

ALCOR LIFE EXTENSION FOUNDATION

CRYONICS

2ND QUARTER 2010 · VOLUME 31:2

FUNDING YOUR CRYOPRESERVATION

PAGE 3

DEATH OF ROBERT PREHODA

PAGE 7

MEMBER PROFILE:

MARK PLUS

PAGE 8

NON-EXISTENCE IS HARD TO DO

PAGE 14



ISSN 1054-4305



\$9.95

Improve Your Odds of a Good Cryopreservation

You have your cryonics funding and contracts in place but have you considered other steps you can take to prevent problems down the road?

- Keep Alcor up-to-date about personal and medical changes.
- Update your Alcor paperwork to reflect your current wishes.
- Execute a cryonics-friendly Living Will and Durable Power of Attorney for Health Care.
- Wear your bracelet and talk to your friends and family about your desire to be cryopreserved.
- Ask your relatives to sign Affidavits stating that they will not interfere with your cryopreservation.
- Attend local cryonics meetings or start a local group yourself.
- Contribute to Alcor's operations and research.

Contact Alcor (1-877-462-5267)
and let us know how we can assist you.



Alcor Life Extension Foundation is on



facebook®



**Connect with Alcor members and supporters
on our official Facebook page:**

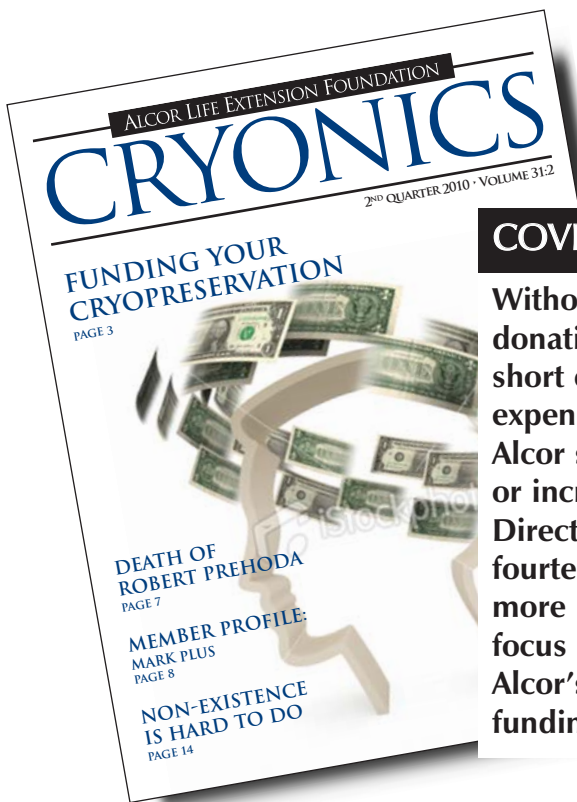
<http://www.facebook.com/alcor.life.extension.foundation>

**Become a fan and encourage interested friends,
family members, and colleagues to support us too.**

ALCOR LIFE EXTENSION FOUNDATION

CRYONICS

2ND QUARTER 2010 · VOLUME 31:2



COVER STORY: PAGE 3

Without bequests and donations Alcor's revenue falls short of covering its operating expenses. This means that Alcor should further cut costs or increase revenue. Alcor Director Ralph Merkle presents fourteen strategies to raise more revenue with a special focus on how to re-structure Alcor's cryopreservation funding mechanisms.

7 Death of Robert Prehoda

Mike Perry

A visionary advocate of depressed metabolism research has passed away.

8 Member Profile: Mark Plus

Chana de Wolf

Mark Plus is one of Alcor's most committed and outspoken members. Mark Plus coined the term "Singularitarian" but has evolved in a more skeptical direction in later years.

14 Non-existence is Hard to Do

Aschwin de Wolf

Cryonics editor Aschwin de Wolf takes on the pessimists in an extensive review of contemporary philosophical pessimism and antinatalism and learns something about the limited appeal of cryonics while doing it.

CONTENTS

- 11 Book Review: *The Rational Optimist: How Prosperity Evolves***
Former Alcor President Steve Bridge reviews Matt Ridley's optimist tract *The Rational Optimist: How Prosperity Evolves*.
- 20 Mike Perry on David Benatar's *Antinatalism***
Mike Perry reviews David Benatar's *Better Never to Have Been: The Harm of Coming into Existence* and offers his own perspective on why life is worth starting.
- 23 Membership Report**
The state of Alcor membership at the end of March 2010.
- 24 Tech News**
Tech News editor Mike Perry reports on breakthroughs on memory chips, low-cost prediction of Alzheimer's, full face transplants, and a landmark achievement in synthetic biology.

Editorial Board

Jennifer Chapman
Aschwin de Wolf
Ralph Merkle

Editor

Aschwin de Wolf

Art Director

Jill Grasse

Contributing Writers

Ralph C. Merkle, Ph.D.
Steven Bridge
R. Michael Perry, Ph.D.
Aschwin de Wolf
Chana de Wolf

Copyright 2010

by Alcor Life Extension Foundation
All rights reserved.

Reproduction, in whole or part, without
permission is prohibited.

Cryonics Magazine is published quarterly.

To subscribe: call 480.905.1906 x101

Address correspondence to:

Cryonics Magazine

7895 East Acoma Drive, Suite 110

Scottsdale, Arizona 85260

Phone: 480.905.1906

Toll free: 877.462.5267

Fax: 480.922.9027

Letters to the Editor welcome:

aschwin@alcor.org

Advertising inquiries:

480.905.1906 x113

advertise@alcor.org

ISSN: 1054-4305

Visit us on the web at www.alcor.org

Alcor News Blog

<http://www.alcor.org/blog/>

FROM THE EDITOR

One of the most popular talking points about cryonics is its cost. Advocates of cryonics argue that if cryonics is funded through life insurance, making cryonics arrangements should be within reach for most people in the United States. Alcor wisely does not permit third party pay-as-you-go funding but this means that the organization needs to give careful thought to the (projected) costs of running a cryonics organization, providing cryonics services, maintenance and resuscitation. In the 4th quarter 2009 issue of the magazine, Charles Platt opened a discussion about the challenge of setting realistic cryopreservation minimums for members that will not need these services for many years to come.

In this issue of *Cryonics*, Alcor Director and nanotechnology researcher Ralph Merkle looks this problem straight in the face and identifies no fewer than 14 specific strategies to close the gap between Alcor's income and operating expenses. One of the interesting themes in Merkle's contribution is that Alcor is not faced with a simplistic choice between abandoning grandfathering (the practice of honoring the cryopreservation minimum that was in place when the person signed up) and carrying on business as usual. There are multiple solutions to ensure that Alcor can charge realistic and future-oriented fees for its services without leaving long-time members, and those with limited means, behind.

It is clear that Alcor will need to make important decisions about its revenues and costs to remain a robust and credible organization. One of the most important requirements to make such decisions is to present members with up-to-date information about Alcor's operating expenses and the cost of cryopreservation. Updating this information will provide a useful picture of how Alcor's technical and administrative costs have evolved since its inception.

Alcor has a long history of presenting an optimistic perspective about the future of technology and mankind. In this issue Mike Perry and I take a critical look at the recent stream of books that advocate philosophical pessimism and antinatalism (the view that procreation should be discouraged because coming into existence is always a harm). We are not persuaded, but it is important to follow these debates because the topics that antinatalists discuss feature prominently in bioethical discussions about cryonics and transhumanism as well. Antinatalist writings may also hold important clues to the reasons why so few people make cryonics arrangements.

Not among the pessimists is Matt Ridley, whose new book *The Rational Optimist* is reviewed by former Alcor President Steve Bridge. Cryonicists do not necessarily believe that "in the long run, we are all dead," but human history as we know it has seen recurring periods of unrest and decline. The challenge for existing cryonics organizations is to persist through such great upheavals and transformations.

Mark Plus is a long-time Alcor member and vocal cryonics advocate. It was about time that our magazine approached Mark for a member profile to talk about cryonics and related topics.

Alcor keeps spreading the word! In June 2010 Alcor created its official Facebook page at: <http://www.facebook.com/alcor.life.extension.foundation>

If you have not already done so, please join our page and encourage others to do so as well. The Alcor Facebook page is an important tool to connect members and to generate support outside of our own membership.

Aschwin de Wolf

ORDER

To request a printed copy of
this *Cryonics* issue,
go to www.magcloud.com.

FUNDING YOUR CRYOPRESERVATION

By Ralph C. Merkle

Introduction

Alcor is really two organizations. One Alcor takes care of cryopreserved patients and is funded by the Patient Care Trust (PCT). This Alcor has regular and predictable expenses (the monthly costs of liquid nitrogen, rent, caretaker salaries and the like) and a regular funding source (the PCT). When new patients are cryopreserved, the PCT gets a fairly predictable infusion of funds to deal with the resulting expenses (although grandfathered members pay less to the PCT). The primary concern is insuring that the PCT has acceptable long term growth – sufficient to keep the patients cryopreserved and to have an annual growth that modestly exceeds inflation. This Alcor seems to be doing well.

The other Alcor cryopreserves patients as needed, publishes a magazine, deals with periodic legal problems and legislative issues (both of which can cost quite a bit), maintains a web site, educates the public, responds to PR issues, and carries out a host of other activities. This other Alcor has traditionally operated at a loss and made up for it with bequests and donations. It has little secure funding, can see both its income and its expenditures fluctuate dramatically, and runs the risk of running short of cash and being forced to curtail operations following one or two bad years.

The full explanation for how this came about is complex and involves many factors, but there is one factor which is relatively clear and which might be mitigated using multiple strategies.

The Problem

Simply put, when members join Alcor they agree to pay today's minimum funding. Decades later, when they are cryopreserved, Alcor has to pay the inflated future costs – which often exceed what the member (or the member's life insurance) pays to Alcor and is usually well below the cryopreservation minimums in force at the time. And the minimums are – well, minimums. They let us pay the marginal costs of the procedure, but don't pay for the overhead of running an organization. This problem has been noted for as long as I can remember, most recently in an article in *Cryonics* [2009-4] by Charles Platt.

A member who signed up for neuropreservation in 1995 needed a \$50,000 life insurance policy. The minimum for neuropreservation today, 15 years later, is \$80,000 – an increase of 60%. That's an annual rate of increase of a little over 3%, somewhat above the general pace of inflation. A neuropreservation today is more expensive than a neuropreservation in 1995. Today we use M22 (which is both better and more expensive to make, even in 1995 dollars) and the inflation rate for staff and other supplies is somewhat higher than ordinary inflation. We are also shifting from an all-volunteer organization to a professionally staffed organization with correspondingly higher salaries. Alcor could pay the marginal costs of a neuropreservation in 1995 for \$50,000 but it's now a guaranteed way to lose money.

We price cryopreservations in a way that guarantees we lose money for two reasons: (a) our funding minimums cover only our

marginal costs, not the fully loaded costs of running Alcor and (b) we usually charge a lower "grandfathered" price which is well below even that.

Figures 1 and 2 (prepared by Robert A. Freitas Jr. from Alcor's published financial data and records of cryopreservations) provides a more quantitative perspective about what it has historically cost Alcor to cryopreserve patients.

Fig. 1 shows that over the last 2 decades, total Alcor expenses per new cryo-

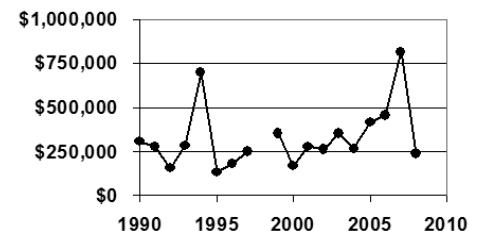


Fig. 1. Total Alcor annual expenses per new cryopreservation in that year, in constant 2010 dollars, during 1990-2008 (chart by R. Freitas).

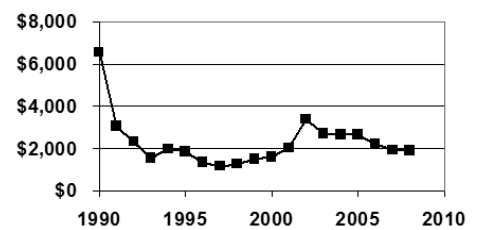


Fig. 2. Total Alcor annual expenses per suspension member, in constant 2010 dollars, during 1990-2008 (chart by R. Freitas).

preservation in that year are trending up slightly in constant 2010 dollars. The constant-dollar cost averages \$327K per cryopatient excluding the zero-patient year of 1998, or \$273K/cryopatient also excluding the anomalously low-patient-count years of 1994 and 2007. This suggests that the long-term cost of keeping Alcor running, if Alcor had no income sources other than cryopreservation fees (the worst-case scenario), is about \$300K per cryopreservation in constant 2010 dollars. **Fig. 2** shows that total Alcor expenses per suspension member have remained relatively stable in constant 2010 dollars. The cost per member averages \$2300 per year across the last two decades; ignoring 1990, the constant-dollar cost is \$2100/yr (\$170/mo per suspension member).

Today's dues and CMS contributions, combined with the revenue from cryopreservations, combined with other lesser sources of income, are substantially less than is required to cover Alcor's costs of operation.

Today's Solution

While we continue to lose money on operations, Alcor as a whole has somehow managed to muddle through. The primary reason is simple: we have received donations and bequests that allow us to underprice our services and yet make ends meet – if only barely.

A reasonable question is: if we've always used donations and bequests to help offset expenses, why change? The Dick Jones bequest from 1988 is still providing Alcor with money, as is the Eleanor Williams Trust created in 2002. Two other substantial bequests from 2001 and 2002 aided Alcor for several years. Smaller bequests have also helped Alcor. When members drop out of Alcor we ask them why they are no longer able or willing to continue. The major reason people give is simple: they can't afford it. If we charge more, some of our members will simply not be able to afford the higher prices. So why shouldn't we underprice our services and make up the difference using bequests?

There are several concerns with this approach. One is the constant toll on Alcor staff of living with financial uncertainty. This not only makes it harder for people to do their job, it also makes it harder to recruit new people. Another is the constant risk that a string of bad luck will force Alcor to make major cutbacks – which will not only hurt

our ability to cryopreserve members, but will also increase our expenses in the long run because rebuilding costs more than maintaining. There is also the question of whether operating so close to the edge is the right way to carry out our mission. While the PCT could in theory carry on without Alcor, it would have a greatly reduced ability to respond to challenges or to deal with unexpected events.

