Hello everyone and welcome to the new electronic edition of the Cryonics Institute’s Newsletter. I hope you are as excited about this development as I am, and I hope this newsletter will serve its purpose by informing and educating our members in a way that is affordable for all.

CI continues with steady growth and improvements. We are currently finishing up on a tribute/conference room at CI and it will be ready for viewing at our next AGM coming Saturday, September 12th at 3:00pm EDT. Remember to mark your calendars. Also, please see page 5 for important information about the Board of Director elections.

I am very excited about all the new things happening in cryonics. There continues to be exceptional growth in terms of membership at CI coupled with a growing interest in cryonics overall. There are many people overseas expressing interest in cryonics operations where they reside. And there are additional cryonics standby groups and facilities sprouting up both within the United States and abroad.

I think that mutual aid relationships with sister organizations can only serve to strengthen the combined mission goals we have. Standby needs to be looked at in the same way that emergency services help one another from community to community. All over the world police, fire and ambulance agencies cooperate to protect life and personal property. Our members are just too few not to join together on the issues we can agree on. There is much work to accomplish and as a good friend once told me “everyone in cryonics has ideas on what everyone else should be doing but few are willing actually put forth the personal time or money to realize those ideas”.

I commend those who do more than suggest or pontificate but rather roll up their sleeves and get to work. I also commend those who look beyond disagreements and see what can be agreed upon. I also commend those who put their own house in order before they suggest others do the same. I hope I can live up to those standards and lead by example. That is why I look hard at my own standby and critique my own plans so that not only may I help myself but I also may be able to share what I have learned to benefit others.
The Annual General Meeting (AGM) of the Cryonics Institute will be held at 3PM on Saturday, September 12th, 2015 at the CI facility, 24355 Sorrentino Court, Clinton Township, Michigan 48035. The AGM of the Immortalist Society will be held after the CI AGM on the same day at the same location. The two meetings generally last most of the afternoon. A buffet dinner and social follow. The CI facility will be open to guests and visitors one hour before the meeting begins.

Meetings offer an excellent opportunity to see the facility, to meet other members, to get a sense of the status of the Cryonics Institute and Immortalist Society and to see Officers, Directors and Staff. For those who come a day early, an informal dinner will be held on Saturday evening at a local restaurant.

Agenda items for the CI AGM will include President’s Report, Treasurer’s Report, and Investment report as well as business issues that arise. The winners of the CI Board of Director election will be announced. There will be tours of the CI Facility. There is no charge for the buffet dinner, but we need to know how much food to order.

The AGMs are open to the general public. We request that we be informed if you wish to attend. For driving directions, more meeting information and to confirm attendance, send e-mail to CIHQ@aol.com, phone (586) 791-5961 or write to the above address.

Pre-Meeting Mixer and Casual Dinner

CI members and the public are invited to join us the night before the official CI AGM at Ike’s restaurant for a casual dinner and drinks. We will meet Friday, September 11, 2015 at 6pm at Ike’s Restaurant, 38550, Van Dyke Avenue, Sterling Heights (MI) 48312, near The Cryonics Institute.

Click here for Directions

We hope to see you there!
2015 ANNUAL GENERAL MEETING

CI’s 2015 AGM will be held Saturday, September 12 at our Michigan facility. The meeting is open to the public, so if you have friends or family interested in cryonics, feel free to bring them along!

NEW MEETING ROOM AT CI FACILITY

While you’re visiting our Michigan Facility for the AGM in September, make sure to stop in and check out our posh new meeting / tribute room! The remodeled room includes a conference table, a couch for casual seating, faux fireplace and wide screen TV. The new room is designed for meetings, presentations and patient family visits.

BOARD OF DIRECTORS ELECTIONS

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’s Michigan Facility no later than August 1st 2015. 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.

The following four directors seats out of twelve are up for election for a term of three years. All four incumbents have announced that they will run again this year.

