

The JOURNAL of
GEOETHICAL
NANOTECHNOLOGY



Volume 3, Issue 3
3rd Quarter, 2008

Awaken the Universe – Introducing the Order of Cosmic Engineers.....1

Philippe Van Nederveelde

Philippe Van Nederveelde, co-founder of the Order of Cosmic Engineers, discusses the benefits and methods to developing the technologies purported to enhance, thus expand, human health and life spans.

Terasem Movement, Inc.
201 Oak Street
Melbourne Beach, FL 32951

Editor-in-Chief: Martine Rothblatt, Ph.D., J.D.
Managing Editor: Loraine J. Rhodes



The JOURNAL of GEOETHICAL NANOTECHNOLOGY

Volume 3, Issue 3
3rd Quarter, 2008

Awaken the Universe -- Introducing the Order of Cosmic Engineers

Philippe Van Nedervelde

This article was adapted from a lecture given by Philippe Van Nedervelde, MA Comm., FLF, co-founder of the Order of Cosmic Engineers (OCE), during the 4th Annual Workshop on Geoethical Nanotechnology on July 20, 2008 at the Terasem Island Amphitheatre in Second Life.

Philippe discusses the benefits and methods to developing the technologies purported to enhance, thus expand, human health and life spans.



Image 1: Terasem Island, Second Life

The focus of the Terasem workshop is the appropriate geo-ethical management of nanotechnology. Not so much nanotechnology in general (which by the way most definitely

requires appropriate geo-ethical management) as the specific nanotech which will be needed for bringing the quiescent consciousness of human persons back to wide-awake, vibrant life.

In my capacity of spokesperson at the already twenty-two year old Foresight Nanotech Institute [1], I have been and still am a rather vocal public advocate of the responsible development and use of nanotechnology. For well over a decade now, the central theme and focus of my professional non-profit work has been and still is maximizing the upsides and minimizing the downsides of the genuinely revolutionary, game-changing technology that nanotechnology, in its key role of catalytic enabler of the so called Nano-Bio-Info-Cogno (NBIC) [2] technology convergence, is

becoming.

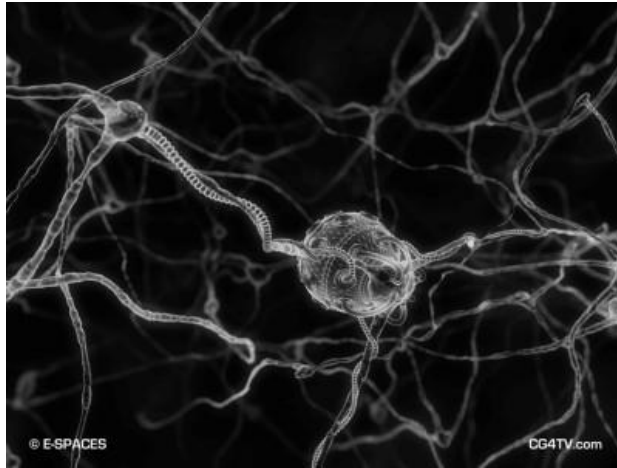


Image 2

Even in my bread and butter for-profit business that centers on Virtual Reality and 3D graphics, the focus of this workshop is near and dear to my heart as you can see from this still shot of the high-definition 3D animation that we made of a possible future nano-robot replacing a neuron inside the human brain.

Powerful, mature nanotechnology is rightfully believed by numerous experts and futurists to be one of the key technologies, if not THE key technology, needed for the future resuscitation of the dormant consciousness of human individuals in cryonic biostasis or electronic storage.

Powerful, mature nanotechnology is most likely to be what it will take to revive human beings from long-term biostasis or enabling the embodiment of digitized personalities onto and into new physical substrates and forms.

For your information, the relatively

conservative forecast of leading nanotech experts today is that they would be surprised to see this powerful form of nanotech reach mainstream use before 2025... or after 2040.

Most people, including many scientists, still believe such future technological feats to be so difficult and improbable as to still be all-too-readily dismissed as impossible. In the slowly but surely growing group of people and scientists who believe that these feats may one day become achievable, not everybody thinks this is a good idea.