Perhaps the strongest reason is this: we're more likely to survive if Alcor is successful, and Alcor is more likely to be successful if it enjoys good financial health – which will permit it to more robustly defend our legal rights, more robustly fund research to improve cryopreservation technologies, more robustly fund research into the technologies needed to revive us, more robustly fund the actual revival of individual Alcor patients, more robustly explain to a skeptical world that cryonics is a good idea, better make allies with those who can help us, and in general better fund all the critical activities required for a successful organization and a successful result: reviving our patients.

Increasing Revenue

Which brings us to the major focus of this article – if our purpose is to increase the overall probability of success, and the financial well being of Alcor greatly enhances that probability, how should we proceed? How should we fund cryopreservations to maximize the strength and well being of the organization on which our lives depend?

Perhaps the most obvious answer is: charge more.

If our problem is that revenues do not cover costs, then we must either increase revenues or decrease costs. Alcor has been on a steady diet of cost reductions since it started, and continues a vigorous program of cost reduction and cost cutting to this day. A major focus of last September's Strategic Meeting was how to cut costs, and this will continue to be a major focus at the next Strategic Meeting. But will cuts alone increase our probability of success? If we are to carry out high quality cryopreservations we need people with the skill, the expertise, and the willingness to carry them out. We must attract them, we must retain them, and we must maintain a stable environment so that their skills can grow and mature. If we are to communicate with the public, we need expertise in public relations and marketing and again, we must

attract people with these skills, we must retain them, and we must provide an environment where they can grow. If we are to understand our finances, deal with the legal cases that sometimes entangle us, communicate to potential members the sheer raw excitement of the opportunity before us, and fund all the other activities required for success – we need people with the right skills, the right tools, the dedication, and the confidence that Alcor will support them.

Indeed, setting our financial house in order is perhaps the best way to increase the confidence of our members and insure that future growth will increase our strength – and not force us to struggle ever harder to make do on a budget that grows ever tighter with each additional member. People are happy and willing to pay for a service when they see they are getting value for their money – even when they have to pay a little more.

But the blanket answer “charge more” hides more than it reveals. Right now, we have a very specific structure built on many implicit assumptions, and we need to review those assumptions and see if they can be changed in a way that benefits all of us.

Perhaps most obviously we must examine our funding minimums. Even the word betrays our problem – our funding minimums are not meant to provide optimal funding, or even good funding. They are the minimum funding that lets us get by. If we charge less than the minimums, we know we are in trouble. Yet for some of our members, even the minimums are hard to meet.

Most Can Pay More

Many, if not most of our members would be able to pay more, and many do. When my wife and I signed up for neuropreservation, the minimum was \$50K. Our insurance policies are for \$100K each – because we thought then and continue to think now that \$100K is more prudent than \$50K. Would Alcor have to pay extra for an air ambulance? Would it cost more to gain rapid access to us if we were traveling? Would there be legal costs, or some unexpected problems that had to be dealt with? Might Alcor need to increase our minimums in the future? Might Alcor offer better methods of cryopreservation, and need to charge more? (This issue is of most immediate concern for ITS [Intermediate Temperature Storage]. Alcor will have to charge more for ITS because ITS is more expensive to provide.)

For us, and for many Alcor members who provided additional funding when they originally signed up, increasing the funding minimums would literally not cause even a slight inconvenience, let alone hardship.

But for others, this would be a problem. Two questions arise: how might we address this issue looking forward, and how might we address this issue for those who have already bought their life insurance policies and would have a hard time changing them?

As a start, we could advertise not the minimum funding but the recommended funding. Recommended funding would be significantly more than the minimum, and new members would be expected to put life insurance in place to cover the recommended funding, rather than the minimum funding.

First, this would require a change in how we present our pricing structure to the world. We have always tried to present the lowest figure that we could, hoping that this would enable more members to join. There's not a lot of evidence this works, and for many members the insurance premiums are a non-issue.

But if we simply announced recommended funding levels, and required all members to pay those new recommended funding levels, would we be comfortable walking away from those who could meet our current minimums but couldn't meet our higher recommended funding levels? On the other hand, if we think most members can afford recommended funding levels, and that such funding would increase both their and our probability of survival, how could we do otherwise?

There are, however, more options available than simply (a) sticking with our current minimums or (b) moving everyone to newer, higher recommended funding levels.

Specific Strategies

A fairly wide range of strategies would seem possible:

(1) Alcor could require the recommended funding, and simply not accept members who cannot meet this requirement. This would be easy to implement and should be effective at increasing revenue, but would mean walking away from those less able to pay – which is undesirable for several reasons. It also does not deal with the grandfathering problem, at least not directly.

(2) We could adopt option (1), but accept minimum funding for hardship cases – which would be monitored by Board review or some other mechanism. Most members would be able to afford the recommended funding levels, but most of those who couldn't would still be able to join.

(3) Alcor could require that all members meet the minimum requirement using a secure form of payment (a life insurance policy owned by Alcor, for example) but the additional funding could be provided by a less secure method. For example, the member might agree that the final payment was due and payable upon their legal death and would be paid from their estate. We would therefore be in a position similar to that of other creditors who were owed money from the estate. While this would increase the risk that Alcor would not be paid the full recommended amount, it would at least guarantee that Alcor would receive the minimum and in many cases Alcor would receive the full recommended amount. The additional risk might be compensated for by adopting a somewhat higher payment when such an insecure funding method was used.

This strategy also has the advantage that it would make it easier to increase the funding required of existing members – they already have some secure funding in place, and could provide additional funding by a less reliable mechanism. Further analysis of the actual risks involved would be required. For example, there could be issues if the spouse was hostile and had effective control of the payment of creditors from the estate.

(4) Alcor could require that all new members have an upgradeable life insurance policy. The major problem with increasing funding minimums on members who bought their life insurance policy many years ago is that they might not be able to get any more insurance, or it might cost a great deal if they have suffered from a health problem. If we require that new members have an insurance policy that lets them purchase additional life insurance at the same rate as their existing policy, then they would always

be able to buy additional insurance and would not be “priced out” of life insurance if they suffered a health problem. Alcor could then increase the member's funding requirement knowing that the member could at least purchase additional insurance at the same rate as their existing coverage.

(5) Alcor could require that all new members purchase a life insurance policy for significantly above the recommended funding level, but allow the amount of the policy above the recommended amount to be directed to some other beneficiary (spouse, children, etc). If Alcor ever had to increase rates, the amount paid to the other beneficiaries could be reduced. This mechanism provides a more direct response to the grandfathering problem. This mechanism might also be coupled with a financial incentive to the beneficiaries to make sure the cryopreservation went smoothly – they would not receive “their” part of the insurance if they had obstructed the cryopreservation (though creating a mechanism for determining this that did not itself create unwanted liability might also be a challenge).

(6) Alcor could require that all new members purchase a life insurance policy that has a payout that is inflation adjusted, or has a Cost Of Living Adjustment (COLA). While the cost to Alcor of doing cryopreservations seems to be increasing more rapidly than the general level of inflation, this would at least cover a larger percentage of the actual costs of a cryopreservation than are covered now.

(7) Alcor could require that all new members purchase a life insurance policy for the expected minimum at the time of their cryopreservation. If you are 40, and expect to be cryopreserved at 70, you would get a policy for the amount Alcor expects to charge as a minimum in 30 years. This requires that (a) Alcor forecast expected funding minimums and (b) also implies that the actual amount paid by the member at their cryopreservation might be more or less than the actual amount both because the expected inflation rate might be inaccurate but also because the time of their legal death might vary.

On average, however, this mechanism would keep funding minimums in line with Alcor's actual minimums in force at the time of the member's cryopreservation. How to implement this in a way which complied with the laws covering insurance companies would need careful review.

- (8) Alcor could provide an inducement to members who fund at the recommended level, rather than the minimum level (or from an alternative perspective, provide negative inducements to members who fund at the minimum level).

Possible inducements include the availability of expensive services or equipment if required during the members cryopreservation (e.g., air ambulance, legal services, early deployment by Alcor for lower risk situations, etc) or an agreement that the funding level would be contractually grandfathered, insuring the member would not have to provide additional funds in the future. Alternatively, those who fund at the minimum level might receive a lower priority when it comes time to revive patients.

- (9) There is a built in motivation to provide additional insurance coverage at the time of original sign-up to mitigate the risk that Alcor might apply rate increases to existing members. This inducement is only effective, however, if there is a perception that Alcor might actually increase rates for existing members – which so far it has not done. This line of logic suggests that Alcor should apply a rate increase to existing members at least once in order to demonstrate that this risk is worth mitigating.
- (10) We have so far been operating on the assumption that the only contribution that a member can make is financial. This is far from the truth. Alcor could recognize other contributions and couple them to incentives – such as providing grandfathered rates to members who make a contribution.

One significant contribution members can make is to sign up additional members – to spread the word and increase the acceptance of cryonics.

For example, we might ask every new member to name the person who most influenced them to sign up with Alcor, and could then provide the person so named an incentive – for example, we might guarantee their existing rate would not be raised for at least 5 more years.

- (11) We could increase dues for members who could not meet the current minimum funding level. The amount of the increase could be based on the amount of the shortfall.
- (12) Whole body members could receive a neuropreservation if they no longer had sufficient funds to meet the whole body minimums.
- (13) Alcor could adjust grandfathered rates upwards, but not entirely eliminate grandfathering. Existing members with grandfathered rates would have their rates adjusted upwards according to a fixed schedule (each member's rates would then be intermediate between their previous grandfathered rates and the current rates). Those unable to pay the new rates would be reviewed and hardship options would be made available as appropriate.
- (14) Alcor could eliminate grandfathered rates. Members would be expected to increase their funding levels to meet existing requirements. Those members unable to pay the current minimums would be reviewed, and hardship options would be made available as appropriate.

Some of the mechanisms discussed above have legal aspects that would have to be reviewed before it would be possible to seriously consider implementation, and clearly any serious effort to implement any specific subset of these possibilities would require further discussion and evaluation.

Conclusion

This preliminary look at some of the possible mechanisms for structuring higher average payments for cryopreservation, and thus to better secure the financial health of Alcor, should provide some idea of the range of options available. Most of these methods could be used in various combina-

tions, and different methods could be adopted for new members and existing members. The objective is to increase overall revenue to Alcor while minimizing the burden on specific members who might be ill able to afford it.

Alcor continues to review methods for raising funds, reducing costs, and making our operations more effective at achieving our core goals. At the most abstract level, however, continuously operating at a loss while hoping that we can sustain operations until the next windfall does not seem like the best long term strategy. Some change to this traditional mode of operation that provides greater stability would seem advisable. ■

About the Author

Ralph C. Merkle

Ralph C. Merkle received his Ph.D. from Stanford University in 1979

where he co-invented public key cryptography. He joined Xerox PARC in 1988, where he pursued research in security and computational nanotechnology until 1999. He was a Nanotechnology Theorist at Zyvex until 2003, when he joined the Georgia Institute of Technology as a Professor of Computing until 2006. He is now a Senior Research Fellow at the Institute for Molecular Manufacturing. He chaired the Fourth and Fifth Foresight Conferences on Nanotechnology. He was co-recipient of the 1998 Feynman Prize for Nanotechnology for theory, co-recipient of the ACM's Kanellakis Award for Theory and Practice and the 2000 RSA Award in Mathematics. Dr. Merkle has fourteen patents and has published extensively. His home page is at www.merkle.com.



DEATH OF ROBERT PREHODA

By Mike Perry

I am sad to report the likely death of Robert W. Prehoda, one of the early pioneers in the cryonics movement. Prehoda took part in the freezing of James Bedford, Jan. 12, 1967, usually regarded as the first “real” cryonics case, done under controlled conditions for the purpose of eventual reanimation. (Bedford after his freezing was maintained by relatives until becoming an Alcor patient in the 1980s; he is still being cared for by Alcor.) Prehoda was a chemist, reduced metabolism expert, and futurist who promoted his ideas through a number of books including *Suspended Animation*; a paragraph from this 1969 study shows his forward thinking:



Robert Prehoda at James Bedford's freezing in Glendale, Calif., Jan. 12, 1967.

Prehoda injects cryoprotectant while Dante Brunol, background, holds face mask to facilitate oxygen delivery to the patient. (This is possibly a posed shot but does illustrate the sort of procedure that was followed, with an Iron Heart to maintain chest compressions, inducing air intake and, in theory, maintaining blood flow while cryoprotectant consisting of a DMSO solution was injected. Modern procedures differ considerably from this. I thank Robert Nelson for making this picture available.)

“20th century man naturally turns to science in his never-ending search for immortality. Reduced metabolism is the new branch of biomedical research which offers the tantalizing promise of allowing each of us to achieve a door into the future. ‘Reduced metabolism’ is a collective term for all of the various means of slowing down the rate—or speed—of biological processes in cells, organs and whole animals. Life processes can be slowed by lowering the temperature, or through highly specific biochemical reactions that slow metabolic activity by chemical interference. The purpose of this book is to outline, for the intelligent reader, the present status and future promise of the various scientific disciplines and specific research investigations that promise, collectively, to make reduced metabolism an area of potential revolutionary impact in the next few years.”¹

Unfortunately, Prehoda was not favorable to cryonics despite promoting “reduced metabolism” through, among other things, “lowering the temperature” and despite involvement in the Bedford freezing (reportedly at the request of the son, to document what happened²). He felt that, under then-current techniques, the all-important brain tissue would be “damaged beyond any conceptual means of future repair and restoration to original function”³ and that cryonics was diverting funds that ought to go to relatives of the deceased or be used for research.⁴

His opposition led to estrangement from the cryonics movement and, as the years went by, those involved heard less and less of him and his whereabouts were unknown. (The last time, to my knowledge, that he had significant contact with a cryonics person was in October 1991 when I interviewed him. He had a serious drinking problem then, and what he said was unreliable.) Recent attempts by some of us to contact him or learn his whereabouts were futile. Finally someone informed me of his apparent passing.



Robert Prehoda from an interview in *Cryonics Reports*, January 1969 p. 8.

