by Marie H. Walling, religion editor of the Arizona Republic. According to the Associated Press, most of the theologians were generally in favor of the experiment.

The Reverend Howard MeBain, minister of the First Baptist Church, said, “If he were later revived, I would regard it as one of the many miracles God works through medical science.”

(There was also some understandable skepticism: another Baptist, the Reverend Wesley Darby, said, “I have never had a funeral that failed.”)

Catholics and Jews have expressed even fewer reservations than Protestant clergymen; as remarked elsewhere, on at least one occasion a cryo-capsule was actually consecrated by a Roman Catholic priest, with the approval of the bishop. (12)

To be sure, this climate may change when the cryonics movement becomes larger and its deeper aims more apparent. When clergymen begin to comprehend that we are seeking to shed not only our mortality, but also our humanity, they are likely to become much more uneasy. Superman may not threaten God, but he does threaten the church, primarily by questioning its relevance. The main weakness of the churches—beyond the philosophical level of the grade school—is not that they fail to make Heaven and Hell understandable, but that they fail to make sense of the world.

Although “relevance” is a popular topic these days in church circles, for the most part only its trivial aspects are discussed, e.g., whether ministers should become involved in politics or race relations. Such questions show only the penumbra of the deepening shadow over modern theology, especially Christian theology. The umbra, the core question, concerns the ultimate worldly mission of man and of men.

What is the goal of the human race? What is the duty of the individual? What is the purpose of life? What is Christianity for?

The more naive Christians, taking a narrow view, consider the answers pat: humanity’s goal is to achieve Christ’s kingdom; a man’s duty is to lead a devout and respectable life; earth is the testing place of souls; Christianity is called to save souls. More highly educated, thoughtful Christians are less assured. But there remains a pervasive reluctance to ask the hard questions or to face the hard answers.
Specifically, the churches have concerned themselves almost exclusively with short-term, negative goals. They want only to eradicate sin, not to fabricate greatness; they perceive good principally as the absence of evil. They focus on transient social problems—poverty, war, bigotry, and so on. They seldom ask: After the Global Great Society—what? Will the only remaining significant task be the conversion of unbelievers? And would success in this task signal the end of history?

It is obvious that there is more to life than most Christians recognize. We need merely ask: What does the “folk Christian” do after his soul and his own community have achieved peace? (After all, many believe they have come to terms with God, and many small communities are reasonably serene.) Do you play canasta until death and reward? Are your further activities no more than hobbies? Does the secular world consist only of tinker toys? Or are there other roads and different horizons apart from traditional religion? In short, is Christianity (as narrowly conceived) all that is really important in life, or is it only a part? In slightly different terms: Is it enough to “lead a Christian life?” Would a collection, say, of Amish communities constitute a Christian utopia? Can we settle for peace, faith, and virtue, and forego the stars? Can we rest content to be good men and relinquish or subordinate the drive to become supermen?

My own belief is that we cannot. Is it conceivable that God created the awesome galaxies just for scenery? Were our cunning brains, clever hands and restless glands designed to no purpose beyond the plow and altar? Can homo sapiens be the realized image of God? No and no, assuredly not.

The Paradoxes of Radical Theology

The obvious weaknesses in traditional Christianity, some of them recited above, have always tormented theologians, and lately have forced some into paths nearly parallel to the cryonicist’s. The radicals include the “Christian atheists” and death-of-God theologians, although some of their ideas have already passed the zenith of fashionability and appear inadequate in any case.

Several years ago, William Hamilton and Thomas Altizer were making waves as leaders of the “death-of-God” movement, and if the waves have subsided it is not so much because they shocked the traditionalists as because they have simply run out of steam. How quaint it seems already to read Professor Hamilton’s statement, “One of the most pressing intellectual responsibilities of the Negro student and minister today is that of working out some of the ethical and theological clues that the Negro revolution is teaching him and us all.” (67) How easy it is to sympathize with the condescending recent dismissals of “mood theology!” Surely the meaning of religion cannot shift with every political breeze! And yet, there does seem to be something authentic in “Christian atheism.”

