Noesis

The Journal of the Mega Society

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About the Mega Society

The Mega Society was founded by Dr. Ronald K. Hoeflin in 1982. The 606 Society (6 in 10^6), founded by Christopher Harding, was incorporated into the new society and those with IQ scores on the Langdon Adult Intelligence Test (LAIT) of 173 or more were also invited to join. (The LAIT qualifying score was subsequently raised to 175; official scoring of the LAIT terminated at the end of 1993, after the test was compromised). A number of different tests were accepted by 606 and during the first few years of Mega's existence. Later, the LAIT and Dr. Hoeflin's Mega Test became the sole official entrance tests, by vote of the membership. Later, Dr. Hoeflin's Titan Test was added. (The Mega was also compromised, so scores after 1994 are currently not accepted; the Mega and Titan cutoff is now 43—but either the LAIT cutoff or the cutoff on Dr. Hoeflin's tests will need to be changed, as they are not equivalent.)

Mega publishes this irregularly-timed journal. The society also has a (low-traffic) members-only e-mail list. Mega members, please contact the Editor to be added to the list.

For more background on Mega, please refer to Darryl Miyaguchi's "A Short (and Bloody) History of the High-IQ Societies,"

http://www.eskimo.com/~miyaguch/history.html

and the official Mega Society page,

http://www.megasociety.org/

Editorial
Kevin Langdon

Here's another issue of *Noesis*, on the small side this time (12 pages). Members of Mega and others, please submit material for publication.

Unfortunately, we are still having trouble keeping an article on Mega alive at Wikipedia. Chris Cole provides the details in his "Wikipedia Update" in this issue.

One of the issues involved in the Wiki Wars is "notability." Although Mega is certainly notable as the high-IQ society with the highest credible admission standards, this has been a hard sell. In order to try again later it would be helpful if we could do something to put Mega on the map. Elements that would contribute to this include:

* More of your serious scientific and literary work appearing in *Noesis*.
* Publishing the long-stalled *Journal of Right Tail Psychometrics*, with a focus on the high-range tests used for admission to Mega, and the development of new tests suitable for Mega admission purposes.
* A comprehensive multi-society survey, including many kinds of data on high-IQ people and comparison of the responses of members of the various high-IQ societies. Prometheus Society President Fred Britton and I have been discussing this project for some time and we'd like to hear from others seriously interested in participating in creating such a survey. Working with Roy Langston and Norm Treloar, Fred conducted a similar survey, known as the Arrow Project, in the 1980s.
* Sympathetic news stories focusing on Mega or including the society in coverage of the higher-IQ societies.

Also in this issue:

* An article by Chris Cole exploring some of the implications of the idea of God.
* An article by me outlining an idea for an interstellar propulsion system.
* Notes by Ron Yannone on key events in his life over the past year.
* An example of the wisdom of May-Tzu and a poem by Richard May.

Erratum: The copyright page of *Noesis* #182 (September 2006) lists the issue as #181 (June 2006). This error has now been corrected on the society website.

The deadline for *Noesis* #184 is February 15.

Cover: "Garble," by Nicholas C. Hlobeczy. Copyright © 2006 by Nicholas C. Hlobeczy.

Image of the earth from the moon, page 11: NASA.

Back Cover: The Editor's cat, Jadzia, sitting on a heater to keep warm.

Wikipedia Update

Chris Cole

A few months ago Chris Langan was promoting his CTMU theory on Wikipedia, which stirred up some controversy and caused the article on it to be deleted. During the course of this controversy, some of the people who were debating with Langan decided to track down other work of his on Wikipedia and delete it too. Either because Langan originally posted the Mega Society article, or because he is listed in it, or because they confused his Mega Foundation with the Mega Society, or some combination of the above, these people submitted the Mega Society article for deletion. This deletion was approved and even though there was some question about the process involved, the deletion survived a review. We were counseled to rewrite the article and resubmit it.

Over the course of three months we made many improvements to the article. It was then resubmitted, although not by one of us. It was immediately put up for speedy deletion as a recreation of deleted material, but this was overturned since the article had been rewritten.

The article remained up for a month or two and then was again nominated for deletion, this time by an administrator tracking a debate with Langan over edits being made to the article on Langan himself. This admin mistakenly thought that Langan had resubmitted the Mega Society article. When the deletion debate did not appear to be heading toward a deletion decision (there being five people arguing for deletion and nine against), this admin summarily closed the debate and deleted the article.