Some people out there really do NOT approve

"...extreme life-extension should be optional..."

of greatly extended, let alone,

indefinitely extended human life spans. So it sure looks like diverging interests will be defended by different groups of stakeholders. This in turn suggests that appropriate geo-ethical management will be needed to arbitrate this potential conflict of interests.

In passing, I should note that we need to take into account that this likely conflict of interests may, to a very significant degree, already come to a head and possibly even be substantially resolved well BEFORE the advent of powerful nanotech.

Thanks to initiatives like Dr. Aubrey de Grey's SENS Project [3] we may very well see the arrival of biotech-based technologies yielding significant life-extending results without requiring mature nanotech, possibly not even

requiring any nanotech at all. The societal ethical debate about significant life-extension may already come to a head and be resolved around such pre-powerful-nanotech technologies.

Included in that scenario, the reasonable and responsible solution seems to me to be one where those who really want to dramatically extend their life spans... should not be prevented from doing so... provided they do it in a responsible manner that is at least ACCEPTABLE to those who do not wish significantly extended life spans for themselves. In other words, extreme life-extension should be optional at the discretion of each individual.

Conversely, the freedom of people to NOT significantly extend their life spans should equally be rigorously respected... without going so far as to impose such as a limitation on the freedom of those that do wish such. Live and let live. Or to be fully accurate: live as briefly as you wish and let others live as long as they wish.

Note that there are also some statistics which should come in handy in our favor. The historical data of the lengthening of human life spans shows, for instance, that the life expectancy in the year 1900 was 49.7 for men and 50.9 for women.



Image 3

Advocates of what they think of as their own non-extended lives all too easily and readily forget, and should be duly reminded, that they are already the beneficiaries of significantly lengthened life spans thanks to the essentially technological interventions of better public sewage systems, better hygiene, better food, and better medicine.

I know there are lies, damned lies, and then there are statistics, but still.

In the end, the ultimate arbiters of this conflict of interests, which really boils down to a deeply rooted conflict of worldviews and belief systems, will obviously and naturally have to be the elected legislators as well as the judges of the many national jurisdictions of this planet.

That is not to say that there IS a great deal that the stakeholder organizations present at this gathering can do to influence and shape the societal debates which will yield relevant legislation and jurisprudence.

One specific course of assertive action, and in my view a very big part of the solution, which we assembled here may come to have direct control and influence over, seems to lie in the pro side -that's us- doing a far better job at communicating the overwhelmingly great value as well as major moral, ethical and philosophical justifications of greatly extended life spans, or rather, "health spans" to be fully precise.

This is something we need to do with words and images which are readily accessible and understandable as well as acceptable to the contra side. That is, "acceptable" at least in the "live and let live" sense that they accept and respect that we who wish to extend *our* health span indeed do so at our convenience and discretion and naturally without reducing *their* lifespan as well as without harming them in any other concrete way.

I would argue that this critically important job of communication has so far not been done well at all.



Image 4

It is vitally important it be properly explained that the higher purpose -and hence one of the key moral justifications- of the extreme extension of one's life span is to enable long-term personal quests towards answering the big perennial, existential questions: Why do we exist? Why do we exist here and in this way? What are we? What is this reality? Where does everything come from? Where is everything going?

A key beneficial role in this communication effort and by extension in the arbitrage of this conflict may be played by a new type of organization ideally suited for this purpose. Let me explain. It will initially seem like a digression, but please bear with me.

If the potential for successful progress at a quest towards answers to the big existential

questions by a single highly determined human individual can in certain cases be phenomenal, how phenomenally much more successful progress may then be achieved by a GROUP of singularly determined individuals pulling together, pooling their resources towards the shared goal of the pursuit of these answers... and the execution of their implications, if any?

Since the dawn of mankind, many such groups of people focused on answering those big existential questions have been formed.

Today we know and label such groups by names including "religions" or cults, physics and chemistry research labs, and university faculties or departments specialized in astronomy or philosophy.

Over the past ten millennia or so, many such organizations have come into being. Most have come and gone; a good number are still with us.