On the Christian side—distinguishing them from ordinary atheists or agnostics—is a will to cling to Jesus, to Christology as distinct from religion and God, and also a residual longing or hope or faith that somehow, some day, God will reveal himself and “live” again; it seems almost a mysticism devoid of content, little more than a wistful ache. Yet these nearly inchoate yearnings are not altogether without force or direction.

In fact, they tend to provide psychic fuel and compass (however wobbly) for the “atheistic” or humanistic aspect of the movement, which is a commitment to the world and a groping forward, a search for growth and meaning in the here-and-now. In some respects this is closer to the cryonicist feeling than is humanism, because it contains a vaulting aspiration that the plodding humanists seem often to lack. Other modern theologians, more “respectable” than the death-of-God people, are hardly less radical—Niebuhr, Karl Barth, Rudolf Bultmarm, Dietrich Bonhoeffer, and the German expatriate Paul Tillich. If the average parishioner or “folk Christian” does not revile Tillich, it is only because he does not read or does not understand him. Tillich retains use of the Gospel and of Christian mythology and symbolism—but he rejects literalistic interpretations of the biblical witness, he rejects any distinction between the sacred and the profane, and he rejects the notion of “eternal law” in favor of situational or evolutionary ethics. (169) For Tillich, there seems to be only one world—this world—and religion boils down to a sense of “ultimate concern;” again, aside from labels and phras-
es, radical Christianity seems to come very close to humanism.

The difference is that the radical Christian, while sometimes vaguer and more muddled, is also gutsier, more vital; he is charged with a higher voltage, and shares with the cryonicist--or with other cryonicists--a vision of something higher, something qualitatively different. If I had to choose one or the other as companion or colleague, I should much prefer the radical Christian over the humanist. The latter, limp and pallid of spirit, typically pays lip service only to radical change, and has sold out cheap: settled for humanity, with minor improvements. The Christian, while perhaps nearly indistinguishable in his actions, is always goaded onward by the inner conviction that somewhere there is meaning, sometime there will be greatness, somehow man can find the means to transcend himself.

But the road of cryonics is wide, and it is our hope that humanists, almost every stripe of Christian, and indeed nearly every mother's son can walk it with us. There will be quarrels along the way; it remains to be seen how much conflict, in practice, will result from the philosophical clash between Christian morality and the ethics of self-interest. The important thing is that our initial goals lie in the same general direction, which is pointed out below.

The Purpose of Life

At last one of the central questions can be dealt with: What is the purpose of life? Answer: To discover the purpose of life. This is not a play on words, but a recognition of the obvious truth that since ultimate answers are not within view we must make do, for the foreseeable future, with uncovering and pursuing a succession of intermediate goals, and that this requires a program of growth and development.

The universe is vast and mysterious, its qualities and values hidden either in distance, smallness, complexity, subtlety, darkness or dazzlings that bewilder eye and mind. To attempt to fathom its depths in the manner of the traditional philosopher is a task which may be likened to that of a dog trying to build a bridge over the Mississippi. To begin with, he needs tools; working only with jaws and paws, he finds the job hopeless. But even if he had the tools and could handle them, he would not live long enough to make a dent in the task. And even if he had greatly extended life or the help of many others, he could neither handle the tools nor organize the work. In short, he must fail simply because bridging the Mississippi is not a job for a dog.

Just so with the philosopher. To begin with, one cannot unriddle the world simply by reasoning it out, as the Greeks thought; one has to go out into the world and tinker with it. One needs tools--microscopes and telescopes and oscilloscopes and spectroscopes and much, much more that we have yet to imagine. Nor is it other than arbitrary and unreasonable to suppose that an ordinary lifetime could suffice for the work; much more likely, millennia of effort by the entire race will be required. Finally, it seems also arbitrary and unreasonable to imagine that merely human intelligence can operate at the required levels; instead, we shall probably have to improve the very physical structure of our brains before we can expect to make important progress.

We must, in fine, become immortal supermen--not to gloat over our accomplishments and strut among the stars, but to do our work, the only work there is.