A Social Security death record shows a Robert W. Prehoda with the following information: SSN: 557-40-3073; last residence: 91344 Granada Hills, Los Angeles, California; born: 7 Jul 1931, died: 11 Jun 2009. This appears to be him. Another record reports Robert Wayne Prehoda born 7 Jul 1931 Santa Barbara County, California, mother's maiden name: Kady. There is more information in California public records probably about him, including data on marriages and divorces. (Although multiple individuals have the name Robert Prehoda, the middle initial “W” appears to be unique or rare enough that positive identification based on that and residence in California seems reliable.) In any case it is regrettable that he did not rethink his position on cryonics, which it appears he had actually formed prior to even that early freezing in which he took part. In the more than 40 years of his life since the Bedford case, procedures would change and improve greatly, while new conceptual means of tissue repair involving nanotechnology would raise hopes for cases that “experts” had previously dismissed. ■

References

All citations except as noted are from Robert W. Prehoda, *Suspended Animation: the Research Possibility That May Allow Man to Conquer the Limiting Chains of Time*, Philadelphia: Chilton, 1969.

1. p. 5
2. p. 115
3. p. 113, quoted from *Freeze-Wait-Reanimate*, August-September 1966, p. 2.
4. p. 119

MEMBER PROFILE:

MARK PLUS

By Chana de Wolf



Mark Plus with his employer and fellow Alcor member, David Pizer.

Few Alcor members have more to say about cryonics and cryonicists than Mark Plus. Then again, Mark generally has thoughtful comments and ideas about the topics that interest him, as evidenced by his frequently updated site, *The Life of Man Qua Man on Earth* (the most recent incarnation of his personal blog). From transhumanism to paleofuturism, Mark is never afraid to probe the big questions confronting people of the modern world. Cryonics could turn out to be just a small cog in the wheel of progress – but will humanity reach the technologically advanced state it has dreamt of for so long or will it destroy itself with ignorance and hubris

first? I will leave the reader to ponder the possibilities for now, with a hearty recommendation to visit Mark’s blog for more thought-provoking material of this nature.

Born in 1959, Mark vaguely remembers what he calls the “paleo-cryonics” era, having read something about cryonics in *The Weekly Reader* as a child. Later on, Mark became a fan of the *The Six Million Dollar Man*, an early 1970’s television series about an astronaut who suffers an injury and is experimentally repaired with advanced technologies. Artificial limbs and a “bionic” eye bestow super strength, speed, and vision upon him – an idea which greatly intrigued Mark, who wanted to read more about replacing natural organs with superior artificial ones. Fortuitously, during summer break in 1974, Mark found a paperback book dealing with that very proposal in his local Tulsa, Oklahoma, supermarket.

The book was Robert Ettinger’s second, *Man Into Superman*. In it, Mark recalls, Ettinger presents a vision of “immortal supermen”—people radically life-extended and enhanced in interesting ways—and he emphasized cryonics as a speculative way to get to that future.

“The experience of reading that book, at that age, provided me with something like a worldview conversion which shaped the course of my life,” Mark explains. Following his “religious conversion” from Baptist to transhumanist, he quickly found that others



In the gift shop at Creekside, Mark displays his enthusiasm for his job and his employer, who is running for Justice of the Peace of Mayer, AZ.

were not very receptive to his concepts regarding life. “As a teenager growing up in Tulsa, Oklahoma, in the pre-internet era,” Mark says, “I felt like a time traveler from the 21st Century who was stranded in the past. I didn’t have anyone to talk to about these ideas for years.”

to say that she had arrangements to have her head frozen, but that her cryonics involvement was causing problems with her boyfriend. I didn’t find her story off-putting and thought ‘Hey, I’d go out with her.’” Afterward, he wrote a letter of interest to Mike Darwin, who wrote back to him about

“With a world population of over 6 billion, it shouldn’t be that hard to find another 100 or so individuals with the intelligence and expertise to help us out.”

After discovering the L5 Society in his senior year of high school, Mark went on to start a chapter at Washington University in St. Louis. It was during his tenure at the L5 Society that Mark invited Keith Henson, widely known for his ideas about space colonization, to give a talk at the University. Keith accepted, and thus Mark met, for the first time, another person who would go on to become a cryonicist. (Keith Henson became an Alcor member in the mid-’80s.)

But Mark didn’t learn about Alcor until some time later while watching a game show in the early 1980s. He remembers that “a woman from Indianapolis came on the show

the Alcor Life Extension Foundation. Having finally found the other people with “those ideas,” it was only natural that Mark signed up with Alcor in 1990, at the age of 31.

Once he signed up, Mark was motivated to get closer to people who shared his world view. “I went out of my way to get closer to other cryonicists,” he states. In 1991, Mark moved from Oklahoma to Wrightwood, California, where he was employed at a resort run by Alcor member David Pizer. In 2004 he moved to Mayer, Arizona, to manage another resort, the Creekside Preserve (about 75 minutes from Alcor),

where he remains in David’s employ to this day.

Not only has Mark seen Alcor members David and Trudy Pizer on an almost daily basis for nearly two decades, but he has also had the opportunity to visit Alcor frequently, getting to know the staff and other members who live in metro Phoenix or who are passing through. And, while some Alcor members may only meet a few other cryonicists, Mark has reached out to others whenever possible. “Over the past nearly 20 years I think I’ve talked with approximately 10 people who are now in suspension, and I got to know three or four of them fairly well beforehand,” he says.

During that time Mark has taken note of people’s ideas about cryonics with some alarm. “Something about the cryonics idea fails to communicate well,” he observes, “because I keep seeing the same misconceptions about it over and over again. For example, that only rich people can afford it; that it requires successful revival now before it can be taken seriously; that the people in the Future World, as I call it, wouldn’t want us around; things like that. As Thomas Donaldson pointed out years ago, cryonics involves dealing with the unknown and requires us to make peace with the uncertainties of revival.” Accordingly, Mark thinks that more effort should be put into “framing” cryonics differently so that people can more easily understand it and appreciate the value of our proposal.

With appropriate and effective framing of cryonics, Mark feels that we could more easily integrate medical professionals into the cryopreservation procedure – a feat



A younger Mark in his stylish light blue polyester leisure suit.



Mark lives in Mayer, Arizona, where he also works at the Creekside Preserve Lodge & Cabins, about an hour's drive from Alcor.

which cryonics organizations have struggled to accomplish for years. Furthermore, Mark complains that the field of cryonics suffers from cognitive insularity. "I would like to see an increase in the number and diversity of human minds working on problems in cryonics," he muses. "With a world population of over 6 billion, it shouldn't be that hard to find another 100 or so individuals with the intelligence and expertise to help us out."

Mark also warns "against tying cryonics too closely to the propeller heads' current fads." After living through two waves of "future hype" related to cryonics (Transhumanism and Extropianism) and reeling in the midst of the current incarnation of transhumanist philosophy (Singularitytarianism), he has become a bit jaded when it comes to predictions of the future, and especially the propensity for some to set

dates by which certain technological or biological advances will be made.

"Thirty years ago these [Transhumanist] guys said that in our mysterious, far-future year 2110 we would have become superintelligent and "immortal," we'd live in space colonies, we'd have solved our energy problems, and so forth." Later on, Extropianism foundered in the '90s because, Mark suspects, "its principals performed a middle-aged reality check after the year 2000 and decided that their speculations didn't match the underperformance so far of 21st Century technology." Likewise, he doubts that the Singularitytarians of today will continue much longer "unless something substantial happens to make that world view sound plausible."

Yes, Mark Plus has lots to think about, and talk about, when it comes to cryonics. But in the end, like all of us, he just wants

cryonics to work. To that end, Mark has donated some money to scientific research in cryonics and plans to donate more as finances permit. He reminds us that, "although Robert Ettinger's book came out as a part of 1970s transhumanism, his speculations have worn well, unlike many of the other ones, because he tried to ground them in the scientific literature of the time, and he didn't engage in date-setting... He tried to set a good example by basing cryonics and its life-extension goals on empiricism and scientific reasoning, and he emphasizes the need for hard work and a long view over the false promises of instant gratification." ■

Mark Plus has his own personal blog called "The Life of Man Qua Man on Earth" at: <http://thelifeofmanquamanonearth.blogspot.com/>

THE RATIONAL OPTIMIST

How Prosperity Evolves

Author: Matt Ridley [Harper Collins, 2006]

BOOK REVIEW BY STEVEN BRIDGE

A pessimist is said to call the glass half empty, while the optimist labels the same glass half full. A more pragmatic person knows that either label is meaningless without knowing what came before. Was the glass in the process of being filled or emptied? In the future, will it get more full or more empty? When looking at the future of prosperity and well-being on this planet, many writers and activists say that humans are emptying our planet of resources and that we are doomed to a terrible future. In his new book, *The Rational Optimist*, British science journalist Matt Ridley provides an intelligent and interesting counter to the doomsayers. Ridley, the author of *Genome* and *The Origins of Virtue*, believes that humans are continually becoming better off, that resources are increasing, and that we as a species are nowhere near the end of progress.

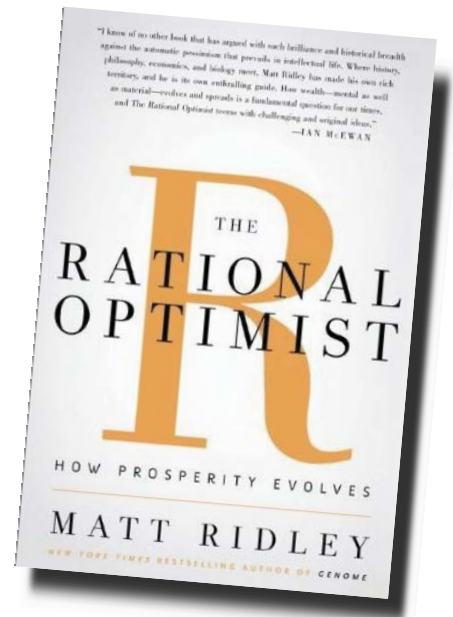
If this sounds familiar to some of our readers, it might be because Ridley explores some of the same territory as economist Julian Simon did in his 1981 book, *The Ultimate Resource*. Simon's book was written in response to the books of Paul Ehrlich (e.g. *The Population Bomb*, 1968) and other writers who said that population growth was dooming humanity and that within a few years mass famines would kill hundreds of millions of people. Simon's idea was that population growth was, on average, a GOOD thing because it provided humans with both a stimulus to solve the problems of scarcity and also with new minds to

create new ideas. On average, it appears that more of Simon's ideas have been correct so far; but there are still many supporters of Ehrlich who would argue that. You can spend days on the internet following the arguments of the two camps.

Simon's book never became widely popular, perhaps because optimism was not popular at that time. However, *The Ultimate Resource* was also long, deeply-detailed with many charts and graphs, written in a somewhat more scholarly tone, and published with overly small print. It was much more work to read. Ridley's book will appeal to more readers.

The state of publishing speculation about the future hasn't changed much. Any reader is aware of the proliferation of books that tell us that disaster is just around the corner – economic, cultural, disease, environmental. Many of these authors appear to be convinced that the collapse of Western civilization is inevitable and the only thing we can do is to prepare for doom – but please buy their book first!

There is no difficulty in deciding which side Ridley comes down on. Ridley notes that these disaster scenarios have been put forth at least since of the days of Robert Malthus (*Essay on Population*, 1798) and they haven't come true yet. For Ridley, human beings have been making progress in using resources and in making the world more peaceful ever since the invention of trade, perhaps as long as 100,000 years ago. He points out that many of the poor today are better off in many ways



than the rich of the Middle Ages, that the real prices of commodities have been coming down for centuries, and that modern technology is much less harmful to the environment than was human actions of centuries past.

The book's subtitle is important – "how prosperity evolves." Ridley writes, "This is what prosperity is – the increase in the amount of goods or services you can earn with the same amount of work." He then provides dozens of stories of how much more we can get today for an hour of work than someone could have gotten hundreds of years ago. But "evolution" is important,

too. Basically, Ridley's thesis is that human specialization of labor 100,000 years ago began a rarely interrupted line of progress. If one person in your nomadic band became especially good at making strong axes quickly, he could trade his extra axes for the extra meat than an especially adept hunter might get. If the axe maker became so important to the group that he could spend his time making axes, instead of hunting, then he could invest creativity and energy in finding even better ways to make axes, perhaps inventing better tools to help him make the axes. Eventually, your tribe might have enough extra axes that you could make trades with a nearby fishing tribe, allowing both tribes to gain a benefit that they did not have before.

“Assuming either that disaster is inevitable or that success is inevitable can cause bad decisions to be made or, sometimes worse, no decision to be made.”

Ridley believes that it was trade that brought cities together rather than cities creating trade. Once you are trading with someone else, it becomes less desirable to go to war with him. More people in one place, with many specialties, create new expertises in technology and science and leads to an interchange of ideas, which propels more trade and exchanges. Ridley calls this the “Collective Brain.” It's an interesting idea that I have read about only briefly before; but Ridley convincingly works it out in great detail and clarity.

A large part of this book consists of interesting expansions of this idea, showing how human intelligence and the influence of trade and shared ideas have allowed us to overcome the objections of Malthus and other pessimists of the past. Some of the more interesting discussions are on how human effects on the environment have diminished in many ways in the past 200 years, in spite of what many environmental activists have led us to believe. For instance, if we had not developed coal and oil as energy sources, we'd have been stuck with wood and water power for the past three centuries, which would have led to the

destruction of nearly all of the forests in the world, at a much more rapid rate and with greater air pollution than is occurring today.

Ridley points out that he is not anti-environment at all; but he feels that the efforts of many environmentalists today are misguided, actually producing results that are the opposite of what is intended. For example, as many others have noted, using corn (“maize” in England) to produce fuel actually uses more energy than does the production of energy from coal or gasoline, takes up land than could be used for growing food or forests, and raises the price of corn so that it reduces the world's food supply. Also, he notes that organic farming, if practiced on a large scale, would be an environmental disaster. Organic farming

emphasizes the use of cow manure for “natural” fertilizer. This manure is a less productive fertilizer than those that derive nitrogen from the air, so crop production is reduced. To produce the same amount of food therefore requires a larger amount of land being taken from “nature” and given over to farming. In addition, the more organic farming you have, the more cattle you need to produce the manure. The cattle must be fed, too, which requires even more land being taken from the forests and turned over to feed production and cattle living quarters. Ridley quotes one source that estimated that if the entire world went “organic,” “to replace all the industrial nitrogen fertiliser now applied would mean an extra seven billion cattle grazing an extra thirty billion acres of pasture.”