Before a deletion review could be started someone posted an article that stated that "Mega Society is second only to the Giga Society in entrance requirements" or words to that effect. We were accused of doing this in bad faith, although of course none of us had done so. Nonetheless the admin, who has special powers on Wikipedia, deleted the article and locked it so that only an admin can recreate it.

We have been negotiating with this admin to get the article restored or at least to have the debate reopened. So far this has not been successful. The only other alternative at this point is to start another deletion review. However, we learned last time that it is very difficult to succeed in deletion review, because institutional defensiveness is involved. Admins are valuable contributors to Wikipedia, and like most people they do not like being overturned, so other admins loathe overturning them.

God and the "Is/Ought" Dichotomy

Chris Cole

The idea of God is meaningful for several reasons. One reason is that God provides a basis for deciding the difference between right and wrong (good versus evil). Another reason is that God provides a means to achieve immortality. A third reason is that God provides an explanation for seemingly inexplicable experiences (the mystical tradition) that many people have. This third meaning would probably be the domain of psychology if not for the first two meanings and I will not further discuss it here. I think the first two meanings ironically lead to their own frustration, which will be the topic of this essay.

How does the existence of God distinguish right from wrong? One answer is that doing what God wants is right and doing what God does not want is wrong. But why is this so? God may punish those who choose to ignore his wishes, but the avoidance of punishment is a selfish act, not a basis for claiming that something is right. God may have a plan that we cannot understand, but why is obeying God's plan right? It is not true that obedience to God is the definition of "right," as is evident from questions like, "If God gave you the power to torture and kill every living human being and told you to do so, would that make it right?" Whether or not you think it would be right, the fact that the question can be considered shows that "right" cannot simply be defined as "obedience to God." The existence of God is not a basis for morality because of the "is/ought" dichotomy.

The "is/ought" dichotomy is the explanatory gap that exists in any line of reasoning that jumps from describing what "is" to describing what "ought" to be. As long as discussions stay within the confines of the factual or the confines of the moral, they follow the usual forms of reasoning and argumentation. It is when a discussion attempts to jump from the factual realm to the moral realm that the dichotomy is encountered. There have been myriad attempts to bridge the gap, but none has achieved anything like universal acceptance. This is because morality is based on values, and values are based on goals, and goals cannot be detected in the factual world. There is no experiment that can be performed to detect that one thing is better or more beautiful than another. Why values exist at all leads us naturally into the second reason for believing in God.

While the factual world does not have values, the factual world does have a form of self-organization called evolution. And one of the results of evolution is the creature. A "creature" is a system that is self-organizing because it is built to survive. Some creatures have cognitive functions that allow the creature to model the world and make plans. We say such creatures have the will to survive. This "will" is embodied in each creature by a set of values which the creature attaches to its environment. The creature seeks to manipulate its environment to ensure its own survival, and values situations in

which it is more likely to survive over those in which it is less likely to survive. Indeed, this is probably a bit understated. A creature perceives its environment only in order to survive and hence it is likely that perception and evaluation are intertwined. It is then no wonder that the "is/ought" dichotomy has historically been a source of controversy.

One way self-organization proceeds is by fault tolerance, and one form of fault tolerance is the species. A "species" is a type of creature that can reproduce itself. The species thus ensures its own survival by making many redundant copies of the creatures in it. This is fault tolerance through massive redundancy.

What is in the interests of the creature is not always what is in the interests of the species. In order for a species to dominate competing species some mechanism must exist to override an individual creature's selfish interests. If the creature has cognitive functions, that mechanism is a sense of morality.

The calculations necessary for a creature to figure out how it must act to ensure the survival of the species are beyond the abilities of a creature with limited cognitive abilities. Creatures think symbolically because they cannot work out the details of every situation, and this leads to the idea of "right" and "wrong." These normative values do not exist independently of the creature, but it is not evolutionarily adaptive for a creature to tend to question these views. From the standpoint of species survival, it would be better for the creature to believe that "right" and "wrong" are objective facts about the external world. Since this kind of complex cognitive setup is not something that can be conveyed in genetic material, it is conveyed in cultural material. This is why the culture of all societies has historically included a moral underpinning. Evolution may favor blind obedience to moral strictures. The ability to tease apart the "is/ought" dichotomy may be maladaptive.