Super-Christian

Such perspectives are unsettling even to sophisticated theologians, many feeling that Christianity is put on the defensive or elbowed rudely aside. Their forebodings may to some extent be justified, especially if religious leaders take a reactionary stance. Yet it seems to me, although I am not a theologian or a Christian, that there are many intimations in Scripture and tradition that would allow embracing the larger view.

For example, most churches have accommodated themselves to Darwin's theory of evolution. Dr. E. C. Messenger has written, "... many think there is good reason to suppose that the 'dust of the earth' of the Scriptural text need not and should not be taken to signify that the immediate source of the
first human body was in fact inanimate matter. They see no reason why, on the contrary, the first human body may not have been fashioned by God from some animal organism, and this hypothesis has now been officially recognized by the supreme authority in the Catholic Church as open to discussion.

There is every reason to think the churches can also accommodate themselves to the idea of future evolution, natural or “artificial.” In fact, it seems to me, they must, since it were surely blasphemous to assert that present-day man is made “in the image of God,” whether that “image” be taken as physical or spiritual. We obviously have a long way to go; man is still being created; he must develop into the image of God. And did not Jesus say, “Greater things than I have done, shall ye do”?

For those committed to Scripture, yet prepared to interpret it liberally, there are also many other possibilities. The teaching of “resurrection of the body,” and eternal life for the resurrected, need not conflict with cryonics. Perhaps our medical revival is the promised resurrection, at least for some, and Heaven is not a different realm, but this world after we have improved it and ourselves. Somewhat similar doctrines, mundane interpretations of Revelations, have already been espoused by the Jehovah’s Witnesses and others.

Such ideas have been entertained, at least tentatively, by some clergymen of the major denominations; and some have preached or written in favor of cryonics. Perhaps the most vigorous “Christian immortalist,” however, seems to be A. Stuart Otto, a maverick who has written a book, How to Conquer Physical Death, and publishes The Immortality Newsletter. (134)

The book seems to reflect Christian Science as well as cryonics influence, and to contain major errors; but it also shows remarkable insights and interesting biblical interpretations. Mr. Otto advocates a double-barreled attack on death, spiritual and physical, and stoutly maintains that “Death is not a friend but an enemy and must be overcome... Jesus made no mention of resurrection after death as having any part in the new birth. The new birth is a change that comes here and now.. ’The world to come’ (mentioned in Mark 10:30 and Hebrews 2:5) is the world of tomorrow--this world as it is to be.”

There are still many who worry about the sin of pride and about the futility of dreams of heaven on earth. But most of us who intend to go forward do not dream of any simplistic heaven on earth; indeed, we explicitly recognize that mere material comfort, even universal peace and good will, constitute only a starting point, not by any means a final goal. We go forward into the unknown because there is nowhere else to go. Is the past so beautiful that we should dust it off and wear it? Is the present so precious that we should preserve it in amber? Shall we walk with downcast eyes in circular ruts? For us this is not possible--and some of us are Christians.

We aspire to be supermen not necessarily because we are vain and arrogant; rather, our dissatisfaction with present endowments and attainments reflects a realistic humility--we are painfully aware of our shortcomings. The Christians--among us are not rebelling against God nor aspiring to equality with him (if such a thing were conceivable); they seek rather to become his more effective tools, his worthier stewards. Neither do we seek endless change just for the sake of change; we pursue intermediate goals on what we hope will be an ascending road, a road perhaps some day leading to the Celestial City--wherever and whatever that may be.

Does not Christianity need supermen? Can any but a superman be a complete Christian? Can the highest spiritual merit be built on less than an adequate intellectual substrate? We have got to grow, and growth requires more than formulas or incantations; it requires changes in the biological structure, changes which in all probability those of our generation will not experience except after freezing, storage, and revival.

If one construes biological engineering as a threat to the churches or to the peace of mind of individuals, he must be careful not to misdirect his resentment. The threat comes not from any person, or even properly from any school of thought, but from the world itself, which is to say from unresolved contradictions in the threatened churches and philosophies. At one time Moslem conservatives held
that the Koran contained all wisdom and that to read or write another book was blasphemous; this ostrich attitude succumbed not to the malicious attacks of unbelievers but to the incontrovertible facts of life. Likewise, religion today must regard the biological revolution not as a threat, or even an annoyance, but as an integral and extremely important part of God's gift and continuing revelation—mind-wrenching though such a change of view may be for some.