All of this is very interesting, but Ridley shortchanges his readers when he gets to speculation on the future. It is very non-specific, not as interesting as the history he has provided, and confined to the two last, short chapters of the book. He basically points out some promising trends taking place in energy and food production, shows how an increase in prosperity is slowly taking

place in many parts of Africa and Asia, and suggests that human intelligence and interaction will solve most of the problems.

Now, the book is certainly fascinating and informative. NOT to read this book might leave a significant hole in your personal knowledge of the world. However, I think that reading ONLY this book would leave an equally large hole.

Many of the pessimistic books of the past seem to have been written to fit a goal — to announce that disaster is coming — and then to prove that thesis by cherry-picking only the data which supported that view. A good writer can make any group of statistics look like it supports his point of view. However, it is equally possible for an optimistic writer to build his book around whichever statistics support HIS idea and oppose the ideas of the pessimists. While reading *The Rational Optimist*, I kept wondering what had been left out or interpreted from a limited bias. I certainly don't have the knowledge to make that decision, but I advise healthy skepticism while reading *any* books that claim to predict the future. Ridley is also a libertarian, which occasionally gives him a sort of bias against government. It doesn't mean that he is wrong; but his belief that governments and religion are the ultimate thieves is so obvious to him that he stints on explanations that might make his points better.

Ridley complains about “the constant drumbeat of pessimism” that pervades speculation and study of economics, science, and culture today. However, the same week I bought this book, I also picked up a copy of Barbara Ehrenreich's new book, *Bright Sided; how the relentless promotion of positive thinking has undermined America*. (Metropolitan Books, 2010). Ehrenreich talks about a “cult of optimism” and points out how the thoughtless refusal to look at or discuss the possible negative outcomes of decisions has caused many disasters. Both authors are probably right in their general lessons. Assuming either that disaster is inevitable or that success is inevitable can cause bad decisions to be made or, sometimes worse, *no* decision to be made.

So what are we to make out of all this? As a culture, it is useful to understand that

progress has indeed been made over the centuries, and it is wise to remember that Julian Simon's primary observation is still true: the creativity of many human minds is a resource that gives us the best chance of survival as a species. And I am generally an optimistic fellow, even after 35 years in cryonics, although probably not as optimistic as I was when I started. I want to believe Matt Ridley's optimism for the future – and maybe, as a member of our species as a whole, I can.

“The world is not going to develop cryonic suspension or life extension and then just hand it to you. If you want these technologies to work for YOU, you can't be all pessimist or all optimist. You must help us fill the glass.”

But as individuals? It is all well and good to understand that the human race in general is becoming more prosperous. And perhaps it is somehow comforting to know that the future will be better when your house disappears into a sinkhole caused by excessive water use, when your city and 200,000 of your neighbors die in an earthquake, when your job is outsourced to Mexico, when your fishing business fails because of careless oil drilling in the Gulf of Mexico, or when you lay dying of lung cancer caused by air pollution. Or maybe not. Improvements in food production, cancer treatment, the African economy, and the price of energy do not mean that you as an individual will necessarily live longer, richer, or happier.

So what about us as cryonicists? Reading this book may help you do better in arguments with people who say that the human race is doomed anyway, so why try to live longer. It may even give you a little bit more positive view of the future, maybe enough so that you keep up or begin your cryonics arrangements.

And one very important lesson for us as a group is that if you want to sell a book about the future, it is always easier to *market* a book that starts with the view that “everything the other people are telling you is wrong. This book is the RIGHT way to see

the future.” Once one of us in cryonics figures out how to write and market that properly, we might sell more books. Maybe even get another 1,000 members.

But the real truth is this: At the same time that many human beings are making some aspects of life better for us, a bunch of other human beings are making other aspects worse. And we may not know for decades which group is which! Many developments start out positive and go wrong while other developments that seem ill-

founded turn out to be great forward leaps. But if we humans can keep our intelligence and creativity running ahead of our stupidity, carelessness, and short-sightedness, we just might survive on this planet – or somewhere – to allow us individuals a place to live and succeed in the future.

Ridley, though obviously a libertarian, often refers to “the group mind” as the reason the human race progresses. It's an interesting term for a libertarian to use. I want you to remember that the human race is made up of *individuals* – like you – who move things along by making individual discoveries and decisions. The world is not going to develop cryonic suspension or life extension and then just hand it to you. If you want these technologies to work for YOU, you can't be all pessimist or all optimist. You must help us fill the glass.

If someone is either too optimistic or too pessimistic, they will miss signing up for cryonics. The positivists will assume that everyone will be saved in the great sweep of humanity to the future. The negativists will say, why bother, we're doomed anyway. If you are either one of those — please stay away from me and from everyone else at Alcor. We don't have time to listen to you.

If you consider yourself to be optimistic about the future, great. Stay active in

making that positive future come true. Make the individual decision to sign up for cryonics, work to improve your community and city, support education and libraries, interact with your fellow humans and persuade them to help with positive goals.

If you are pessimistic about the chances of cryonics working or about the future of your country or the human race, don't just sit on your back end and gripe about it. Become an ACTIVE pessimist. Sign up for cryonics so you can find the problems and help solve them. If they get solved, we can help you find other things to be an active pessimist about, I promise. ■



About the Author

Steve Bridge

Steve Bridge was President of Alcor from 1993-1997. Among other accomplishments, he led Alcor's move to Scottsdale, Arizona and was the prime writer and organizer for the Alcor Patient Care Trust. He is still an Advisor to Alcor's Board of Directors and to the Patient Care Trustees, and he is Co-Manager of Cryonics Property, LLC, the company which owns the building that Alcor occupies. Steve is a librarian and currently lives in Indianapolis, Indiana with his family.

Non-existence is hard to do

A review of contemporary antinatalist writings

By Aschwin de Wolf

“Coming into existence is bad in part because it invariably leads to the harm of ceasing to exist.”

~ David Benatar

“If they could get a corpse to sit up on an operating table, they would jubilantly exclaim, “It’s alive!”

And so would we. Who cares that human beings evolved from slimy materials?

We can live with that, or most of us can.”

~ Thomas Ligotti

The persistence of pessimism

When I sent out an email message soliciting contributions on the topic of philosophical pessimism and antinatalism one person declined with the reasonable response that such positions are only taken seriously by a handful of far-out philosophers. Humans have evolved to procreate and seek happiness. What is the point?

The reason why I have not been inclined to so easily dismiss the recent renaissance of philosophical pessimism is because negative and tragic views about life are woven throughout human history and culture. Most dominant religions have little positive to say about the state of humanity (after the fall) and the prospects for a life devoid of suffering on earth. Despite its relative sophistication, even Buddhism presents a picture of the universe as a source of suffering. Much can be said about pessimism but not that its influence is outside the mainstream.

Even the antinatalist position that it is better never to have been and that we have a moral obligation not to procreate is not completely obscure. Who has not had the experience of talking to the grumpy old lady who wonders why anyone would want to bring children into this world? We routinely dismiss such positions as being out of touch with reality but modern culture persists in

linking intellectualism to pessimism. This perhaps should not be surprising because, as a general rule, excessive thinking comes at the expense of sensual experience. One reason why many intellectuals are biased towards pessimism is because it provides them the opportunity to rescue us with their ideas. Antinatalism offers the triumph of Reason against existence itself; the ultimate triumph of the Intellectual.

Philosophical aversion to pessimism can be found among the finest thinkers in the history of philosophy. There is David Hume, the great empiricist thinker, and an amiable and optimistic person. Then there is Friedrich Nietzsche, who, despite a life of disease and isolation, recognized that pessimism is not an objective feature of the universe but the expression of a weak and oversensitive mind. The twentieth century witnessed a strong renaissance of the empiricism of David Hume in the form of logical positivism. These philosophers rightly abstained from putting forward a “philosophy of life,” but optimism about science and humanity’s potential is clear in their foundational writings. It is also interesting to note that the most recent forceful responses to pessimism have not come from professional philosophers but from libertarian economists who do not display the slightest intellectual embarrassment in

claiming that life is getting better all the time.

In my opinion, the most obvious question that can be raised about philosophical pessimism is whether its supporting claims are factual descriptions of reality or just expressions of temperament. Another interesting question is whether philosophical pessimism necessarily obliges us to the antinatalist position. In seeking answers to these questions we turn to the literature of contemporary antinatalism.

Jim Crawford’s *Confessions of an Antinatalist* is a highly readable autobiographical exposition of antinatalism. Thomas Ligotti’s book *The Conspiracy Against the Human Race* is more ambitious in scope and contains a wealth of historical information on pessimism, discussions of modern science, and, not surprisingly, a review of the theme of pessimism in horror literature. David Benatar’s *Better Never to Have Been: The Harm of Coming into Existence* is the most rigorous exposition of antinatalism to date. This book covers a lot of ground and I will confine myself to some of its main topics only.

The harm of coming into existence

In its purest form antinatalism may not be attainable but the framework that informs

this position rests on a couple of sound premises: (1) we do not impose a harm (or withhold a benefit) by not bringing someone into this world; (2) we do impose a harm by bringing someone into the world when this person's life will be bad. Jim Crawford believes that these premises are evident and I see little reason to dispute him. The real debate about antinatalism is how to determine that a person's life is (or will be) bad, and how much consideration the interests of parents should be given.

One of the most problematic aspects about the work of Crawford and other antinatalists is that they have little patience for the argument that life is better than *they* think it is. In some passages it is hard to distinguish the antinatalist from the Marxist. If people think that life is much better than Crawford makes it out to be, the standard rejoinder is that these people suffer from a form of false consciousness (pessimists frequently use words like "truly" and "really"). In some passages this attitude borders on intolerance. A prime example can be found in Crawford's discussion of childhood. For many people growing up was a period of great happiness and discovery. Crawford's agitated dismissal of such accounts introduces an element of illiberalism in what is otherwise a humanistic endeavor. It is in these passages that antinatalism turns into bitter ideology.

"One of the most problematic aspects about the work of Crawford and other antinatalists is that they have little patience for the argument that life is better than *they* think it is."

The way the term "bias" is employed is deeply problematic. It is used as if there is an objective perspective that can be reached were it not for those pesky evolutionary biases coming between the person and the universe. At times the author appears to be saying that if evolution did not select in favor of those wanting to survive we would not want to survive. This is not particularly helpful. Some of these "biases" do not cover up anything but just *make* us happier.

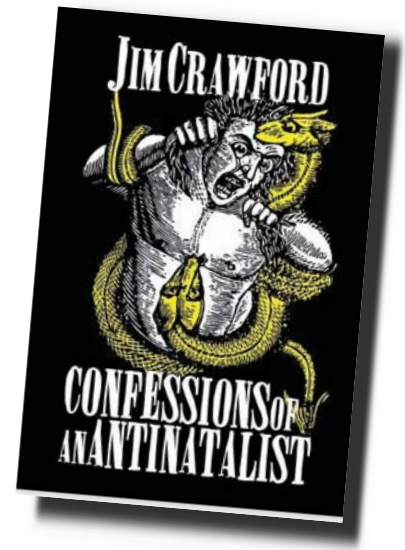
Let us assume here the metaphysical premise that there is an objective, material reality that can be known through the use of

reason and empirical observation. This does not mean that there is one "correct" fit between an organism and the world. A person who is manically depressed perceives the world in a different matter than a person who is not. How we are "wired" and respond to our environment is not a matter of "correct" or "incorrect." Thinking otherwise would be hard to reconcile with an evolutionary outlook in which life is just the outcome of random interactions of organic molecules.

One argument that remains available to the pessimist would be that the probability of creating a miserable life is too high to warrant procreation. But it is at this point that the "transhumanist" can enter the debate and claim that our expected quality of life is no longer just the outcome of a "random" evolutionary process but can be brought under rational control. We should endeavor to make happy children.

In my opinion, the short response to empirical pessimism can take the following form. Pleasure and pain are both part of existence. For some sentient beings pleasure outweighs pain, for other sentient beings pain outweighs pleasure. A moral agent cannot add up, subtract, or divide these elements for life as a whole to produce an objective quality-of-existence function. The antinatalist runs into the same problems as all the utilitarians and welfare economists

who have tried to define a social utility function as a guide for public policy. As Thomas Ligotti notes in his book, *"...the reason for the eternal stalemate between optimists and pessimists, is that no possible formula can be established to measure proportions and types of hurt and happiness in the world. If such a formula could be established, then either pessimists or optimists would have to give in to their adversaries."* I think that the best response available to the antinatalist would be to follow David Benatar's example and present a strictly formal argument, or simply argue that in case of doubt, we should abstain from procreation.



Escape strategies

After spending the bulk of his book persuading the reader that life is suffering, Crawford discusses what he calls "Escape Strategies." In his treatment of Buddhism as an escape strategy he could simply have made the obvious internal critique that desire may be sufficient, but not necessary for suffering. Crawford's treatment of Christianity is scathing, which may indicate regret because the author himself was a Christian for awhile. Why have children if there is the prospect of eternal damnation? Good question, but I think that a Christian can respond by saying that following Scripture is more important than applying human morality to God's creation.

The last escape strategy that Crawford reviews is hope, which turns into a discussion of futurism and transhumanism. The argument that many of those pursuing life extension will not be around to benefit from it is too simplistic. Unless the brain is completely destroyed at death, the neuro-anatomical basis of identity can be preserved at cryogenic temperatures for a very long time. No delusional expectations about the future are required. People in cryostasis have *time*. But then the author delivers a critique that I think deserves serious treatment by transhumanists (discussions about "friendly AI" do not exhaust this topic by any means). In a nutshell, we should not expect that technological progress will necessarily produce *moral*

progress. And even if it will, accidents happen. Technologies that can be designed to produce great joy can be used to create great suffering as well. If humanity can manufacture hell without God, the case for pessimism and antinatalism may be strengthened.

Interestingly enough, the anticipation of such dark future technologies may present a (subconscious) obstacle for many people considering cryonics. Hundreds of millions of people believe in the craziest things like astrology and psychoanalysis, but only a handful of people (around 1500) have made cryonics arrangements. This lack of interest can hardly be attributed to ignorance, and perhaps the most persuasive answer may be hidden in Crawford's book. Cryonics basically forces people to deal with the question whether they would like to be "born again" in a far and unknown future. As a general rule, the answer seems to be "no." Antinatalists may find additional ammunition for their position in studying the reasons for the low sign-up rate for cryonics.

