

Background and history of the association **"Sub Specie Aeternitatis" - 2011 Bulgaria**

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Why do I bother the audience with the history and background of the association "Sub Specie Aeternitatis" – 2011?

First of all - this is the only organization in Bulgaria that deals with immortology, and it does so for more than a several decades - from the 70s to today, i.e. long before the world immortology has become modern.

Second, the history of the association is a convenient way to present the flow of ideas, which have been realized by the group from the 70s until today, moreover this stream does not copy and reproduce foreign ideas. This is an original approach and it offers ours Bulgarian solution on principles and technology for achieving rational personal immortality.

The immortalism is an essential component of transhumanist movement.

Just look at Zoltan Istvan's campaign as candidate for presidency of the United States that promises immortality of US citizens. He led his mobile campaign with so-called IMMORTALITY BUS. <http://www.immortalitybus.com/>



If we "google" words PERSONAL IMMORTALITY (cibernetics, rational, science....) we have thousands of results displayed immediately, but just less than 20-30 years ago this was not the case. And it is not just there were no internet, but the scientific publications on the topic were less than a handful in the whole world.

Years 1973-1977r.

In 1973 the first focus group on the problems of immortality was founded, which then we called "infinite growth" we were afraid of the word immortality at the time. The group was composed by students of technical disciplines - physics, computing, mathematics and young professors from the Physics Faculty of Sofia University "St. Kliment Ohridski". The group was formed spontaneously and voluntarily without coercion or cooperation from academia or public structures. Motivation and inspiration, members of the group have received from science fiction writer and futurologist Arthur C. Clarke and in particular from his book "Profiles of the Future" 1968 chapter "Humanity grows old" and the physicist John Bernal. Perhaps this is John Bernal first introduced the idea of immortality in his book written in 1929. "The world, the flesh and the devil", where he expresses the idea that man can be upgraded based on artificial organs and prostheses, and as a logical consequence - why not the whole body prosthetics?



John Bernal

“ Now we must not accept death as mysterious destiny imposed on us as retribution by a jealous god, but in fact as a legacy arising from biochemical facts and processes ... as a consequence of that we have inherited bodies for which death a normal finish.”

And although, he did not offer anything specific in this direction, relying on intuition of a scientist, takes an optimistic stance that expresses this:

“What we do know is that the restrictions now standing before us are not immutable. You can now find ways to delay death and will probably find more of them, but we are still in the position of Thor between the Giants, who bout my old troll Death can achieve nothing more than to make him kneel. We have a great hope from him to succeed because uniting force greater than that of Thor, with wisdom superior to that of Odin”



Arthur Clarke

Biological immortality and retention of youth are so alluring things that people never cease to pursue them, always will tempt examples of creatures that live hundreds of years and will not be afraid of sad adventures of Dr. Faust. It would be foolish to think that this aspiration never, absolutely never be crowned with success. But whether such a success would be desirable, it is another matter. The body is a carrier of the brain, and the brain - the seat of the mind. In the past, this trio was inseparable, but that will not always be so. If we learn to protect our bodies from destruction, then we may in time to replace them. For such replacement does not necessarily have to serve another body of flesh and blood: this may be the machine. And maybe it will be celebrated next stage of evolution...One can imagine such a future when people, still living organic matter-liners, will look with regret those who have gone to incomparably richer form of existence and become able to instantly switch their consciousness or focus area at any point on land and sea and sky, where are the sense organs. With maturity, we break with childhood; someday we will be come upon a second, even more astonishing maturity where will ever forgive flesh. Now, maybe it's time to look at the idea that most people seem worse than thinking that machines can replace us.

I already mentioned in the previous chapter, the machines can join us and unite with us. But how long this partnership will last? Could the synthesis of man and machine ever become stable, or purely organic components thereof will become such an obstacle that must be abandoned? If, in the end, it happened - and I provide sufficient evidence to allow us to think that it must be done, we have nothing to regret, and nothing to fear of."