The Long View vs. Alienation

Superman and the Long View are needed, among other things, to cure the alienation so-celebrated in current American and Christian life—the malaise that afflicts even affluent segments of our society and our younger generations, the lack of adequate feelings of identity and destiny. This disease is not restricted to unbelievers or back-sliders; many pastors are close to panic in their failure fully to reach their people, in their inability to make religion satisfying.

The issue is obscured by the fact that the alienated often turn from the institution that has disappointed them, only to seize upon another and perhaps even less promising ideal. The despairing Christian may become a Communist, and vice versa; the switch may be from a liberal to a conservative denomination; or a Marxist may turn to anarchism. This is like the restless and vacant man or woman wandering from one lover to another, when the real problem is another realm altogether. The real problem of alienation is that the traditional institutions—Christianity, Judaism, Marxism, and humanism, in particular—would be unsatisfactory even if they succeeded in all their ambitions—especially if they succeeded in all their ambitions. That the institutions sometimes betray their own credos is only a secondary problem.

It should be obvious that Christians also require mundane challenge and secular purpose, that religion as narrowly conceived is not enough, that earth must be more than the anteroom to Heaven. There is a very simple reason why many parishioners are impatient or bored with constant preaching against sin, viz., in many communities most individuals are already honest, decent, and pious, even though there is room for improvement. It may not be to the point to overemphasize various social problems, since most parishioners may already be doing about as much as their talents and resources permit. If the average, decent Christian is to improve himself and his contribution to any notable extent, it is not likely to be by nagging exhortation but by a complex process of education, growth, and biological change.

As already noted, it is not only the churches but other institutions as well that are missing the point. Among the other institutions are those quasi-religious bodies, the communist states, which to instill spirit and assure support rely on that old standby, the martyr syndrome. This gives the individual both happiness and usefulness—but the happiness may be brief and illusory; the usefulness may accrue only to a false ideal. (It should not be necessary to elaborate on the possibility of “illusory happiness,” in which category I would include, for example, that of the contented cow, the euphoric acid-head, and the kamikaze.) In parts of the more advanced communist countries such as Russia, where material wealth has increased and revolutionary fervor subsided, idealism is failing to satisfy the restless young, just as Christianity is failing here. (The “Jesus freaks,” even aside from their small numbers, can scarcely be counted successes.)

The necessary change in outlook cannot and need not be either sudden or universal. Many will lack the time or the flexibility to modify their philosophies; presumably God’s mercy will provide for them, as for the nameless myriads throughout prehistory. But those able to understand the questions and vigorous enough to accept the duty must face the issue.

That issue is whether Christianity (and the other religions) will be universal and evolutionary or narrow and static. Merely to phrase it so nearly removes any choice; a narrow and static religion can end only in impotence and decay. The practical question is whether Christians will be followers or leaders, whether they will sullenly and grudgingly submit to change or eagerly and gratefully seek to guide it.

The Ultimate Ecumenism
That traditional religion should adopt the Long View and welcome superman is a disturbing suggestion for theologians, but it will not panic even the conservatives among them; they are very canny, tough and shifty customers. They will soon see that we are really asking for an ultimate ecumenism, a final rapprochement between science and religion. I think such a rapprochement is possible, and that its necessary condition--an end to religious dogma--can be made acceptable to the churches.

Most of the supposed conflicts between science and religion have been resolved or left behind. The twentieth-century scientist is less confident and more puzzled than his predecessors, and so is the contemporary theologian, who is very respectful of science. Typically, the philosopher of faith not only acknowledges his duty to interpret religious doctrines in accordance with “scientific facts,” but he also tends to apply the critical standards of the scientist to his own work—even though often protesting, all the while, that his realm is entirely different and apart from that of science.