Mahayana antinatalism

Antinatalists should expect a lot of obvious questions such as "*are most people not glad to be alive?*" or "*why not kill yourself?*" I fear that Crawford's answer to the question "*why not kill yourself?*" risks undermining the orthodox antinatalist project. If empathic sensibility can make an enlightened antinatalist who wants to stick around it is

arguable that antinatalists should make an effort to remain alive in an effort to reduce the amount of (future) suffering in the universe. Antinatalists then become life extensionists. To use conventional Buddhist terminology, perhaps at some point there will be a Theravada version of antinatalism (focused primarily on non-procreation) and a Mahayana version of antinatalism (concerned with the elimination of the suffering of all sentient beings).

David Benatar runs into a similar problem when he ponders the question whether bringing new people into the world could be justified to reduce the suffering of the last remaining people. It seems to me that how an antinatalist deals with such practical moral issues depends on how the ethics of antinatalism is conceived. Do we have a "right" not to come into existence or is the objective of antinatalism to juggle with small and great suffering towards the ultimate end of its complete abolition?

If antinatalism is conceived as a strictly individualistic endeavor, concerns about the suffering of all humans can be easily dismissed. But in that case antinatalism would just collapse into individualist pessimism. Who cares about suffering, as long as it is not me! This is not the kind of sentiment that is generally found in antinatalist writings. I do not think that the question whether there might be moral reasons to remain alive, and, yes, bring into being forms of life that are benevolent but ruthless towards suffering, can be easily dismissed.

At one point Crawford observes that secular and smart people are having fewer children. This does not look good for the inevitable triumph of antinatalism. Under such scenarios antinatalism produces dysgenics, and if one believes that stupidity and evil go hand in hand, increased suffering for more people.

To me it is not unlikely that, *in practice*, antinatalism leads to more suffering because it will only be adopted by sympathetic human beings such as Crawford. The antinatalist cannot argue that the amount of suffering in the universe cannot be increased nor decreased. The whole point of antinatalism after all is that suffering can and should be decreased. But how to go about this may be more complicated than it

appears. A sober assessment of the practical implications of antinatalism may require revision of the antinatalist position itself.

Confessions of an Antinatalist is a fine and humane book, but in the end it is also a book of the converted written for the non-converted. Thomas Sowell has noted that in economics there are no solutions but only trade-offs. I would not be surprised if antinatalists will come to a similar conclusion at some point.

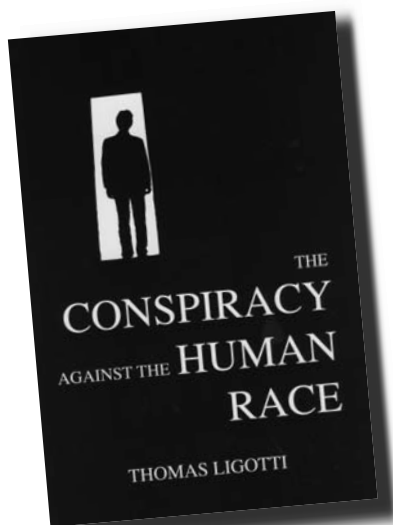
Suffering without meaning

Thomas Ligotti is a contemporary horror writer whose fiction work is marked by cosmic nihilism, alienation and the fragile nature of reality. As a great admirer of the work of Ligotti I have been reluctant to comment on his non-fiction. Fortunately, unlike many other artists, Ligotti has little interest in "critical theory" or "progressive" politics. His book *The Conspiracy Against the Human Race* is not concerned with such trivial topics but with the bleak fate of humanity in a deterministic and indifferent universe.

The book starts off with an introduction by obscurantist philosopher Ray Brassier, whose work would certainly qualify for the description that Ligotti gives to Schopenhauer's oeuvre ("too overwrought in the proving to be anything more than another intellectual labyrinth for specialists in perplexity").

Reading Ligotti's account of why humans reject truly bleak views about life it would be interesting to see how antinatalists respond to the existence of orthodox Calvinism. Accepting a universe without free will that is ruled by an omnipotent God who has decreed that the majority of people will suffer in hell for His self-glorification seems a lot more terrifying to me. Nonetheless, millions of people have accepted this theological perspective. The existence of Reformed theology lays to rest the view that humans have an intrinsic desire to avoid doctrines that are too terrible too contemplate.

When Ligotti discusses the work of antinatalist Peter Wessel Zapfe once more we find the view that there is an objective predicament of mankind that is hidden by false consciousness. It is remarkable to see



the similarities between those who argue that we do not want look our “oppression” straight in the face and those who argue that we avoid coming to terms with the horror of existence. What is often lacking here is the recognition that there is also a wealth of literature about human suffering that supports the idea that we would be happier if we *did* look nature straight in the face. No nonsense about “moral responsibility,” “sin,” “duty,” “the greater good” etc. Marquis de Sade, Friedrich Nietzsche, and Max Stirner are representatives of this school of thought.

What is intriguing about Ligotti’s book is that it reads like a rather delicate balancing act. On one hand, we have the detached observer (my favorite) who is bemused at the show business of both the optimists and pessimists. On the other hand, it is unmistakable that Ligotti feels affinity with the philosophers of cosmic horror and pessimism. His fiction does not leave much room for any other conclusion. But *The Conspiracy Against the Human Race* contains more than a few (unintended) suggestions how someone who declines to take sides would present his argument.

Hard determinism and the illusion of the self

I have a hard time relating to the Ligotti’s discussion about determinism and pessimism. Hard determinism (or hard incompatibilism) is just a part of the “scientific worldview” and it is not obvious to me why it should be a source of despair. Ligotti then discusses the existence of the “self.” I am inclined to think there is an important difference between free will and the self. Modern science can make sense of the world and human action without assuming free will. I am not convinced that this is possible if the concept of the self is rejected. Unlike free will, the recognition of a “self” comes at a later stage in evolution. It has been argued that primitive people could not clearly distinguish the self from its surroundings and thus were not able to discover the laws of physics and manipulate it to their benefit. The philosopher Hans Reichenbach developed a *pragmatic* case for the existence of the external world and the self in his seminal work *Experience and Prediction*. Ultimately, the Kantian question whether something “really” exists (or what

something “really” looks like) does not seem particularly helpful in the study of reality, as the early logical positivists of Vienna understood well.

“Why would anything that neuroscientists discover about the self and how it is constructed be a source of dread?”

Why would anything that neuroscientists discover about the self and how it is constructed be a source of dread? If you believe that life is just the result of random meetings of organic molecules, it stands to reason that the physical basis of consciousness and the self reflects such a process. Why would accepting such ideas make one a “heroic pessimist?” Why the pessimism at all? Ligotti even agrees. “One would think that neuroscientists and geneticists would have as much reason to head for the cliffs because little by little they have been finding that much of our thought and behavior is attributable to neural wiring and heredity rather than to personal control over the individuals we are, or think we are. But they do not feel suicide to be mandatory just because their laboratory experiments are informing them that human nature may be nothing but puppet nature. Not the slightest tingle of uncanniness or horror runs up and down their spines, only the thrill of discovery. Most of them reproduce and do not believe there is anything questionable in doing so.”

Ligotti also discussed transhumanism, but not in much depth. As a transhumanism skeptic myself, I found little to object to but it seems that Ligotti’s real target is what is called Singularitarianism. This part in the book seems something of a missed opportunity because there is substantial overlap between Ligotti’s fiction and themes that are discussed by transhumanist writers: living in a computer simulation, parallel universes, alternate realities etc.

When Ligotti reviews near-death experiences and ego-death, the common-sense neurological explanations that were invoked in discussions of free will and the self are largely absent (a notable exception is his discussion of the possibility that a brain tumor can cause such an “enlightened” state). For critical-care physicians it is a given that many

people suffer (regional) cerebral ischemia during the dying process. As such, it is surprising (but encouraging) that not more people claim enlightenment after they

recover. These periods of transient oxygen deprivation can produce long term damage and a “re-wiring” of the brain, which can explain the new perspectives these people adopt. From a physicalist perspective, death of the ego is (partial) death of the brain, something one may or may not want to celebrate.

In Ligotti’s book the reason for pessimism is multi-factorial. It includes the lack of meaning in an indifferent universe, the reality of hard determinism, and the illusion of the self. The works of Benatar and Crawford are more restricted in scope and mostly focus on more mundane suffering. Ligotti’s philosophical horror is much richer, but I wonder how much of it will resonate with people who embrace a scientific view of the universe. *The Conspiracy against the Human Race* may not have been designed as an argument against “unweaving the rainbow” (to use Richard Dawkin’s useful phrase) but it sometimes reads like one.



Peter Wessel Zapfe (1899-1990)

There is a lot in Ligotti’s fine book that I have not discussed such as the extensive treatment of pessimism in horror fiction, loads of interesting philosophical and scientific references, plus illuminating discussions of obscure authors such as Peter Wessel

Zappfe and Philipp Mainlander. As such, it can also be considered as an indispensable reference for philosophical pessimism and cosmic horror.

Empiricism and non-existence

David Benatar is a rigorous philosopher. His work can be situated in the analytic tradition and he makes an honest attempt to anticipate objections to his own views. When he argues for positions using mainly logical arguments he is quite persuasive. A being that does not exist can neither be harmed nor benefited. I cannot see how this argument (or tautology?) can be successfully refuted. But when Benatar attempts to argue that the quality of life of most people is much worse than they think it is, multiple challenges arise. I do not think this is the result of Benatar's poor reasoning but because the fields that he relies on – evolution, social psychology, happiness research and the study of cognitive biases – are notorious for allowing competing views. It seems to me that ultimately Benatar cannot escape the charge that he pays excessive attention to theories that claim that we think we are happier than we really are. Perhaps I have spent too much time in the wrong subculture but it seems to me that the phenomenon of people claiming to be less happy than they really are should not be ignored either.

“The claim that coming into existence is always a harm is not consistent with the reports of all those who have come into existence.”

Like Crawford, Benatar cannot completely escape the charge of illiberalism. Classical liberalism takes very seriously the difficulties in reaching satisfactory conclusions about the quality of *other* people's lives. In practice this means that we exercise restraint in making strong cognitive and moral claims about the feelings and preferences of other people. This is a mindset that does not seem to come easily to antinatalists. Benatar is on more agreeable ground when he simply derives his antinatalism from uncertainty: “some know that their baby will be among the unfortunate.

Nobody knows, however, that their baby will be one of the allegedly lucky few?”

Benatar believes that even if his empirical argument about the poor quality of our lives fails, his formal argument from asymmetry is still left standing. He thinks that even if there is one single painful pinprick in an otherwise good life, we still harm that person by bringing him into existence. I think that Benatar is “proving” too much here. We can agree that anyone who conceives a child cannot escape the prospect that this person will experience *some* harm. But from this it does not follow that the person is harmed in a meaningful moral sense without considering the *expected* overall quality of that life. Perhaps Benatar would respond that I have not understood his argument, and I will admit that I have a difficult time understanding why the possibility that a person's pleasures are expected to outweigh the pains do not alter his argument. I think that both bringing into existence a life that is *invariably good* and a life that is *generally good* can be morally defended on the grounds that there will not be any post-natal moral objections from the person involved. Of course, we are not morally obliged to do so, because we will not deprive the unborn of such a good life if we don't have children. But since most parents have a positive interest in having children, in practice this tips the scales in favor of some

(but not all!) procreation. One problem I can see with my argument is that it might permit the creation of a life form that would experience great suffering but with an unalterable survival instinct and no cognitive possibility of moral blame or regret. Some antinatalists might even claim that this is a rather accurate description of the human race as it exists today.

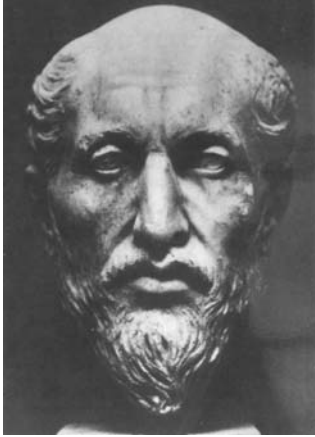
As an empiricist, I generally give the benefit of doubt to empirical observations when they appear to conflict with logical reasoning. I think that this preference itself can be justified on historic and pragmatic

grounds. The claim that coming into existence is always a harm is not consistent with the reports of all those who have come into existence. That seems to be a non-trivial epistemological roadblock for antinatalism.

When Benatar discusses the moral duty not to have children he runs into the obvious problem of how the interests of the parents should be weighed against the interests of the child. One does not need to be an ethical egoist to believe that the interests of the parents count for *something*. In this case the question returns to *how bad* the life of most people is and, as discussed, this is a rather vulnerable part of antinatalism. Benatar attempts to answer the obvious objection that most people who have been born do not regret this or blame their parents. But when I read his thoughts on “indoctrination” I only see further evidence of the anti-liberalism in his writings.

In fairness to Benatar (who seems to identify himself as a liberal of some sorts), he does defend the *legal* right to procreation because he admits that there can be reasonable disagreement about his views. I think this point is particularly important for antinatalism since reasonable objections often come from the very people whose lives Benatar characterizes as very bad. That is not to deny that society can choose to be less supportive of people who engage in reckless procreation. Such behavior can be substantially decreased by *withholding* benefits that encourage or reward such behavior. Benatar correctly argues that if one subscribes to a consistent interpretation of the Kantian argument that future people should not be treated as means, then *all* reproduction is morally dubious. But whether that highlights the virtues or defects of Kant's ethics I leave to the reader to ponder.

Benatar highlights the importance of making a distinction between the decision to bring someone into existence and the decision to *continue life*. Even if we commit to the idea that it is better never to have been we can still have reasons for wanting to continue life. As a matter of fact, Benatar entertains the argument that the prospect of death itself is one of the reasons why existence is bad. Those who follow Epicurus believe that death cannot be experienced and



Plotinus: CE (204/5–270)

thus cannot be a bad thing for the person. This is an extremely difficult argument to refute, but Benatar's discussion of this topic is quite illuminating because he points out that those who hold this position may also have to commit to the view that death can never be *good* for a person. One only needs to imagine a person whose life is one of continuous suffering to see that this is not a plausible argument.