Species that can adapt to meet new challenges will dominate those that cannot. Both sex and mortality evolved to speed up species adaptation to new situations, primarily new competitors. The upshot is that evolution favors a finite lifespan. Ironically, evolution endows the creature with both a finite lifespan and the will to survive. Creatures with sufficient cognitive resources to realize this lead lives of quiet desperation, wishing on the one hand to live, and knowing on the other that they will eventually die. This naturally leads to a tremendous desire to avoid death by some means, and a belief in some kind of an existence after death can satisfy this desire. The need to believe that right and wrong have an objective meaning and that life continues after death have frequently been bound together into one belief: God. God is an eternal entity that controls a realm that we will enter after death and therefore if we want to live forever, we will obey God's laws while we are alive on Earth. These two beliefs reinforce one another and many civilizations have been built on this symbolic foundation.

Once all this is realized, the question naturally arises, how do we escape the clutches of this evolutionary dilemma? One mechanism of escape is to mediate the will to survive; this is the practice of Zen and similar traditions, which teach that suffering is caused by desire, and the end to suffering is the end to desire. A waterfall does not suffer

because it does not desire, and by considerable effort it is possible to deprogram desire and hence suffering.

Another approach is to attempt to overcome the finite lifespan of the creature. Given its ubiquity and its importance to evolution, it is likely that there are systemic mechanisms that are responsible for mortality. To reconfigure the organism to live forever will probably require a profound understanding of the creature. This understanding is currently beyond the capability of any single person. There seem to be two ways in which this solution might be found outside of the efforts of a single individual.

The first way is via culture itself. The same culture that imparts morality to the individual can build up knowledge beyond the ability of any individual to understand. However, there is a problem with this solution. While culture has historically been able to pass on simple values and knowledge, it has never been able to create complex solutions like works of art or scientific theories. These have always been the creation of gifted individuals. The reason for this is that creation seems to require a kind of organic unity that can only be achieved within the cognitive apparatus of a single individual.

So here we have a roadblock in the way of achieving practical immortality. On the one hand the complexity of human biology is beyond the ability of any one individual to comprehend; on the other, while human culture can store all the necessary information, the systemic changes necessary to achieve it probably require a synthesis that has hitherto required a gifted individual. To draw an analogy, the game of chess can be played fairly well by humans on an 8x8 board. However, it is unlikely that humans can play chess well on a 1000 x 1000 board. The cognitive resources required simply do not exist in a single human brain.

This analogy also suggests a solution. Computers have recently surpassed human chess players. In the past it was commonly believed that computers were not capable of creative thought, but this belief has been difficult to quantify. In the case of chess, as the depth to which the computer searches increases, it begins to exhibit behavior that chess experts cannot distinguish from creativity. It seems likely that the common belief that creativity is uniquely human is wrong and that computers are capable of creative thought.

Science fiction has anticipated this transition and warns that humans will be eclipsed by computers. Humans have goals because they evolved; computers did not evolve and hence there is no reason to think they will have goals. Primitive cultures endowed all animate objects with intentions ("spirits") and modern cultures endow all cognitive objects with the same. This is a misunderstanding. A computer is a tool, much as a bulldozer is a tool. A bulldozer can move dirt more quickly than any human ever will be able to. Similarly, a computer can think faster than any human ever will. The fear of extinction by computers is a failure to come to grips with the "is/ought" dichotomy.

An Interstellar Propulsion System

Kevin Langdon

We have now conducted a preliminary exploration, by means of robotic spacecraft, of our own solar system, but we know almost nothing of the worlds around nearby stars. Clearly, these other planetary systems are of great interest but conducting an exploration of them poses great technical challenges, because of the great distances involved and because we know so little about conditions in the vicinity of stars other than the sun.

The primary challenges are accelerating spacecraft to speeds which will make it possible to reach the stars in years or decades rather than centuries or millennia, miniaturization to minimize the energy requirements for propelling them, protecting them against the hazards of long space voyages and radiation and debris in the target star systems, and developing communication technology capable of sending (from the spacecraft) and receiving (on earth) data from the brief reconnaissance possible by means of flybys of distant stars (deceleration of spacecraft for more prolonged investigation of other star systems is a much more difficult problem requiring much more advanced technology; the first interstellar missions will, of necessity, be flybys).

This paper addresses the first challenge mentioned above (speed); it assumes that it will be possible to construct fairly small probes to minimize the energy required. While designers of interstellar probes will need to think seriously about various hazards, exploration of new worlds is always risky and there is no guarantee that the first few attempts will be successful. The communication problem is within the reach of present technology and is not likely to be the most critical factor in such missions, but it also poses a challenge. A number of spacecraft within the solar system have been lost because of failed communications.