This is a major cause of confusion: the tendency to smile at the scientist's supposed concern only with those things that can be “seen and felt, weighed and measured,” the tendency to ask such questions as: Can you put beauty tinder a microscope? Can you put love on an oscilloscope? These people have been misled by the fact that the scientist does indeed, when feasible, prefer to work quantitatively, and by such dicta as that of Lord Kelvin: “... when you can measure what you are speaking about ... you know something about it; but when you cannot express it in numbers ... you have scarcely advanced to the stage of Science. . . .” This kind of attitude, combined with the diffidence of most scientists in the face of truly slippery problems, has produced the widely credited notion that science and religion have different “provinces,” that they do not share the same “universe of discourse,” that they meet only tangentially and that, fundamentally, one is irrelevant to the other. Nothing could be sillier.

The fact is that when a scientist cannot find accurate data, he makes do with less accurate ones; and when he cannot define a concept sharply, be works with a fuzzy one, applying, nevertheless, all the honesty and resourcefulness at his command. These, in the end, define the “scientific attitude”: honesty and resourcefulness. Paul W. Bridgman, the eminent physicist, has made this explicit by saying that the most important part of the scientist's procedure is simply “to do his utmost with his mind--no holds barred.”

In this larger sense, then, clearly the province of science is universal, not excluding art, human relations, or religion. But while this statement may at first seem both vague and innocuous, it packs a punch. Now comes the crunch.

The gut issue, to use the current argot, concerns the validity of “spiritual insights.” The argument from such insights is presented in crystalline purity by Billy Graham, who says, “I know God exists... I have talked with Him ... I have walked with Him.” That is, he has experienced a direct perception, and needs no further evidence; he feels only pity for the blind man who has not seen, and who requires mountains of indirect evidence to allay his doubts.

But if Dr. Graham were scientific he would acknowledge the well-known fact that there is such a thing as delusion, and entertain the possibility that his “insight,” convincing as it seems, may nevertheless be delusory. Many others--possibly most others--do entertain this possibility. Pierre Teilhard de Chardin, to cite an eminent example, occasionally voiced such doubts. The root question is how much weight to give to personal visions, and how much to other kinds of evidence.

Most theologians, I believe, have the scientific attitude in some measure. They make every effort to be reasonable, and they admit the possibility of error. After all, absolutely convincing visions have frequently occurred under grossly discrediting conditions, e.g., through the use of drugs, as well as through diverse faiths.

Perfect faith is only for perfect fools. it requires the most foolish arrogance to assert, “I cannot be mistaken.” To be sure, those who say this will assert that they are humble, not arrogant, and their claim is that Jesus cannot be mistaken; but this is specious.
It will be only a partial digression here to comment on the remark often made by Dr. Graham and others, to the effect that “faith” is necessary in everyday life--that all of us must have faith that our spouses are loyal, that the food in the can will be fit to eat, etc. The error is profound: there is a world of difference between “faith” on the one hand in the sense of a reasonable degree of confidence, based on experience, and on the other, the kind of religious faith that brooks no questioning of dogma.

Many theologians, even of conservative denominations, come rather near being scientists and monoists, rather close to agreeing that essentially there is only one kind of truth-seeking and one set of rules; the well-known Dutch Dominican, Eduard Schillebeeckx, speaks of “truth without adjectives.” But the churches as institutions mostly fall much farther from the mark: they tend to emphasize conformity rather than honesty for the rank and file, and they tend to make exaggerated claims as to the certainty and finality of their “answers;” yet in this they differ only in degree from the recognized branches of science. While a full discussion of this aspect of the church would have to be lengthy, I believe the churches could purge themselves of their taint of irrationality without losing much of substance.

My principal suggestion, then, is that the theologians recognize themselves as scientists, and accept the discipline of science. Such a “one-world” movement would not necessarily be one-sided: for example, while the theologians might learn something about discipline, the natural scientists might learn something about responsibility, and stop pretending that their only duty is to their sense of curiosity. This would be ecumenism with a vengeance—but could it work?