Connie Ettinger T2015
Pat Heller T2015
Joe Kowalsky T2015
Paul Hagen T2015
Every issue, we’ll be highlighting a single aspect of standby to provide our members with a simple incremental program for setting up their own standby arrangements. Proper standby arrangements can seem like an overwhelming task, so our goal is to help you by breaking down the process into “bite-sized” pieces that can each be easily accomplished in a reasonably short time with a minimum of effort. Some tasks will be more involved than others, but remember - in an emergency situation, even the smallest step taken today can prove to be a lifesaver tomorrow.

**STANDBY TASK: WALLET CARDS**  
**Difficulty Level: Easy**  
**Time: 15 minutes**

Our first task is a basic but effective one; carry a wallet card that informs people, especially emergency personnel, of your cryonics intentions. Printable cards are provided here in both color and black and white versions for your convenience. We suggest using a card or photo stock paper for your cards if you’re printing them yourself. Otherwise, a local quick-print or office supply shop (Kinko’s / FedEx, Office Depot, etc.) can also print and laminate your card if you want a color version but don’t have access to a color printer.

Preprinted laminated wallet cards and driver’s license stickers are also available from CI. Contact CIHQ@aol.com, or by telephone at (586) 791-5961. Please include your full name and mailing address. **Note, these cards are available at no charge only to CI Members with full funding in place and executed contracts.**

- **PRINT OUT THE CARDS ON THE NEXT PAGE AND CUT OUT THE VERSION(S) YOU WANT TO CARRY**
  - If printing from home, remember to print page 7 and not the entire document.
  - For printing at a print shop, download this file or forward them this link: http://tinyurl.com/pkxgyq9

- **CARRY IN YOUR WALLET OR PURSE**
  - OPTION: ADD A CARD TO YOUR CAR’S GLOVE BOX, OR KEEP ONE VISIBLE ON YOUR REFRIGERATOR
  - OPTION: REQUEST A WALLET STICKER FROM CI HEADQUARTERS. CIHQ@aol.com
WHOLE BODY DONOR to Cryonics Institute
In the event of death or critical illness, please call the numbers listed below until someone answers.
Cryonics Institute (CI).............................586 791-5961
CI Toll-Free...........................................866 288-2796
CI Emergency Pager .........................313 990-5916
Faulmann & Walsh Funeral Home ...586 293-3390
Upon death or discovery of body, cool with ice, especially head. DO NOT embalm or autopsy.
DO NOT FREEZE! REWARD FOR CALLING!

Print and Clip
File Available At:
http://tinyurl.com/pkxgyq9
Worldwide Cryonics Groups

AUSTRALIA: The Cryonics Association of Australasia offers support for Australians, or residents of other nearby countries seeking information about cryonics. caalist@prix.pricom.com.au. Their Public Relations Officer is Philip Rhoades. phil@pricom.com.au GPO Box 3411, Sydney, NSW 2001 Australia. Phone: +6128001 6204 (office) or +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

QUEBEC: Contact: Stephan Beauregard, C.I. Volunteer & Official Administrator of the Cryonics Institute Facebook Page. For more information about Cryonics in French & English: stephanbeauregard@yahoo.ca

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: kryonilika.fi Their President is Antti Peltonen.

FRANCE: SOCIETE CRYONICS de FRANCE Roland Missionnier would like to hear from cryonicists in Switzerland, Luxembourg and Monte Carlo, CELL: (0033) 6 64 90 98 41, FAX: (0033) 477 46 9612 or rolandmissionnier@yahoo.fr
Can help Cryonics Institute Members who need help for the transport & hospital explication about the cryonics procedure to the Dr and authority in Toulouse Area. Contact: Gregory Gossellin de Bénicourt / Email: cryonics@benicourt.com Phone: 09.52.05.40.15

GERMANY: There are a number of cryonicists in Germany. Their homepage is: www.biostase.de (English version in preparation.) If there are further questions, contact Prof. Klaus Sames: sames@uke.uni-hamburg.de.