What was exposed as forecast in "Profiles of the Future" is artistically recreated in "Odyssey 2001"



Academic Victor Glushkov

The group has obtained another impulse from an interview Acad. Viktor Glushkov, in which he said:

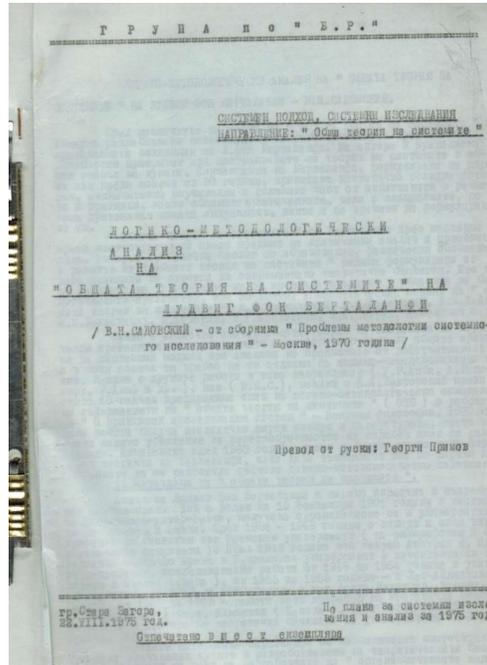
“I think mankind can give to the machines a lot more. Somewhere, at the last stage of transmitting information to the computer man will likely transcribe in the machine his consciousness and he suddenly will begin to feel that he, that is himself, and at the same time, he - it is the machine. Such a possibility could not be excluded if the core of consciousness is not bound inseparably to certain cells of the brain, and is able to migrate. Here, this is it - the final transition, the transition to the computer not only of the intellectual power, but also of self-consciousness of man itself, it is actually full of immortality ...”

But the idea of cybernetic version of personal immortality was formulated too abstractly and too general, and we have been focused on how this could be achieved here and now. More or less, the tasks have been defined as follows:

- Study of publications directly related to the cybernetic version of personal immortality.
- Exploring all possible relevant issues.
- Search answer the question: **How specifically would be achieved personal immortality?**
- Delivery of seminars and discussions on the topic. Preparation of essays and reviews.

We have found ourselves in a sea of heterogeneous information. Theories, hypotheses, experimental data written in different languages, with different logic, and in the traditions of distant from each other disciplines. What we needed was a single language, integration of

information framework to cover and present the problem of personal immortality in its



cybernetic version.

This is how one of our papers looked at the time!

We have realized, that we have to make a choice of a universal language and **interdisciplinary general theory**, penetrating into areas that directly or indirectly relate to personal immortality in his cybernetic version! And thus, we chose GENERAL SYSTEM THEORY by Ludwig von Bertalanffy (GST) which at that time was extremely popular and promising.

However, GST has proved to be an area that demonstrated several dozen different concepts without bridges between them.

And therefore, we realized the need for such a version of GST that without losing the initial concept of this theory can be adapted to the problem that we solve. Further extending the need to develop both, the formulation and the solution of the specific problems, in terms of our laws and the OTC version, we started to develop our version of the GST.

Year 1983

New stage of development of the group in "endless development."

It began with the discovery of the so-called neuro-holographic hypothesis of brain activity and processing of sensory information (Source Karl H. Pribram Holography and Brain Function) and several dozen subsequent developments of PR. Westlake ,M.Arbib С.Н.Брайнес ,... Since it is a key to the ideas of the movement I will outline it here briefly. The neuroholographic hypothesis rests on the following:

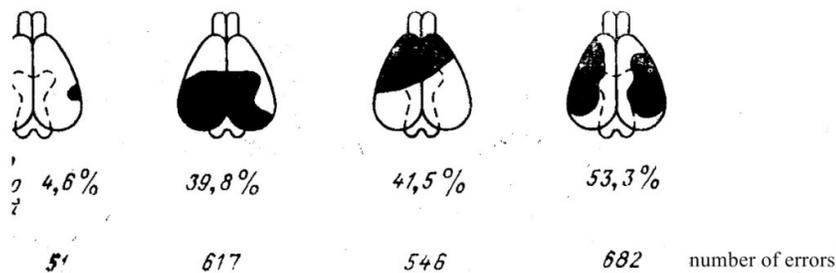
Properties of the Optic Hologram	Properties of the neurophysiological memory
Distributed record	Lashley's mass action principle: a)

	irrelevance of the specific place of the brain cortex that is damaged b) proportion of the brain that is injured is directly proportional to the decreased ability of memory functions
Pattern recognition that is invariant with regards to the dimensions or motion of the object	Image recognition as something unified, Image is recognised as a whole.
Associativity (three types)	Associativity
Spacial Volume, Colour, and Motion in image restoration	Stereo perception, Colour, Temporal Memory