As an academic Benatar is less hostile to religion than Crawford and Ligotti but I do not think he can successfully escape the objection that antinatalism requires an atheist perspective. One does not have to be a scripturalist to note that Benatar is only concerned with the fate of humans and not with the interests of God. Perhaps Benatar cannot see any positive value in human suffering because his information about Creation is incomplete. Theodicies that reconcile the existence of God and the existence of Evil are not difficult to generate. As Plotinus has observed, "We are like people ignorant of painting who complain that the colours are not beautiful everywhere in the picture: but the Artist has laid on the appropriate tint to every spot."

Antinatalists and life extensionists

One would think that cryonicists and life extensionists should be repulsed by antinatalism. I think such a view would be mistaken. All the antinatalist authors discussed here are motivated by empathy for the suffering of all sentient life. We should also welcome the analytical and physicalist perspectives that underpin their writings. Too much (Continental) philosophy is

simply an insult to the intellect and a waste of time. If a case should be made for pessimism it needs be stated in a form that is amenable to reasoned debate and empirical investigation.

Of more specific interest to life extensionists is the plausible prospect that our abilities to decrease suffering will (necessarily?) be matched by our abilities to increase suffering too. This is a possibility that should be studied in great detail by advocates of molecular nanotechnology, strong AI, and Substrate Independent Minds.

It is no secret that cryonicists are underperforming in terms of reproduction. But as Howard V. Hendrix discusses in the article "Dual Immortality, No Kids: The Dink Link between Birthlessness and Deathlessness in Science Fiction," this may not be a coincidence. If biological immortality becomes a credible option, having children as a substitute for personal survival will lose much of its appeal.

"It is the prospect that cryonics may actually work that induces severe anxiety."

Most rewarding for cryonicists is the unique perspective that antinatalists can bring to the debate concerning why so few people have made cryonics arrangements. The hostility of many people towards cryonics cannot be explained if people categorically believe that meaningful resuscitation (revival) is impossible. It is the prospect that cryonics may actually *work* that induces severe anxiety. If the antinatalists are correct in their assessment that coming into existence is always a harm, the unpopularity of cryonics might be indirect evidence for their position.

I want to close this review with one word of advice to those who engage in debates with antinatalists. Most antinatalists waste little time reminding their readers how *controversial* their ideas are. They think that they have uncovered the greatest taboo of all time. As an empirical matter, this is doubtful. Antinatalist ideas can be

freely discussed in modern Western countries, something that cannot be said about a number of other controversial ideas. Antinatalists are also quick to point out that their pessimism should not be dismissed as an expression of weakness and depression. But then the antinatalists commit a similar error by too easily viewing optimism as a defense mechanism or a form of bias. But is it completely unreasonable to look for the neurophysiologic and genetic basis of pessimism and optimism? The uncompromising naturalism in the work of the antinatalists supports such an inquiry. ■



About the Author

Aschwin de Wolf

Aschwin de Wolf is the editor of *Cryonics*, advisor to the Alcor Board of Directors and cryonics researcher. He also writes for the blog Depressed Metabolism: <http://www.depressedmetabolism.com/>

Jim Crawford: *Confessions of an Antinatalist* (Nine Banded Books 2010)

Thomas Ligotti: *The Conspiracy Against the Human Race* (Hippocampus Press 2010)

David Benatar: *Better Never to Have Been: The Harm of Coming into Existence* (Oxford University Press 2006)

Thanks to Dr. Michael Perry for discussing some of the topics in this review and proofreading an earlier version of this document.

BETTER NEVER TO HAVE BEEN THE HARM OF COMING INTO EXISTENCE

Author: David Benatar [New York: Oxford University Press, 2006]

BOOK REVIEW BY MIKE PERRY

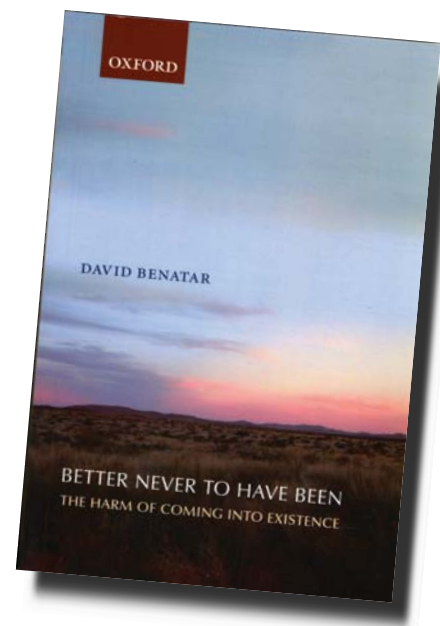
“Would that I had never been born” is a lament sometimes voiced in the depth of misfortune, a cry of despair we hope may be soon be stilled by something more positive, when the bad things, whatever they are, have run their course. Enter David Benatar, a respected professor of philosophy at the University of Cape Town, South Africa. In the volume here reviewed he offers the extreme view that in fact it would have been better, all things considered, if not one of us had ever existed, or even any sentient life whatever. Life is that bad, he says, and he bases this judgment on certain logical principles along with empirical evidence of the allegedly poor quality of life that most of us are forced to endure in this world. Among the consequences is that no more humans should be born, and the human race (and other sentient creatures) ought to become extinct.



Arthur Schopenhauer (1788-1860)

Antinatalism—the viewpoint that birth of sentient life, human in particular, is bad and ought not to happen, is a recurring one theme history, a noted proponent being the philosopher Arthur Schopenhauer (1788-1860). It can also be founded, as Benatar proposes, on certain assumptions considered reasonable by many people today, particularly those of a scientific, materialist outlook who are not inclined to over-optimism. Among the assumptions are that anyone’s life, overall, is an exercise in futility. Death—eternal oblivion—is the eventual fate of each person, and will happen through the normal aging process if not sooner. (Thus there is no serious prospect of a religious afterlife. Though not stated in the book, it is clear also that radical life extension, whether by imminent medical breakthroughs or through an initial “holding action” such as cryonics, is discounted.) Moreover, the human species will eventually die out, as is the fate of all biological species, so the extinction advocated by Benatar must happen in the end regardless. Another important presumption, in this case justified at length, is that in most people’s lives sorrow and misery predominate heavily over joy and happiness, so that their lives are not worth living.

Benatar denies that any good is done in any act of procreation, even if the life of the offspring is predominantly happy and if that person expresses gratitude for having been given life. The very best that could happen, Benatar says, is that no harm would be done, but only if the offspring *never* experienced anything bad in his/her entire life, an



unlikely prospect. Even then, no good would be done or moral credit accrue in bringing that person into existence—good is done only in *not* bringing into existence any person who, in the course of his/her life, would at least experience *some* amount of bad. Harm is done, and in any likely circumstance, unacceptably serious harm, in bringing anyone into the world.

Such arguments seem unpersuasive for any of a number of reasons, and many will also find them offensive. In the matter of family planning, the prospective parents will be motivated by thoughts such as a child would bring them joy even as they in turn strive to provide the child with a happy home life and a good upbringing. Overall the child can be expected to be grateful both during the period of childhood and later in life, something that seems borne out in practice, even if hardship also occurs. As

tough as the going may be at times, most people do not feel their parents were morally at fault for having had them, and are not ready to end their lives over any perceived shortcomings in their present situation or future prospects.

“Immortalists in any case are not so much trying to populate the planet as individuals.”

Benatar devotes a chapter of his book to arguing, nonetheless, that actually life as most people live it is very bad, suggesting that those who disagree don't realize just how bad it is and are suffering some kind of delusion. But this begs the question of who is to judge. Turning the argument around, is it not possible that Benatar himself is suffering from depression that clouds his judgment? Natural selection of course favors a brighter outlook: Benatar's thinking is not conducive to reproductive fitness. Beyond that, it is hard to see that his point of view is more “logical” than a more life-affirming one, both being based, when the rhetoric has run its course, on basic gut feelings about what is pleasant or worthwhile or isn't, in what relative amounts, and how the mix that occurs in life should be assessed.

Despite life's alleged wretchedness, Benatar himself is not ready to commit suicide but insists that life once started, his in particular, may be worth continuing even if it should not have been started in the first place. (Sometimes this sort of argument is reasonable. A woman should not be raped, but a child born as a consequence should not be killed.) More generally Benatar's stance is passive rather than proactive: having children should be legal, even though no one should have them, much as we might favor allowing smoking even though it is medically and socially inadvisable.

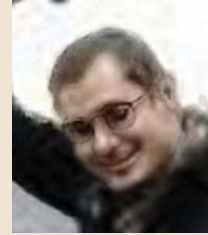
Benatar is aware that, despite these limited concessions, his stance will be unpopular and devotes much attention to defending it against various possible lines of attack. Still it is doubtful his arguments will

persuade many who are not already strongly leaning his way. The rest of us, surely a robust majority of humanity, will find our varied reasons to demur. Religious people will argue that life is a gift of God, children are a blessing, hardships and sorrows happen but can and will be remedied, all will be well in the end. Secular humanists and others of scientific bent may believe with Benatar that their lives must permanently end, and even accept the eventual extinction of all earthly life, yet still remain optimistic, one of their arguments being that “since life is finite, even sometimes very short, each moment of life, handled rightly, is precious.” Scientific immortalists who are hoping for radical life extension will also discount Benatar's pessimism, though possibly in an odd way supporting the end of the present human species—in this case, however, by replacing it with something better that includes themselves in an enhanced form.

“Natural selection of course favors a brighter outlook: Benatar's thinking is not conducive to reproductive fitness.”

Meanwhile, an antinatalist movement has grown up that has simple, passive annihilation of the human species as its goal, endeavoring as far as possible to discourage everyone from having more children. In addition to a claimed humanitarian purpose—eliminating suffering as Benatar proposes—there is an environmental motive some endorse, arguing that the earth's biosphere would greatly benefit if there were no humans to befoul it, as they generally do. Potentially a conflict could erupt between antinatalists and immortalists, who hope to be in the world for a very long time. My feeling, though, is that the antinatalist movement is both unpopular and self-limiting—on both counts, natural selection so wills it. Immortalists in any case are not so much trying to populate the planet as trying to endure as individuals. So probably

we should not worry too much. Instead let's talk to these people. Some of them (Benatar included?) may be willing to rethink their position. ■



About the Author

David Benatar

David Benatar is professor of philosophy and head of the Department of Philosophy at the University of Cape Town in Cape Town, South Africa. Though best known for his advocacy of antinatalism in his book *Better Never to Have Been*, he is also the author of a series of widely cited papers in medical ethics. His work has appeared in such journals as *Ethics*, *Journal of Applied Philosophy*, *Social Theory and Practice*, *American Philosophical Quarterly*, *QJM: An International Journal of Medicine*, *Journal of Law and Religion* and the *British Medical Journal*.

Source:

http://en.wikipedia.org/wiki/David_Benatar, accessed 20 Jun. 2010.

IS A LIFE WORTH STARTING?

SOME PERSONAL VIEWS

By Mike Perry

For life—the life of any sentient creature—to be worth living, there must, as Robert Ettinger has often said, be a preponderance of satisfaction over dissatisfaction. If this overall slant toward good rather than bad is maintained, it seems reasonable that one stands to gain by continued existence. I am not sure what fraction of the human (or other sentient) population achieves this positive balance and will not speculate except to note that by appearances there are many humans who do achieve it, along with other creatures, pets in particular, so at least for them, life is worth continuing. To say that life once started is worth continuing does not, as David Benatar points out, imply that it was worth starting in the first place, or should have been started. But I think that, barring certain problematic cases, it is fair to conclude that a human life at least is worth starting, if there are responsible prospective parents who would like to start it. Here I think it is reasonable to expect that the resulting person will feel that life is overall a benefit, and additionally, that others, the parents in particular, will stand to gain from the new life that has entered their lives. I don't accept Benatar's arguments that by and large life is pretty terrible and people delude themselves who think otherwise.

Also I reject his “asymmetry” argument, that it is “good” if a life that would be bad does not come into existence, but merely “not good” rather than “bad” if a life that would be good does not come into existence. (It is easy to see how this asymmetry supports the argument that life should not start in the first place and Benatar refers to it often.) Benatar's main rationale for this argument seems to be that, while we would consider someone morally at fault for deliberately bringing into existence someone who would be miserable and just want to die, we would not similarly hold someone culpable who elected *not* to bring into

existence someone who would be happy and want to remain alive. This I think should not be the only consideration, for it is based *only* on the idea of when we should regard an action as bad, and not at all on when we should regard it as good and commendable. (Why *this* particular asymmetry?) Instead, weighing both sides of the issue as I think is justified, I would opt for the fully symmetric position that it is “not bad” if a life that would be bad does not come into existence, and similarly, “not good” if a life that would be good does not come into existence. On the other hand, I question and doubt whether a life that comes into existence would be bad in the long run, given the prospect of immortality, which I think is a possibility through science (see below).