GREECE: Greek Cryonics Support Group. Sotiris Dedeloudis is the Administrator. Find them at: http://www.cryonics.gr/

INDIA: Can help Cryonics Institute Members who need help for the transport & hospital explication 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
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/index.html

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

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.criionica.org.sec. 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

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

UNITED KINGDOM: Cryonics UK is a nonprofit UK based standby group. http://www.cryonicsuk.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: ghkipkiss@hotmail.com. Alan Sinclair: phone: 01273 587 660 / 07719 820715, email: cryoservices@yahoo.co.uk

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.
Model for robots with bacteria-controlled brains

*Understanding the biochemical sensing between organisms could have far reaching implications in ecology, biology, and robotics.*

In a paper published July 16 in Scientific Reports, which is part of the Nature Publishing Group, a Virginia Tech scientist used a mathematical model to demonstrate that bacteria can control the behavior of an inanimate device like a robot.

READ THE FULL STORY ON SCIENCE DAILY.COM

Miniature, Beating Hearts Grown Using Stem Cells

*Structures resembling miniature, beating hearts can now be grown in a lab using stem cells.*

Dr. Bruce Conklin, a stem cell biologist at the Gladstone Institute of Cardiovascular Disease in San Francisco, along with colleagues developed these tiny hearts using stem cells derived from skin tissue.

READ THE FULL STORY ON DISCOVERY.COM

Google’s Calico to scour Ancestry.com data for longevity genes

Google’s Calico, a biotechnology firm created by the search-engine giant to study aging and related diseases, will delve into the genetic database amassed by a unit of Ancestry.com to look for hereditary influences on longevity.

READ THE FULL STORY ON BLOOMBERG.COM

New Approach Trains Robots to Match Human Dexterity and Speed

BERKELEY, Calif. — In an engineering laboratory here, a robot has learned to screw the cap on a bottle, even figuring out the need to apply a subtle backward twist to find the thread before turning it the right way.

READ THE FULL STORY ON NYTIMES.COM
Suspension 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 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.
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, member forums 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?

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CI is the world’s leading non-profit cryonics organization, bringing state-of-the-art cryonic suspensions to the public at the most affordable price. CI was founded in 1976 by the “father of cryonics,” Robert C.W. Ettinger as a means to preserve life at liquid nitrogen temperatures. As the future unveils newer and more sophisticated medical nanotechnology, it is our hope that the people preserved by CI may be restored to youth and health.

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

Got something to say?
The CI Newsletter is looking for submissions from our readers!

If you’ve got a great idea for a story, please forward it to:
cryonicsnews@gmail.com

Members’ Talk

“As a cryonicist, what are you looking forward to about the future? (post-revival)”

Submit your answer here: Questionnaire

Results will be published in a future issue!

Cryonics Support Groups Need You

Looking to connect with fellow cryonicists in your area? CI will be launching a new Cryonics Groups program to help our members find local groups or individuals interested in cryonics. Check upcoming issues of the CI Newsletter for more details!

Join us online!

[Logos for YouTube and Facebook]
R.C.W. Ettinger

MAN INTO SUPERMAN

After immortality......comes transhumanity.  
And OUR generation can be part of it.

Robert C.W. Ettinger’s

“Man into Superman”  Part 1
One of our dogs would like to be human. He wants to eat in a chair at the table, and sleep in a bed. We don't let him, because his habits aren't hygienic enough and too much people-food isn't good for him. But surely no one can blame him for trying.

And who can blame us for also wanting more and better? We think life is great already--but that doesn't mean we settle for what we have.

We enjoy our bodies--when they function--but there's no denying that we are made of very cheap materials. Our minds have done marvels--but they are feeble in light of the potential we glimpse. Our emotions are frequently delightful or useful--but fragile and erratic far too often.

Some do blame us immortalists, us transhumanists, and reproach us for hubris, because in earlier times there seemed to be good reasons to accept the status quo--namely, there was little we could do about it, hence mental health and a stable society might require resignation.