The Viability of Religion Without Dogma

The premier case of contemporary religion without dogma is one that many will regard as a horrible example. The Unitarian Universalist Church is considered by many conservatives to be no church at all. Unitarians, the old joke goes, believe in one God—at most. Certainly they impose no doctrine on parishioners: their aim is “not to think alike, but to walk together.” Their services, judging by the few I have attended, are rather pale and unimpressive. Church attendance appears casual, and ties loose.

Nevertheless, this church is large, widespread, and apparently vital. Its members enjoy fellowship and display dedication, which seem to be the only universal characteristics of religion. The dedication, to be sure, is somewhat vague and diffuse, relating mainly to seeking and to social consciousness, but it seems to suffice. Apparently, religious liberalism can be carried to its extreme without destroying a church.

The Jewish faith, also, seems to hold little of dogma. Even in its Orthodox branch, with its emphasis on strict adherence to custom and ritual, there seems little attempt to regulate thought and belief; I have never heard of a heresy trial in modern Judaism. In particular, there seems very little interest in the hereafter and rules for entering it. Yet, without promise of Heaven and in the face of unfriendliness and even persecution, the tenacity of Jews in their religion is well known. It may be argued that the ethnic element makes this a special case—but Jews include very diverse peoples; the community created the “race,” not the race the community.

It is also possible to straddle the fence on the question of dogma, in either of two ways, one exemplified by the Communist “religion,” the other by the thinking of avant-garde Roman Catholic theologians.

The Communist approach is formally to eschew dogma, but in substance to impose it. Marx and Lenin are admitted to be humans, and idealism is spurned, supposedly; but in practice Marxism-Leninism is exalted to a jealously guarded ideal. This approach, viewed from the standpoint of a churchman, has some merit: it makes change difficult, but not impossible; the “revisionist” is reviled, but usually not burned at the stake, and revisions can make some headway if they have enough to commend them.

The approach of some Catholic theologians is in a sense the reverse: in theory, at least some elements of dogma are insisted upon, but in practice virtually unlimited change is gradually permitted. Con-
sider, for example, some of the comments of the German Jesuit, Karl Rahner, concerning the recent Constitution of the Church (Vatican II) and the conciliar decree itself: “Our imagined Christian (of the future) will be living as a member of the little flock in an immeasurably vast world of non-Christians... our future Christian will read with pleasure in the conciliar decree, ‘God’s salvific will also includes those who (without having yet received the Gospel) acknowledge the Creator... For those who through no fault of their own do not know Christ’s Gospel and Church but seek God with upright hearts and so in fact under the influence of grace seek to do his will, made known by the dictates of conscience, can attain eternal salvation.

“Of course the passage quoted is not easy to harmonize with the absolute necessity of faith, of revelation and the necessity of the Church for salvation, which cannot be denied either. In order to show this compatibility a very subtle theology of the possibility and existence of anonymous Christians would first have to be worked out.... “That conciliar statement also comprises atheism of the troubled, inquiring and seeking kind, within the scope of the grace of God.” (142) Of course, Rahner is far ahead of the “folk Catholic,” or the average parishioner, or perhaps even the Pope; some of these still insist that every atheist must burn in Hell. But the direction of the march of history seems reasonably plain, and its relevance to the question of dogma seems fairly plain too. If the substance of dogma is evaporating anyway, why retain the name, with its opprobrium?

What the believers must see clearly is that the abandonment of dogma need not enervate the churches. No one pretends he is a Republican or Democrat by virtue of divine revelation, yet the political parties are full of vitality. When we go to war, there are not many claims that it is a holy war, we admit the issues are cloudy--and yet the soldiers lay their lives on the line. Likewise, a church need not prove to its adherents that it is in any sense perfect, but only that it is good.

We must also admit that giving up dogma, putting on the cloak of humility, may still entail some danger for the churches. There may still be some individuals who cannot be satisfied by anything less than assurance up to the hilt, whose insecurities are such that they will crumble at the least sign of weakness in their spiritual leaders. But if this is the price, I think it will have to be paid. In any case, the ultimate decisions will be based on principle, not short-term politics, and the new breed of scientific theologians will be standing on the firmer ground.

NEXT ISSUE:
Part 10 - “Copouts and Dropouts: The Threat of Immortality”