Since the Enlightenment, we have entered an era in human development where there is an

"Emotionally, the children of the Enlightenment feel like lonely, abandoned, and painfully unloved orphans, denied the existential comforts of tenderly loving and doting parents..."

ever-growing perception that religions and cults have by and large

outgrown their original evolutionary usefulness. They used to provide worthwhile evolutionary benefits by strongly tying groups of people together. The etymology of the word 'religion' itself testifies to such.

To so many human individuals craving meaning, craving answers to the existential questions, craving philosophical as well as emotional crutches to carry them through their days... religions provided a mostly hospitable and supportive community, a tightly knit social circle of shared beliefs.

The ever more impressive achievements of the application of the scientific method by scientists in their physics and chemistry research labs, and in university faculties or departments specialized in astronomy or philosophy, have been increasingly eroding the beliefs upon which those religions and cults are based.

While this erosion is successfully ridding us of the dirty bathwater that religions and cults have come to represent, it has unfortunately also been throwing out the proverbial baby.

The result today is that while ever more individuals are gratifyingly freed of the burden of unscientific religious beliefs, the coldly mechanical rigors of the prepositional logic and mathematics of science have left these persons without a genuinely loving, warm, hospitable, supportive community of people focused on pursuing the answers to those big existential questions.

Emotionally, the children of the Enlightenment feel like lonely, abandoned, and painfully unloved orphans, denied the existential comforts of tenderly loving and doting parents or at the very least an entourage of kindly

hospitable relatives.

To date, the children of the Enlightenment lack a community, an organized group featuring the ready "huggability" of a tight religious community. The social beings that we... are sorely missing the warm and fuzzy feelings associated with this huggability factor.

It is not the job of scientists, or scientific researchers (except perhaps for scientists in the humanities) to do anything with or about the fact that human beings are SOCIAL animals.

Scientists naturally recognize the fact that the vast majority of human beings crave more or less organized groups within which to channel their genuine interests in the existential questions and their contributions towards answering them.

Scientists are not trained to organize or provide such. Therefore, we should not expect this from them and certainly not blame them for this particular void.

The (re-)unification of the sciences and

"We joyfully set out to permeate our universe with benign intelligence, building and spreading it from inner space to outer space and beyond."

religions has been discussed far, wide and deep. Such

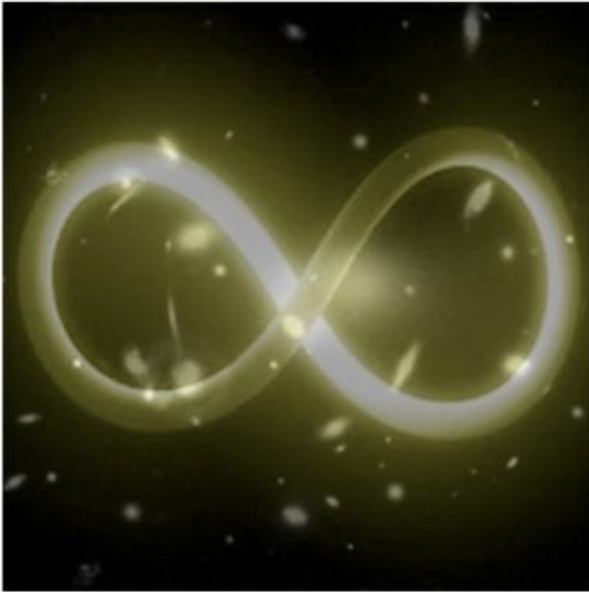
discussions seem to concentrate on finding overlaps and compromises at the top level of the more-or-less abstract beliefs held by the communities involved. At the so-called "street

level", we see no such unification efforts though, until now.

On this precise point, I am happy to be the bearer of what I believe to be rather good news: it is my honor and pleasure to inform you of the birth of a new TYPE of group that's focused on answering those big existential questions. For lack of a better word, we refer to this new type of group with a neologism; the newly made-up word "unreligion".

As with most good to great ideas, the concept is eminently simple and straightforward: a group of people, call it an organization if you wish, that is focused on answering those big existential questions and does so by designing its own organizational DNA in such a manner as to keep out all the demonstrably bad features of religions, cults, sects etc., and adopting only the demonstrably wholesome social activities and other organizational features of such groups as well as their beneficial ethical insights and accomplishments.