The “human condition” celebrated/lamented in song & story (often by philosophers/novelists crying in their beer) centers on limitations and inherent contradictions. Wagnerian tragedy sometimes focused on “impurity of blood,” the irreversible defect. (You are stuck with your genome; your fate is to be only human, and in fact to be only a particular type of human.) Our psyches are in a chronic state of civil war; there is incurable turmoil in Lorenz’ “parliament of instincts,” for example with self preservation ever in conflict with self-sacrifice. The heroic thing, we are usually told, is to accept the limitations and live with the contradictions--to muddle through.

But humans have always tried to transcend their limitations, and have often to some extent succeeded. (“Natural man” would be living naked in a cave or shivering in a tree.) And now we are on the brink of the can-do era, when the leopard will be able to change his very spots. The transhuman condition is one of life unlimited--no acknowledged boundaries in time, space, or quality.

True enough, no one has grown any younger since the first version of The Prospect of Immortality in 1962; and no one has leaped any tall buildings since the first edition of Man into Superman in 1972. Yet there are potential immortals today, the people in cryostasis or frozen storage. There are supermice and patented animals and plants resulting from genetic engineering. Scientific heavyweights think that even within your natural lifetime we can have mental prostheses--direct computer links to your brain. The future is looking good.

There are risks, to be sure, and dissenters. Some people are fixated on the past, which they claim has produced enough wars, famines, acne, and funny money to make a sensible person say, “All right, already!” Hence they either doubt the future or dread it.

Pessimism is partly a matter of bad experiences or/and hormone shortages. These can be remedied, if you can hang on a while.

Pessimism is also partly a failure of imagination. Most people think the future will be just like the recent past, with maybe a little more chrome and somewhat higher prices. They need to pay closer attention to what is happening.

What is happening is a discontinuity in history, with mortality and humanity on one side--on the other immortality and transhumanity. With a little encouragement, many of us can make the transition: that is what this book is about.

Have you had a better offer lately?

R.C.W. Ettinger Oak Park, Michigan November, 1988
By working hard and saving my money, I intend to become an immortal superman. Naturally, many still question the realism and propriety of such a goal; they see this kind of ambition as both foolish and vulgar. I hope to show that those who are willing to settle for mortality and humanity just do not understand their predicament or their opportunity, how lowly they are and how exalted they may become.

That physical immortality—indeinitely extended life— is indeed within the grasp of us now living was the main theme of a previous book. Since then, a vigorous cryonics program has come into being; “dead” people are being frozen and stored in hope of eventual rescue—revival, repair, rejuvenation and improvement.

Practicing immortals are still exceptional, however. (Many are cold, but few are frozen.) There is little support for research to cure old age, despite the efforts and prestige of the Gerontological Society. One reason is a failure of motivation, which depends in part on the feasibility and desirability of improving people—of changing ourselves into supermen. Merely to expand time, without expanding the psyche, seems to hold little attraction.

Furthermore, pundits regularly allow that we should not aim to become superhuman, for a variety of complicated reasons. For example “An ape is not just a super-amoeba, a man is not merely a super-ape, and a ‘superman’ would not represent progress but only intensification of our traits and shortcomings.”

They assert that when we come out of cryonic suspension—after we are thawed, revived and rejuvenated—our efforts to improve out minds and bodies will result only in more cunning and voracious apes, bigger and hungrier amoebae.

The criticisms are vacuous because they are made in a vacuum; very little serious attention has been given to the potentialities of supermen. To the best of my knowledge this book is the first of its kind—the first to deal in a reasonably systematic way with the varieties and potential of superhumans. These should be of considerable interest even to those who choose to regard them as mere possibilities for our remote posterity.