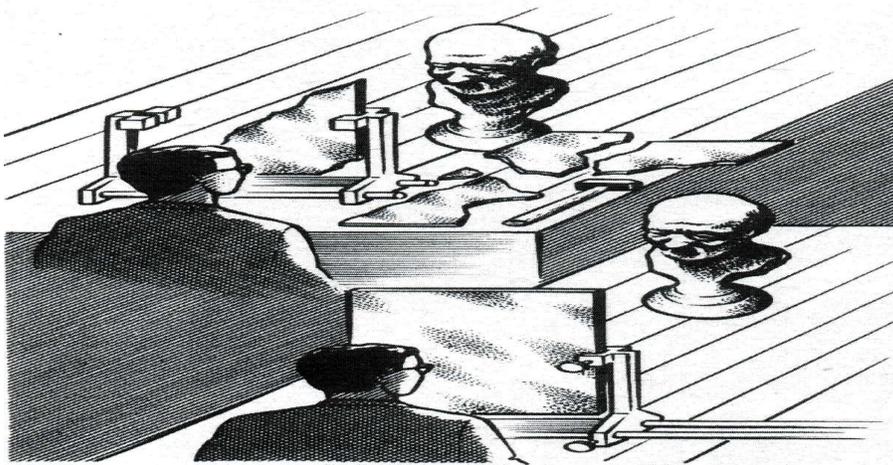
I would like to remind specifically here experiments of Karl Spencer Lashley in removing the parts of the cortex of rat that are specially trained to perform in a maze. Lashley found that errors made by rats with partially removed brain cortex do not depend on the location of the removal but are dependent of the quantity removed cortex. This was an obvious indication for distributed recording of information in the brain.



Karl Spencer Lashley

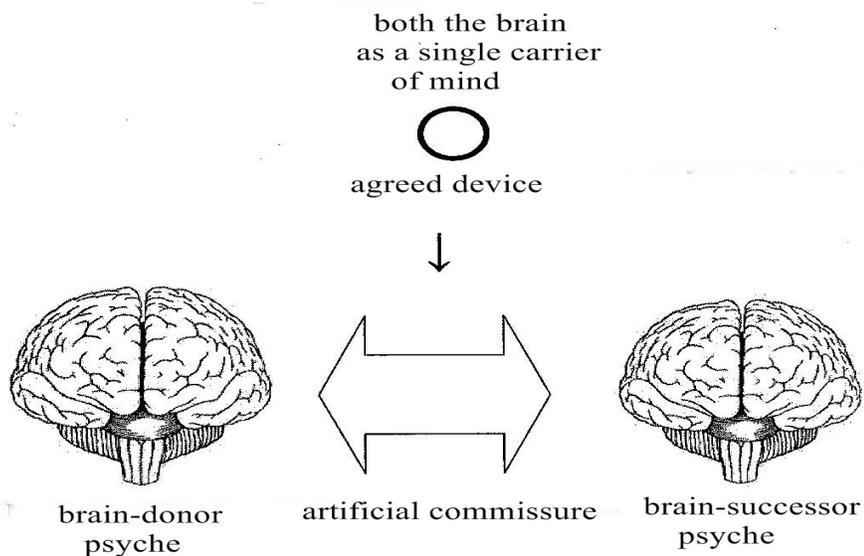


This fact too reminiscent of the ability of certain types of optical holograms that in breaking and removing the pieces, even only one piece is enough to reproduce the recorded image.



Assuming, as a model the neuroholographic hypothesis, it means that we could transfer memory from one brain to another, if we create the necessary conditions in the form of **artificial commissure** connecting the two brains. The largest commissure in the human brain is the corpus callosum. Through it left and right hemispheres share information and work as a whole. Experiments of disjunction of the corpus callosum in the brain are extremely informative about the principles of operation of the nervous system. If we create an artificial commissure, an analogue of the corpus callosum and connect with it two nervous systems (two brains, i.e. four hemispheres) conditions will be created to develop common to both brain memory traces (engrams) i.e. transfer of memory between them.