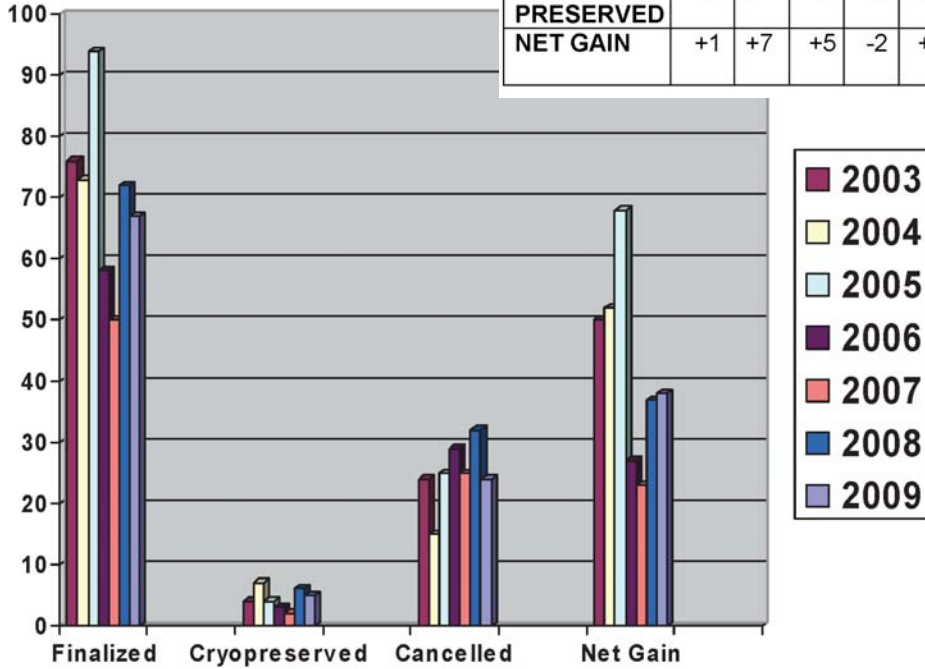
Life does, of course, have its problems, death in particular, that might call in question whether it is worthwhile after all and thus, whether the life of any sentient being is worth starting. For this one problem there are a number of possible answers that will be satisfying to different people, and thus can serve as ground for a feeling that life is worthwhile and was worth starting despite one's own mortality. There is the famous Epicurean argument that death is not really a problem because before it happens it causes no harm, and after it happens there is no victim. There is the Buddhist argument that, more fundamentally, the self is an illusion anyway, so that in fact no persons exist and death never really happens, though bliss can still occur through states of enlightenment which thus are worth seeking. There are various religious traditions that promise an afterlife and a happy immortality for those who prove worthy, or, in some versions, all who are born. Then there is scientific immortalism, which holds that at least substantial life extension through science and technology is possible, so that, irrespective of any super-

natural or mystical process, persons of today have more to hope for as they get older than the usual biological ruin and oblivion.

The scientific possibilities for overcoming death come in different varieties that each have their own advocates. Some of these hopefuls, particularly younger ones, focus on the prospect that aging and now-terminal illnesses will be remedied in their natural lifetime, so that they will escape clinical death and need not specially prepare for it. Others who are not so confident have made arrangements for cryopreservation after clinical death, in hopes of resuscitation and cure of aging and diseases when the requisite technology becomes available. Still others hold out for advances on a more cosmic scale that will eventually make it possible to raise the dead comprehensively. (Some possible scenarios for this using multiple, parallel time streams rather than revisiting or recovering a hidden past are considered in my book, *Forever for All*, and the article at <http://www.universalmortalism.org/resurrection.htm>.) The three possibilities are not mutually exclusive, so that, for example, persons who have chosen cryonics may also place varying hopes in the other two. In fact, my personal viewpoint as a scientific immortalist grants some validity to all three possibilities, but I think it is imperative now to be engaged in cryonics, which is almost unique and the clear favorite as a proactive, interventive strategy against death. Passive acceptance of the dying process simply does not feel right, whatever the prospects for near-term medical progress, or on the other hand, resurrections in a more distant, technologically superior future. It goes without saying that I also think future life will be worth living—it should be possible to make it so, if future developments can provide the opportunity. ■

Membership Statistics

2009	01	02	03	04	05	06	07	08	09	10	11	12	
TOTAL	876	883	888	886	891	893	895	903	905	906	908	913	913
FINALIZED	3	11	8	0	4	3	3	11	5	4	4	7	63
REINSTATED	1	0	0	0	2	0	0	1	0	0	0	0	4
CANCELLED	3	3	3	2	1	0	0	3	3	3	2	1	24
CRYO-PRESERVED	0	1	0	0	0	1	1	1	0	0	0	1	5
NET GAIN	+1	+7	+5	-2	+5	+2	+2	+8	+2	+1	+2	+5	+38



On March 31, 2010, Alcor had 920 members on its Emergency Responsibility List. During the first three months of 2010 8 memberships were approved, no memberships were reinstated, one membership was cancelled and no members were cryopreserved. Overall, there was a net gain of 7 members for the year of 2010 to date.

The chart on the left displays the year-end monthly average net gain since 2002.

Take a look at the **ALCOR BLOG**

<http://www.alcor.org/blog/>

Your source for news about:

Cryonics technology

Cryopreservation cases

Television programs about cryonics

Speaking events and meetings

Employment opportunities



Breakthrough in Ebola Treatment

Using genetic particles known as small interfering RNAs (siRNAs), scientists have halted the replication process of the deadly Ebola virus in monkeys; a breakthrough that the researchers say should be reproducible in humans. The Ebola virus causes hemorrhagic fever with fatality rates as high as 80 percent in humans. The virus can be transmitted through the air although it is more commonly spread through blood and bodily fluids. Until now there have been no available vaccines or therapies. Reporting their work in *The Lancet*, the researchers explain how RNA inhibitors were used to target a protein—called the L protein—that is essential for Ebola virus replication. RNA inhibitors are based on a natural gene silencing mechanism used by all cells, and lipid nanoparticles are the most widely used siRNA delivery approaches. In this study, the team used a proprietary technology called SNALP, or stable nucleic acid-lipid particles, to deliver the therapeutics to disease sites in animals infected with the Zaire strain of Ebola virus.

ScienceAgogo
3/31/10

http://www.scienceagogo.com/news/20100431010042data_trunc_sys.shtml

Errors in Hypothesis Linking Solar Flares to Global Temperature

In contrast to a previous analysis, a new study has shown that the distributions of (a) the global temperature anomaly by month since 1880 and (b) the solar flare index by day over a few solar cycles are fundamentally different. The field of climate science is nothing if not complex, where a host of variables interact with each other in intricate ways to produce various changes. Just like any other area of science, climate science is far from being fully understood. The new study points out a few errors in

the previous analysis, and concludes that the solar and climate records have very different properties that do not support the hypothesis of a sun-climate complexity linking.

PhysOrg.com
4/7/10

<http://www.physorg.com/news189845962.html>

H.P. Sees a Revolution in Memory Chip

Hewlett-Packard scientists April 8 were to report advances in the design of a new class of diminutive switches capable of replacing transistors as computer chips shrink closer to the atomic scale. The devices, known as memristors, or memory resistors, were conceived in 1971 by Leon O. Chua, an electrical engineer at the University of California, Berkeley, but they were not put into effect until 2008 at the H.P. lab here. They are simpler than today's semiconducting transistors, can store information even in the absence of an electrical current and, according to a report in *Nature*, can be used for both data processing and storage applications. The researchers previously reported in *The Proceedings of the National Academy of Sciences* that they had devised a new method for storing and retrieving information from a vast three-dimensional array of memristors. The scheme could potentially free designers to stack thousands of switches in a high-rise fashion, permitting a new class of ultradense computing devices even after two-dimensional scaling reaches fundamental limits. Memristor-based systems also hold out the prospect of fashioning analog computing systems that function more like biological brains, Dr. Chua said. "Our brains are made of memristors," he said.

New York Times
4/7/10

<http://www.nytimes.com/2010/04/08/science/08chips.html?emc=eta1>

Solar Plane Prototype in First Test Flight

A prototype solar-powered plane has made its first full test flight—coming closer to the goal of using solar energy to fly around the world. The Solar Impulse, with a wingspan similar to that of a super-jumbo jet but weighing the same as a saloon car, took off from a Swiss airfield. The plane's wings are covered by solar cells which power four electric motors. Its designers hope a slightly larger production model will circumnavigate the globe in two years' time. The test flight was intended to verify that the plane's behavior tallied with simulations. "With such a large and light plane never having flown before, the aircraft's flight behavior remains unexplored," the flight team said in a statement. Round-the-world balloonist Bertrand Piccard is leading the project and intends to pilot the plane along with co-founder Andre Borschberg. "It's a very important moment after seven years of work," said Mr. Borschberg before the take-off. Witnesses said both take-off and landing seemed to go smoothly. The flight team has been conducting flea-hop tests since December, taking the plane no higher than 60cm (2ft) in altitude and 300m in distance.

BBC News
4/7/10

<http://news.bbc.co.uk/2/hi/europe/8607149.stm>

New, Inexpensive Way to Predict Alzheimer's Disease

Your brain's capacity for information is a reliable predictor of Alzheimer's disease and can be cheaply and easily tested, according to scientists. "We have developed a low-cost behavioral assessment that can clue someone in to Alzheimer's disease at its earliest stage," said Michael Wenger, associate professor of psychology, Penn State. "By examining (information) processing capacity, we can detect changes in the progression of mild cognitive

impairment (MCI).” MCI is a condition that affects language, memory, and related mental functions. It is distinct from the ordinary mental degradation associated with aging and is a likely precursor to the more serious Alzheimer’s disease. Both MCI and Alzheimer’s are linked to a steady decline in the volume of the hippocampus, the area of the brain responsible for long term memory and spatial reasoning. MRIs—magnetic resonance imaging—are the most reliable and direct way to detect hippocampal atrophy and diagnose MCI. But for many, the procedure is unavailable or too expensive. Wenger and his collaborators at the Mayo Clinic College of Medicine, Rochester, Minn., detail their findings in a recent issue of the *Journal of Mathematical Psychology*.

ScienceDaily
4/11/10

<http://www.sciencedaily.com/releases/2010/04/100405111207.htm>

“Broad spectrum” Antiviral Compound

UCLA researchers have identified an antiviral small molecule (LJ001) that is effective against numerous viruses, including HIV-1, influenza A, filoviruses, poxviruses, arenaviruses, bunyaviruses, paramyxoviruses and flaviviruses. These viruses cause some of the world’s deadliest diseases, such as AIDS, Nipah virus encephalitis, Ebola, hemorrhagic fever and Rift Valley fever. Even better, the compound—a rhodanine derivative that the researchers have dubbed LJ001—could be effective against new, yet-to-be discovered enveloped viruses. “Since the government has changed its priorities to support development of broad spectrum therapeutics, more and more groups have been screening compound libraries for antivirals that are active against multiple viruses in a specific class,” said Dr. Benhur Lee, associate professor of microbiology, immunology and molecular genetics at the David Geffen School of Medicine at UCLA and the primary investigator of the four-year study. While the exact mechanism of viral membrane inactivation is unknown, the researchers are pursuing some promising leads that could answer that question. Additionally, the drug does not appear to be toxic in vitro or in animals when used at effective antiviral concentrations.

Nextbigfuture.com

4/17/10

<http://nextbigfuture.com/2010/04/broad-spectrum-antiviral-compound-could.html>

Full Face Transplant “a Success”

A team of 30 Spanish doctors say they have successfully performed the world’s first full face transplant. A man injured in a shooting accident received the entire facial skin and muscles—including cheekbones, nose, lips and teeth—of a donor. The man is recovering well after the 22-hour operation, said a spokesperson from Vall d’Hebron University Hospital. Another 10 face transplants have been carried out around the world, but this is believed to be the most complex. Hospital spokesperson Bianca Bont told the BBC: “This is the first total face transplant. There have been 10 operations of this kind in the world—this is the first to transplant all of the face and some bones of the face.” The man was operated on in March, but details of the operation have only just been revealed. He had been left unable to breathe, swallow, or talk properly after an accident five years ago. He was considered for a full face transplant after nine previous operations failed. A team of 30 experts carried out the operation on 20 March at the hospital in Barcelona. The man has since seen himself in the mirror and was calm and satisfied, the leader of the medical team, Joan Pere Barret, told a news conference. The first partial face transplant was carried out by doctors in Amiens, France, in 2005.

BBC News
4/23/10

<http://news.bbc.co.uk/2/hi/health/8639437.stm>

Science Closing in on Mystery of Age-Related Memory Loss, Says Neurobiologist

The world’s scientific community may be one step closer to understanding age-related memory loss, and to developing a drug that might help boost memory. In an editorial published May 7 in *Science*, J. David Sweatt, Ph.D., chair of the University of Alabama at Birmingham (UAB) Department of Neurobiology, says that drugs known as histone deacetylase inhibitors are showing

great promise in stopping memory loss—and even in boosting the formation of memory in animal models. Sweatt’s editorial was published in conjunction with findings published in *Science* from researchers led by Shahaf Peleg at the European Neuroscience Institute at University Goettingen in Germany. The European researchers’ findings supplement and support work done previously in Sweatt’s laboratory. “It’s a real proof of concept,” said Sweatt. “We’ve been studying histone deacetylase inhibitors for some 10 years. Studies in our lab and elsewhere strongly suggested that these drugs could potentially reverse aging-associated memory dysfunction. Sweatt, director of the Evelyn F. McKnight Brain Institute at UAB, cautions that the findings have so far only been observed in mouse models. He says further research is warranted to see if the findings translate to memory formation in humans.

ScienceDaily
5/6/10

<http://www.sciencedaily.com/releases/2010/05/100506141557.htm>

Brain’s Master Switch Is Verified

The protein that has long been suspected by scientists of being the master switch allowing brains to function has now been verified by an Iowa State University researcher. Yeon-Kyun Shin, professor of biochemistry, biophysics and molecular biology at ISU, has shown that the protein called synaptotagmin1 (Syt1) is the sole trigger for the release of neurotransmitters in the brain. Prior to this research, Syt1 was thought to be a part of the protein structure (not the sole protein) that triggered the release of neurotransmitters at 10 parts per million of calcium. Shin’s research is published in the current issue of the journal *Science*. “Syt1 was a suspect previously, but people were not able to pinpoint that it’s the real one, even though there were lots and lots of different trials,” said Shin. “In this case, we are trying to show in the laboratory that it’s the real one. So we excluded everything else, and included SNARE proteins—that’s the machinery of the release, and the Syt1 is a calcium-sensing timer.” Syt1 senses, at 10 ppm of calcium, and tells the SNARE complex to open the pore to allow the movement of the neurotransmitters. Brain activity occurs when neurotransmitters move into a fusion pore.

Robustness of Quantum Entanglement in Photosynthesis Surprises Researchers

The development of clean solar power may hinge on scientists being able to unravel the mysteries of photosynthesis, the process by which green plants convert sunlight into electrochemical energy. To this end, US researchers have recorded the first observation and characterization of quantum entanglement in photosynthesis. Previous experiments led by Berkeley Lab's Graham Fleming pointed to quantum mechanical effects as key to the ability of green plants, through photosynthesis, to almost instantaneously transfer solar energy from molecules in light harvesting complexes to molecules in electrochemical reaction centers. Now, Fleming and a new collaborative team have identified entanglement as a natural feature of these quantum effects. Their work is reported in *Nature Physics*. "This is the first study to show that entanglement, perhaps the most distinctive property of quantum mechanical systems, is present across an entire light harvesting complex," says co-researcher Mohan Sarovar. "While there have been prior investigations of entanglement in 'toy systems' that were motivated by biology, this is the first instance in which entanglement has been examined and quantified in a real biological system."