I hope not everyone will so regard them. You personally and your families have a genuine opportunity to prolong your lives indefinitely and outgrow the human mold; you can really exercise some of the options outlined here or else better ones after your own heart’s desire, remolded with each change of heart. If you apprehend the reality of this opportunity and if you actually take the necessary steps soon enough, why then, the adventures of the long tomorrow, which I firmly intend shall belong to me and mine, will be yours too.
Some have already decided to try for immortality and for transhumanity, including the dozen or so chrononauts now lying frozen in their voyage through time. But to most onlookers their motives remain somewhat obscure and their vision unclear. What do they love in life, that they cling to it so tenaciously? What marvelous future do they foresee that they are determined to experience it? In that far season, what strange flowerings do they imagine, that they tug so insistently at Heinlein’s “door into summer”? And to what mighty works, what soaring projects, do they imagine they can contribute?

Only a few of the answers are quick and easy. For those who can enjoy leisure in traditional lazy and frivolous ways, a world of delight opens wide: an open-ended future may mean a month wandering the Canadian wilderness, a winter basking on Pacific beaches, a year listening to Bach and Mozart, or Simon and Garfunkel. La dolce vita can become cloying or even disgusting, but some things are likely to wear well: soft grass, a fresh breeze, fleecy skies, a cool drink, crisp snow, a warm hand, a familiar voice—can a thousand years of these be too much?

Other likely rewards are just as tangible. Doubtless the day will come when every citizen will receive a basic income of $10,000,000 or more a year just for breathing, and millions more for such onerous tasks as jury duty. As Benjamin Franklin said, “There is no substitute for luxury,” and we can look forward with unabashed eagerness to an era when luxury will be taken for granted as the natural perquisite of every superman who wants it.

Unhappily, grateful and graceful acceptance of better things is not commonplace in the present age of confusion and warped personalities. Eleanor Roosevelt was reportedly baffled by the sweepers of India, who worked bent over all day with short-handled brooms, and could not be persuaded to save their backs by putting longer handles on the brooms. Today there are vast segments of the world population that will not concede it is better to be rich than poor, better to be bright than dull, better to be strong than weak, better to be free than regimented, or even that it is better to live than to die.

As for the possibility and necessity of redesigning ourselves and outgrowing our humanity, which ought to be nearly self-evident, one finds on every side the most solemn and long-winded arguments to the contrary. Hence, perhaps we had best begin with some brief reminders that it is indeed possible for people to design better people.

The Possibility of Human Design

On a rudimentary level, the engineering of humanity is as old as humanity. Every time one of our ancestors swallowed a medicinal herb, he was trying to improve the “natural” functioning of his body, attempting in his small and vaguely defined way to “denature” himself and produce something a little more than human. When he deliberately selected a strong and clever woman for his mate, he may have been trying, through primitive eugenics, for more and better children. Not only the wish to create supermen, but even the actual effort, has always been there, regardless of disclaimers, and regardless of its minimal effect so far.

On the level of repair work and prostheses there has indeed been notable success, mostly in recent times. With our eyeglasses, gold inlays and birth control pills we are substantially superhuman; we have transcended the apparent limitations of our design, without even taking into account our vehicles and other machinery. But the basic design has not been noticeably improved.

In biological terms, scholars believe we are scarcely
different from our ancestors 50,000 years removed. Humanity has not evolved apparently, and is not evolving. In addition, natural evolution at perceptible rates is believed to require isolation of new strains or genetic segregation which does not occur in the modern world; hence some scientists think men will remain merely men indefinitely.

Or so it appeared before the recent convulsive changes in biology and electronics, including the announcement in June of 1970 that Dr. H. Gobind Khorana had succeeded in synthesizing a gene at the University of Wisconsin. Already a Nobel prize winner, Dr. Khorana was the first to create from scratch a unit of heredity, in this case one related to the metabolism of yeast cells. (92) But for many years previously scientists had been unraveling the genetic code and tinkering with the DNA molecules that carry it, and talk of “genetic engineering” had been commonplace. Today, few biologists seem to doubt that we will learn—eventually—how to modify human reproductive cells, or even manufacture them, so as to produce children with exactly the desired traits—not only gender to order, and skin color and hair texture and body size and facial features, not only healthier and stronger people, but truly significant improvements in intellect and personality, and if need be, a completely different animal.