The idea proposed here would require a massive macrotechnology initiative but it is doable in principle through scaling up existing technology.

I propose a spacecraft accelerator consisting of a ring of satellites in a close orbit around the sun (at a distance of about .05 to .2 A.U., depending on the tradeoff between the availability of a large amount of solar energy and the technical difficulty of protecting the spacecraft and the satellite stations from solar radiation).

Each station would consist of four principal parts:

1. Massive arrays of solar panels to capture the very large amount of energy that would be required.

2. A very robust cooling system to dissipate the very large amount of heat that would accumulate.

3. Very powerful magnets to tweak the trajectory of a spacecraft as it circulates around the accelerator. Most of the force would be required to keep the spacecraft from flying outward before it's built up sufficient velocity, or in the wrong direction.

4. Advanced sensing instrumentation and computing to control the spacecraft during the process of acceleration.

After the spacecraft reaches its target velocity it would be released in the direction of a star of interest.

The spacecraft would be equipped with advanced imaging systems and other instruments, similar to the instrumentation of the Voyager spacecraft, which gathered valuable data as they passed through the satellite systems of the outer planets of the solar system, but far more sophisticated—and much greater sophistication would be needed, because, in addition to the much greater distances involved in reaching another planetary system, the spacecraft wouldn't necessarily approach such a system in the plane containing most of the orbits of major bodies in the system. (However, it might well be possible to target a nearby star with planets in a plane closely aligned with our solar system.)

How many stations would be required and how closely they'd be spaced, and their exact orbital distance, are engineering questions which could only be answered after detailed studies, but there would undoubtedly have to be many of them. One advantage of this design is that if something went wrong a circulating spacecraft could only take out one station.

This system would make it possible to reach the high velocities which will be needed for interstellar exploration.

2005-2006 in Retrospect

Ron Yannone

I went home for Christmas 2005 to Neptune, NJ to visit mom and four brothers and several friends. On the way down a brake shoe literally shattered but I could not discern it . . . it appeared to clear up as I drove the last hour homeward. A few days later it did act up again . . . and the Shell gas station repair person (Roger) found the shattered pieces in the brake drum. A hefty bill to replace both rear brakes. Almost a day after the alternator went . . . Christmas Eve actually . . . Exxon repair and gas station near Fort Monmouth in Eatontown was open and replaced it.

In February, Bruce Partin and I were notified the Commander's Decision Aid (CDA) patent was issued.

I continued to prepare problems for the American Mathematics Competitions (AMC) for the AMC8, AMC10, AC12 and AIME. About 400,000 elementary and high school students take these tests.

I presented a technical paper in May at the International Conference in Signal Processing, Computer Science and Pattern Analysis, Budapest, Hungary. I was also a plenary speaker.

I continued as editor for the BAE Systems quarterly-issued "Fellows Periodical," doing four issues. Hard, bound copies went to about 30 upper-management personnel the week prior to the online version on the Home Page – with access to about 16,500 employees.

In September/October, BAE Systems paid the issuance fee for another patent that is expected to be issued by late December or early 2007. This is with Kam Mun. It was in the patent cycle for a couple of years.

I was alerted that I was to be included in three Marquis *Who's Who* publications: America, The World, and Science and Engineering.

I attended the Technology Review's "Emerging Technologies Conference at MIT" in mid-September.

Two other patent applications were prepared by farmed-out patent attorneys and filed by our legal department.

Climate Change

May-Tzu

In the news:

The UN Intergovernmental Panel on Climate Change has revised its estimate of the effect of human activity on climate downward by 25%, but the Panel still predicts a rise in global temperature of 8 degrees F by the end of this century, and notes that CO2 production has accelerated since its previous report in 2001.

So-called climate change is simply a precursor of the recent election of Democrats to Congress in the U.S.

Al Qaeda is behind any "climate change" and preventing the Iraqis from becoming Texans.

Even discussion of the possibility of climate change is a victory for the terrorists.

If there really is climate change, America and lovers of freedom should **stay the course!**

The Holy Land
Richard May

According to the One-and-Only-One True Revelation,
the entire surface of the Earth,
and even below the surface to a considerable depth,
*was given **forever** by the Landlord to the Chosen Bacteria.*
Even today, unnoticed amidst the Arabs and the Jews,
bacteria continue to live quietly
and worship in their Holy Land,
according to their ancient traditions.
Only the Chosen Bacteria have received a Revelation of
 ***pure signal with no noise**.*