In other words, none of the bad stuff, all of the good stuff. This approach yields a new kind of organization which is so fundamentally different from religions, that it really cannot, and *should not*, be counted as one; hence the word un-religion.



Order of Cosmic Engineers

Twenty short minutes are woefully inadequate to present you a sufficiently shaded insight into this new organization: the Order of Cosmic Engineers (OCE) [4]. First, let me give you the URL where you may find further information: www.cosmeng.org, and second, let me share with you the opening paragraphs of a positional document that we have come to call our "Prospectus". It will give you a taste of what we are all about, hopefully pique your interest, and maybe even whet your appetite.

The Order of Cosmic Engineers warmly invites you to join its cosmic quest. We joyfully set out to permeate our universe with benign intelligence, building and spreading it from inner space to outer space and beyond.

The milestone grails of our joyful cosmic quest sequentially comprise:

Evolve a vibrant global community of responsible, dynamically optimistic, cosmic engineers;

Engineer & homestead synthetic realities suitable for ultimate permanent living;

Responsibly develop and apply technologies to enhance our minds and bodies to be suited to the long cosmic road ahead;

Engineer & apply consciousness preservation means enabling mind uploading and personality reconstruction;

Devise a roadmap for the exponential ingress of intelligence into inanimate matter;

Make inner space come alive with intelligence by engineering intelligence computation at the molecular level;

Engineer, spur, and guide the responsible geometric intelligence expansion from inner space, to human scale, to outer space scale;

Intimately join, cross-pollinate, and cross-leverage our mental resources into a meta-mind society;

Deeply optimize our material universe for cosmos-wide intelligence computation;

Answer the ultimate questions of the origin, nature, purpose and destiny of reality;

Tune universe-creation parameters so as to further improve the maximization of the computational ability of a universe;

Engineer and engender one or more new baby universes with controlled physics parameters;

Beget a new universe anew;

Behold our creations;

Contemplate;

THINK;

and BE

Quite the program, as I have no doubt you will agree. We are quite serious about all this too. There is no tongue-in-cheek here whatsoever.

There is a noteworthy parallel that I would like to point out at this juncture. It is a parallel between the role of powerful nanotech and that of the OCE. In the same way that powerful nanotech will be a tool to awaken the dormant consciousness of human beings back to vibrant life, the OCE intends to be instrumental in the awakening of inanimate dormant matter to sparkling intelligence computing, which in many ways can actually be considered a valid form of being "alive".

This parallel is no accident. It actually runs very deep, both in the figurative and literal senses. You see, the technology needed to awaken both human consciousnesses from biostatic dormancy as well as awaken the inanimate matter of this universe from its deep slumber is one and the same.

Indeed, computronium, defined as an ideal physical substrate for the optimized computation of intelligence and thus "thinking matter", is at heart and in essence *very* powerful, *very* mature nanotechnology.

Let me wrap up by most warmly inviting you all to join me in the Order of Cosmic Engineers.

We welcome any and all contributions you wish to make, be they in kind, in the form of your time, your skills, financially or otherwise.

One specific project you may be interested in helping out with may be the needed communication effort that I described at the beginning of this presentation. It is one of

many exciting and engaging projects which the OCE endeavors to carry out.

I dare hope and trust that I have clearly shown how the focus of present workshop and possible solutions to the problem posed, nest beautifully and fully within the greater scope and perspective of the *Order of Cosmic Engineers*. They fit snugly and perfectly within each other like the nested dolls of a Russian Matrioshka doll [5], each nesting inside the other perfectly. It is all deeply interconnected indeed.

Fellow aspiring reality-shapers, the Order of Cosmic Engineers looks forward to welcoming you among us to join our cosmic quest.

At your discretion and convenience, please come on board by joining our announcement list as indicated in the Join section of our website <http://cosmeng.org/>

Endnotes

1. Foresight Nanotech Institute - Foresight is the leading think tank and public interest institute on nanotechnology. Founded in 1986, Foresight was the first organization to educate society about the benefits and risks of nanotechnology. At that time, nanotechnology was a little-known concept.