The bolder and more perceptive biologists, of course, have long seen the handwriting on the wall. Decades ago, Alexis Carrel wrote, “For the first time since the beginning of its history, humanity has become master of its destiny . . . In order to grow fresh, it is forced to make itself anew. And it cannot make itself anew without pain, for it is both the marble and the sculptor. Out of its own substance it must send the splinters flying with great hammer-strokes, in order to recover its true face.” (22)

This kind of talk makes us hopeful, but also a little uneasy. Carrel mentioned “pain.” Do we really want to hammer ourselves?

The Necessity of Human Design

Professor Joshua Lederberg, Stanford’s Nobel lau-

reate biologist, has given us a refreshingly different definition of disease: it is “any deficit relative to a desired norm.” Delightful! Not only is pneumonia a disease, but also our susceptibility to it; not only is schizophrenia a disease, but also stupidity. In fact, every undesired trait represents disease. Thus—although Professor Lederberg does not seem to have drawn the obvious conclusion—humanity itself is a disease, of which we must now proceed to cure ourselves.

There are still numerous naysayers, who assert that it is wrong to “play God.” Since this objection is seriously proposed by apparently intelligent people, it requires the formality of an explicit answer. At first, let us think primarily of improvement of future generations, although not excluding the question of remodeling living adults.

The first and most obvious comment is that a hands-off policy does not avoid responsibility. Passivity is just one alternative among many, and it also has its consequences. To choose to do nothing is still a choice, with its advantages, disadvantages and probable sequelae. Unless these have actually been weighed, estimated, and compared with alternatives, those who choose not to “play God” are choosing instead, to play ostrich.

Another preliminary remark concerns the curious tacit assumption that human intervention would be “disruptive,” that it might wreck the “normal” and “orderly” processes of “nature”. Actually, it is hard to imagine that human engineers could be any clumsier or messier than that old slattern Dame Nature. The “normal” processes of evolution are wasteful and cruel in stupefying degree. Dame Nature considers every species and every individual expendable, and has indeed expended them in horrifying numbers. Even an occasional calamitous error in planned development could scarcely match the slaughter, millennium in and millennium out, of fumble-fingered Nature.

This brings us to the third general comment: it would be absurd—insane—to “trust to nature,” because nature’s criteria are not the same as ours. In
fact, nature recognizes only two criteria of biological success—survival and proliferation. By these disgusting standards, a fungus might ultimately prove superior to man. In the name of humanity and decorum, should we allow superfungus to develop before superman?

But the clearest understanding of the inanity of the don't-play-God notion emerges when we try to envision its detailed application. Exactly what do the stand-patters propose we prohibit? Shall we prescribe, say any “artificial” improvement in human resistance to disease? If genetic correction can eliminate susceptibility to all forms of cancer, for example, shall we withhold the correction and foredoom millions to early, painful deaths? Or suppose drug therapy becomes capable of increasing the intelligence of the average living individual; then stupidity will be the result not of chance, but choice. What would impel you to choose relative stupidity for yourself, or prevent others from being relieved of it?

Clearly, each separate choice must be weighed on its own merits. Hasty acceptance of an apparent blessing can indeed be costly, as witness, for example, the thalidomide error, and on a larger scale the air and water pollution of careless industrialization. Agencies analogous to the Food & Drug Administration will doubtless have their place. But the penalties of inaction may also be severe; millions of lives were lost because of the fourteen year delay in the use of penicillin. And even those who like the status quo must recognize the possibility of a sudden change in environment, for which it is well to prepare—such as a new disease, or a general war, or a new tyrant, or a shift in climate, or a naturally mutated strain of men, or intelligent machines. In fact, a rapid change in environment is certain, since it is happening now; our culture is changing so fast that in order to cope with it, men must soon change also. To go forward is to risk disaster, but to stand still is to ensure it.