ScienceAgogo.com

5/11/10

http://www.scienceagogo.com/news/20100410224852data_trunc_sys.shtml

Robot Becomes Priest for a Day

Perhaps you, too, have attended weddings where you wanted to take the vicar, rabbi, or local government official presiding over the ceremony and bolt him to a chair. Some very fortunate people in Tokyo can now tell you what that feels like. For, according to the Associated Press, 42-year-old robotics professor Tomohiro Shibata decided that there was only one who could officiate at his marriage to his stunning bride: I-Fairy.

Should you not be familiar with I-Fairy, it is a robot that has the moves of Michael Jackson and the voice of Glenda Jackson. I-Fairy came into the world during a joint exercise between Kokoro Company and the Japanese National Institute of Advanced Industrial Science. Perhaps even they, though, could not imagine that this mere android would one day be uttering words like "just" or "impediment" before a fancily dressed throner. The bride, 36-year-old Satoko Inoue, is an employee of Kokoro. As she explained the unusual nuptials to the AP: "I think that Japanese have a strong sense that robots are our friends. Those in the robot industry mostly understand this, but people mainly want robots near them that serve some purpose."



CNET News

5/16/10

http://news.cnet.com/8301-17852_3-20005081-71.html

Preserving Memory with Age

While the nematode *C. elegans* is already well known for its utility in longevity research, previously it was not known how the memory of *C. elegans* compares with that of other animals, or whether longevity treatments could improve learning and memory. To answer these questions, Amanda Kauffman and colleagues, of Coleen Murphy's lab at Princeton, designed new tests of learning and memory in *C. elegans*, then used these tests to identify the necessary components of learning, short-term memory, and long-term memory. They found that the molecules required for learning and memory appear to be conserved from *C. elegans* to mammals, suggesting that the basic mechanisms underlying learning and memory are ancient. The authors also determined how each of the behaviors declines with age, and tested the

effects of two known regulators of longevity—dietary restriction and reduced Insulin/IGF-1 signaling—on these declines. Surprisingly, very different effects on memory were achieved with the two longevity treatments: dietary restriction impaired memory in early adulthood but maintained memory with age, while reduced Insulin/IGF-1 signaling improved early adult memory performance but failed to preserve it with age. The results will appear next week in the online, open-access journal *PLoS Biology*.

EurekAlert.org

5/18/10

http://www.eurekalert.org/pub_releases/2010-05/plos-pmw051210.php

Scientists Create Cell Based on Man-Made Genetic Instructions

Scientists reported May 20 that they have created a cell controlled entirely by man-made genetic instructions—the latest step toward creating life from scratch. The achievement is a landmark in the emerging field of "synthetic biology," which aims to control the behavior of organisms by manipulating their genes. Although the ultimate goal of creating artificial organisms is still far off, the experiment points to a future in which microbes could be manufactured with novel functions, such as the ability to digest pollutants or produce fuels. Some ethicists fear that the strategy could also be used to produce biological weapons and other dangerous life forms. In a paper published online by the journal *Science*, researchers from the J. Craig Venter Institute described using off-the-shelf chemicals and the DNA sequence of *Mycoplasma mycoides*'s genes to make an artificial copy of the bacterium's genome. The scientists then transplanted that genome into the cell of a different (but closely related) microbe. The donor genome reprogrammed the recipient cell, which went on to replicate and divide. The result was new colonies of *Mycoplasma mycoides*.

The Washington Post

5/21/10

<http://www.washingtonpost.com/wp-dyn/content/article/2010/05/20/AR2010052003336.html?referrer=emailarticle>

MEETINGS

About the Alcor Foundation

The Alcor Life Extension Foundation is a nonprofit tax-exempt scientific and educational organization dedicated to advancing the science of cryopreservation and promoting it as a rational option. Being an Alcor member means knowing that—should the worst happen—Alcor's Emergency Response Team is ready to respond for you, 24 hours a day, 365 days a year.

Alcor's Emergency Response capability includes specially trained technicians and customized equipment in Arizona, northern California, southern California, and south Florida, as well as many additional certified technicians on-call around the United States. Alcor's Arizona facility includes a full-time staff, and the Patient Care Bay is personally monitored 24 hours a day.

ARIZONA

Scottsdale:

This group meets the third Friday of each month and gatherings are hosted at a home near Alcor. To RSVP, visit <http://cryonics.meetup.com/45/>.

At Alcor:

Alcor Board of Directors Meetings and Facility Tours – Alcor business meetings are generally held on the first Saturday of every month starting at 11:00 AM MST. Guests are welcome. Facility tours are held every Tuesday and Friday at 2:00 PM. For more information or to schedule a tour, call D'Bora Tarrant at (877) 462-5267 x 101 or email dbora@alcor.org.

CALIFORNIA

Los Angeles:

Alcor Southern California Meetings—For information, call Peter Voss at (310) 822-4533 or e-mail him at peter@optimal.org. Although monthly meetings are not held regularly, you can meet Los Angeles Alcor members by contacting Peter.

San Francisco Bay:

Alcor Northern California Meetings are held quarterly in January, April, July, and October. A CryoFeast is held once a year. For information on Northern California meetings, call Mark Galecki at (408) 245-4928 or email Mark_galeck@pacbell.net.

DISTRICT OF COLUMBIA

Life Extension Society, Inc. is a cryonics and life extension group with members from Washington, D.C., Virginia, and Maryland. Meetings are held monthly. Contact Secretary Keith Lynch at kfl@keithlynch.net. For information on LES, see our web site at www.keithlynch.net/les.

FLORIDA

Central Florida Life Extension group meets once a month in the Tampa Bay area (Tampa and St. Petersburg) for discussion and socializing. The group has been active since 2007. Email arcturus12453@yahoo.com for more information.

NEW ENGLAND

Cambridge:

The New England regional group strives to meet monthly in Cambridge, MA – for information or to be added to the AlcorNE mailing list, please contact Bret Kulakovich at 617-824-8982, alcor@bonfireproductions.com, or on FACEBOOK via the Cryonics Special Interest Group.

OREGON

Portland:

Cryonics Oregon holds regular meetings every 2-3 months for members of cryonics organizations living in Portland and the surrounding areas. For information, please contact Chana de Wolf at

chana.de.wolf@gmail.com or (503) 756-0864. <http://www.cryonicsoregon.com/>

A Yahoo group is also maintained for cryonics activities in the Pacific Northwest at <http://tech.groups.yahoo.com/group/CryonicsNW/>.

ALCOR PORTUGAL

Alcor Portugal is working to have good stabilization and transport capabilities. The group meets every Saturday for two hours. For information about meetings, contact Nuno Martins at n-martins@n-martins.com. The Alcor Portugal website is: www.alcorportugal.com.

TEXAS

Dallas:

North Texas Cryonauts, please sign up for our announcements list for meetings (<http://groups.yahoo.com/group/cryonauts-announce>) or contact David Wallace Croft at (214) 636-3790 for details of upcoming meetings.

Austin/Central Texas:

We meet at least quarterly for training, transport kit updates, and discussion. For information: Steve Jackson, 512-447-7866, sj@sjgames.com.

UNITED KINGDOM

There is an Alcor chapter in England. Its members are working diligently to build solid emergency response, transport, and cryopreservation capability. For information about meetings, contact Alan Sinclair at cryoservices@yahoo.co.uk. See the web site at www.alcor-uk.org.

If you are interested in hosting regular meetings in your area, contact Alcor at 877-462-5267 ext. 113. Meetings are a great way to learn about cryonics, meet others with similar interests, and introduce your friends and family to Alcor members!

ADVERTISEMENTS

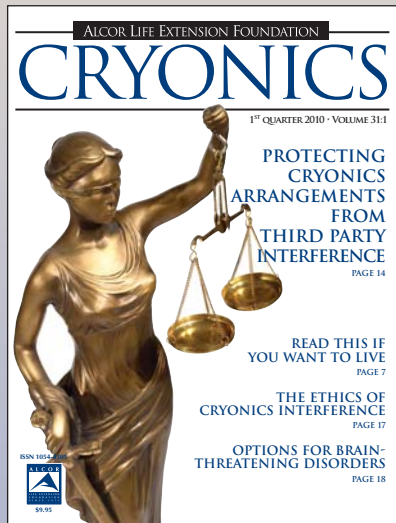
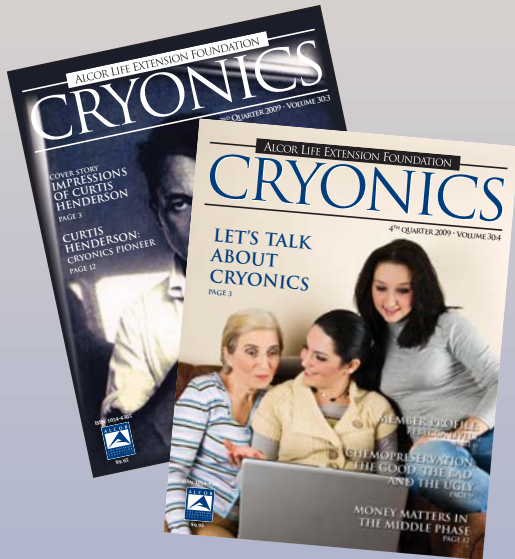


cryonics society

free ebooks & newsletter
www.cryonicsociety.org

Be Part Of The Future.
Join Today!

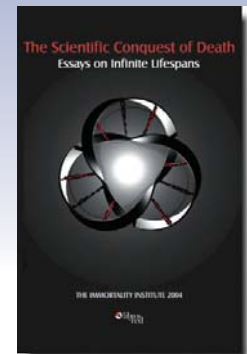
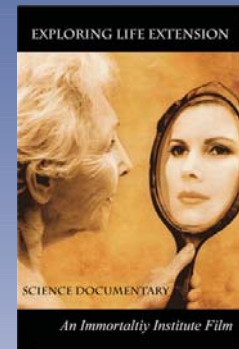
FREE CRYONICS TRIAL SUBSCRIPTION



Call today to request a **FREE** one-year trial subscription to *Cryonics* magazine for yourself or someone you know.

877-462-5267 x101

FREE ONLINE
BOOK &
DOCUMENTARY
IMMORTALITY
INSTITUTE



IMMINST.ORG
For Infinite Lifespans

WHAT IS CRYONICS?

Cryonics is an attempt to preserve and protect the gift of human life, not reverse death. It is the speculative practice of using extreme cold to preserve the life of a person who can no longer be supported by today's medicine. Will future medicine, including mature nanotechnology, have the ability to heal at the cellular and molecular levels? Can cryonics successfully carry the cryopreserved person forward through time, for however many decades or centuries might be necessary, until the cryopreservation process can be reversed and the person restored to full health? While cryonics may sound like science fiction, there is a basis for it in real science. The complete scientific story of cryonics is seldom told in media reports, leaving cryonics widely misunderstood. We invite you to reach your own conclusions.

HOW DO I FIND OUT MORE?

The Alcor Life Extension Foundation is the world leader in cryonics research and technology. Alcor is a non-profit organization located in Scottsdale, Arizona, founded in 1972. Our website is one of the best sources of detailed introductory information about Alcor and cryopreservation (www.alcor.org). We also invite you to request our **FREE** information package on the "Free Information" section of our website. It includes:

- A fully illustrated color brochure
- A sample of our magazine
- An application for membership and brochure explaining how to join
- And more!

Your free package should arrive in 1-2 weeks.

(The complete package will be sent free in the U.S., Canada, and the United Kingdom.)

HOW DO I ENROLL?

Signing up for a cryopreservation is easy!

- Step 1:** Fill out an application and submit it with your \$150 application fee.
- Step 2:** You will then be sent a set of contracts to review and sign.
- Step 3:** Fund your cryopreservation. While most people use life insurance to fund their cryopreservation, other forms of prepayment are also accepted. Alcor's Membership Coordinator can provide you with a list of insurance agents familiar with satisfying Alcor's current funding requirements.
- Finally:** After enrolling, you will wear emergency alert tags or carry a special card in your wallet. This is your confirmation that Alcor will respond immediately to an emergency call on your behalf.

Call toll-free today to start your application:

877-462-5267 ext. 132
info@alcor.org
www.alcor.org





Will You Be Alive and Healthy 10...20...30 Years from now?

Your best chance at achieving future immortality is to protect your precious health now so you can benefit from future medical breakthroughs. Staying informed about the latest health discoveries can mean the difference between life and premature death.

And the **Life Extension Foundation** can be your passport to the future. As the largest anti-aging organization in the world, we are dedicated to finding scientific ways to prevent disease, slow aging, and eventually stop death.

For more than two decades, Life Extension has been at the forefront of the movement to support revolutionary anti-aging research that is taking us closer to our goal of extending the healthy human life span indefinitely. We inform our members about path-breaking therapies to help keep them healthy and alive.

Join today and you'll receive these life-prolonging benefits:

- A subscription to *Life Extension* magazine (\$59.88 yearly newsstand value)...Over 100 full-color pages every month are filled with medical research findings, scientific reports, and practical guidance about using diet, nutrients, hormones, and drugs to prevent disease and slow aging.
- Access to a toll-free phone line to speak with **knowledgeable health advisors**, including naturopathic doctors, nutritionists, and a cancer expert, about your individual health concerns. You can also receive help in developing your own personal life extension program.
- Discounts on prescription drugs, blood tests, and pharmaceutical quality supplements that will greatly exceed

your membership dues. You'll receive a directory listing the latest vitamins and supplements, backed by scientific research and available through a unique buyers club.

FREE BONUS!

- **Disease Prevention and Treatment book** (\$49.95 cover price) ...this hardbound fourth edition provides novel information on complementary therapies for 133 diseases and illnesses—from Alzheimer's disease to cancer, from arthritis to heart disease—that is based on thousands of scientific studies.

Life Extension Foundation funds advanced vitrification and gene-chip research. Your \$75 membership fee helps support scientific projects that could literally save your life.

Call 1-866-820-4967 today.

LIVE
Healthier & Longer

LifeExtensionSM
FOUNDATION

Join today. Call toll-free 1-866-820-4967. Or visit www.lef.org/pim