<http://www.foresight.org/> July 31, 2008
10:19AM EST

2. Nano-Bio-Info-Cogno (NBIC) -

[T]remendous human progress becomes possible through converging technologies stimulated by advances in four core fields: Nanotechnology, Biotechnology Information technology, and new technologies based in Cognitive science (NBIC). Many individual authors had noticed the gathering convergence of technical disciplines, and sociobiologist E. O. Wilson wrote an especially influential 1998 book on the emerging

harmony among the sciences. However, convergence became especially visible, and scholarship about its causes and consequences became very active, through a major 2001 conference, sponsored by the U.S. National Science Foundation and Department of Commerce, that resulted in a substantial book (Roco and Bainbridge, 2003). The intellectual basis of convergence was strengthened by three further annual conferences held in Los Angeles in 2003, New York City in 2004, and near Kona, Hawaii, in 2005. The Los Angeles meeting resulted in a second book (Roco and Montemagno, 2004), and this third volume is an outgrowth of the New York

conference. The question raised at the first conference – “if visionary activities related to NBIC would have impact?” – has been replaced in the following meetings with “how and when?” – aiming at anticipatory measures for taking advantage better, sooner and in a responsible way for society.

<http://www.wtec.org/ConvergingTechnologies/...> July 31, 2008 10:29AM EST

3. Dr. Aubrey de Grey’s SENS Project – De Grey, a Cambridge University researcher, heads the Strategies for Engineered Negligible Senescence (SENS) project, in which he has defined seven causes of aging, all of which he thinks can be dealt with. (Senescence is scientific jargon for aging.)

<http://www.livescience.com/health/...> July 30, 2008

4:39PM EST

4. Order of Cosmic Engineers - Adopting an engineering approach and attitude, the Order aims to turn this universe into a “magical” realm in the sense of Clarke’s Third Law: a realm where sufficiently advanced technology turns daily reality into what would be considered by most today as a seemingly supernatural ‘magical’ realm.

We are, at the same time, a transhumanist association, a spiritual movement, a space advocacy group, a literary salon, a technology observatory, an idea factory, a virtual worlds development group, and a global community of persons willing to take an active role in building, in realizing a sunny future. We will discuss the future of humanity during World of Warcraft quests, plan the future of technology in Second Life, and build futuristic virtual worlds in our labs. But most importantly, we will assist you -yes, we do mean you- in finding meaning and hope in your existence in this, your reality, your universe.

<http://cosmeng.org/index.php/...> July 31, 2008 9:58AM EST

5. Matrioshka doll - Russian wooden dolls within smaller dolls were called matryoshka. In old Russian among peasants the name Matryona or Matriosha was a very popular female name. Scholars say this name has a Latin root "mater" and means "Mother". This name was associated with the image of a mother of a big peasant family who was very healthy and had a portly figure. Subsequently, it became a symbolic name and was used specially to image brightly painted wooden figurines made in a such way that they could taken apart to reveal smaller dolls fitting inside one another.

<http://russian-crafts.com/nesting-dolls/history.html> July 31, 2008 10:05AM EST

Bio



Philippe Van Nevervelde

European Director of the Foresight Nanotech Institute, Philippe Van Nedervelde is an activist technovisionary leveraging NBIC convergence technologies to realize individually as well as socially empowering futuristic visions as daily life realities. He is among the earliest developers of online 3D [virtual worlds](#), and he is a self-styled and noted social and business [matrix-entrepreneur](#).

Philippe is a 5-fold multi-lingual international spokesperson for leading futurist organizations including [Lifeboat Foundation](#) and the [Foresight Nanotech Institute](#) (Executive Director for Europe since 1997). He is also active in [Singularity Institute For Artificial Intelligence](#) (SIAI Counsel Member); World Technology Network (Materials Board Jury Member); [Center for Responsible Nanotechnology](#) (Global Task Force Member), and the [Peer To Peer \(P2P\) Foundation](#) (Sousveillance & Security Expert).

He is also the inventor of Total Situational Awareness "[C-Thru](#)" VR-based technologies/solutions for safety & security monitoring.