The only real alternative to the kind of progress we envision is reaction—a drawing back and pulling in, a closing of the eyes and mind, a regime of ossification and repression, where curiosity is a crime and honesty a sin. This would surely be pathological—"unnatural" in the proper sense.

So far, the goal of superhumanity for ourselves—for living individuals of our generation—seems to be shared by scarcely anyone outside of the cryonics societies, by not a single philosopher, scientist, or writer of acknowledged status and immediate influence. For most of the touted "thinkers," even superhumanity for our descendants is viewed ambivalently and erratically. The eminent philosopher, Pierre Teilhard de Chardin, for example, voiced a gloomy and pessimistic view: “It may well be that in its individual capacities and penetrations our brain has reached its organic limits.” And, “After the long series of transformations leading to man, has the world stopped? Or if we are still moving, is it not merely in a circle?” He thought future progress might be mainly collective and spiritual. (168) But he also had a higher, if wavering, vision:

With our knowledge of hormones we appear to be on the eve of having a hand in the development of our bodies and even of our brains. With the discovery of genes we shall soon be able to control the mechanism of organic heredity....The dream which human research obscurely fosters is...by grasping the very mainspring of evolution, seizing the tiller of the world.... I salute those who have the courage to admit that their hopes extend that far; they are at the pinnacle of mankind.... (168)

Albert Rosenfeld, the eminent science writer, has a wry metaphor for the risks we face in manipulating the world and ourselves:

...in dealing with so many of the potent new tools and techniques, man is very much in the position of those Japanese gastronomes who are addicted to the fugu fish. The fugu secretes a deadly poison to which there is no known antidote. Yet its flesh is considered so delectable that Japanese
aficionados are willing to pay high prices for it and risk the dangers. The risk is somewhat mitigated by the fact that in Japan only licensed chefs specially trained to know the poisonous parts from the nonpoisonous and to prepare it nontoxically, are permitted to serve it up. No system is foolproof of course. Despite all precautions, a couple of hundred Japanese die every year of fugu poisoning. Perhaps we should all take a lesson from the fugu fanciers. To enjoy the pleasures, we must take the risks. But let us by all means see to it that the chefs know what they are doing. (145)

To be born human is an affliction. It shouldn't happen to a dog. Yet the disease is definitely enjoyable, and we must take care that our “cures” really represent improvement. To what extent, and in what way, should man design superman?

To See Beyond the Horizon

Is it possible to see farther than one can see—for example beyond the horizon? Certainly—our newer radars can do it. Is it possible to remember more than the brain can retain? Of course—our libraries do it. It is impossible by definition to see through an “opaque” object, and yet the x-ray business is booming. And so on: we can often do indirectly, and by stages, what at first seems quite beyond our scope, and this includes a human study of the superhuman.

Certainly one cannot visualize a unique superman, even in faintest outline. In the third place, some of the most important elements of the future will be revealed as complete surprises, and thus cannot be taken into account. In the second place, there will be tendencies to diversity and pluralism. And in the first place, one can foresee no completion to the self-directed evolution of the superman; it must be thought of in terms of open-ended development. The present task is only to outline some of the earlier options of supermen, with special attention to those heretofore ignored or underemphasized.

To do this, it must first be shown that homo sapiens is only a botched beginning; when he clearly sees himself as an error, he may not only be motivated to sculpt himself, but to make at least a few swift and confident strokes.

We must also review the supermen of literature, scant and flimsy as these are, to consider whether they contribute interesting possibilities.

The bulk of this book will comprise an investigation of superhuman potential, modes of life and thought. Some of it will be mainly for amusement. Some will be exceedingly practical in a direct and obvious way. And some, necessarily if presumptuously, will touch on certain old and profound problems of philosophy, and will finally force us to consider superman in the first and second person.

NEXT ISSUE:

CHAPTER TWO: The Deficiencies of Modern Man