The group took to construct and implement a kind of experiment:



... and we have issued the paper "A Holograph Model of Memory"

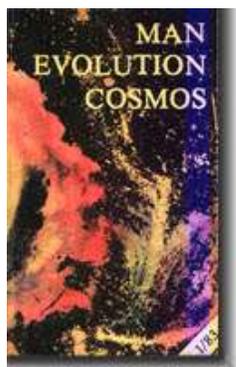
System approach and preservation (tendencies, concept, approaches) Системност и запазване, collective journal methodology of science, Sofia, Bulgarian Academy of Science, 1989.

[A model of the universe in terms of GST](#) - Report of the National Conference, Yambol, 2011



The undisputable success of the group was the publication of the article:

„[Can we put new meaning into the idea of personal immortality](#)” journal Man, Evolution, Cosmos”, issue#1 1983. Where the problem of cybernetic version of immortality is central and the foundations of the theory of rational personal immortality have been given. The article has been issued simultaneously on Bulgarian, Russian, and English languages. In this article, personal immortality is interpreted on the basis of systematic ideas and no longer seems like a miracle or pointless spurt of certain persons. It is regarded as a natural consequence of the processes of preservation in the world. Personal immortality is seen as **ultra preservation** a certain type of systems - systems of information. The first class of this type of system are the genes and the genome as a whole, which have already realized a kind of **ultra preservation**. The mind (the psyche), and especially the self-conscious, self-aware mind represent another, superior to the genome, class of systems of information. Mind's over-preservation has not yet been achieved. Through transfer from one carrier (one substrate) to another, more sophisticated compared to the previous one mind over-preservation could be achieved.



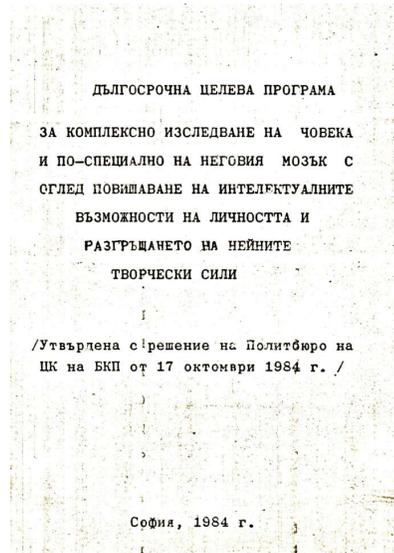
Years 1983 – 1991

The group is growing and it is gaining impressive size.

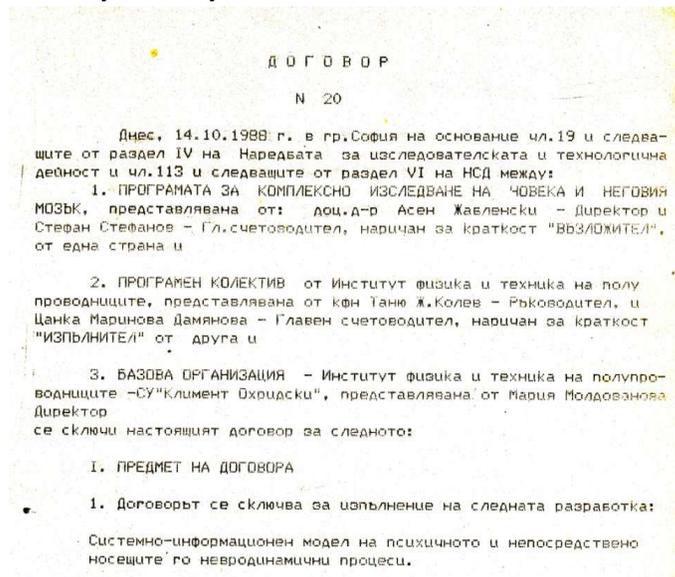
Doctorates in various areas related to the problem have been accomplished.

Without describing all our attempts to institutionalize activities for achievement of the cybernetic version of personal immortality, I will mention only the most successful:

It was the conclusion of the Contract №20 / 14.10.1988g. between original team working on the problems of cybernetic version of personal immortality led by T. Kolev PhD and Assoc. Prof. A. Zhablenski, leader of the "Complex Program for the Study of Man and his Brain. The purpose of this contract was the development of a GST model of mind, and mind carrying



neuro-dynamic systems:



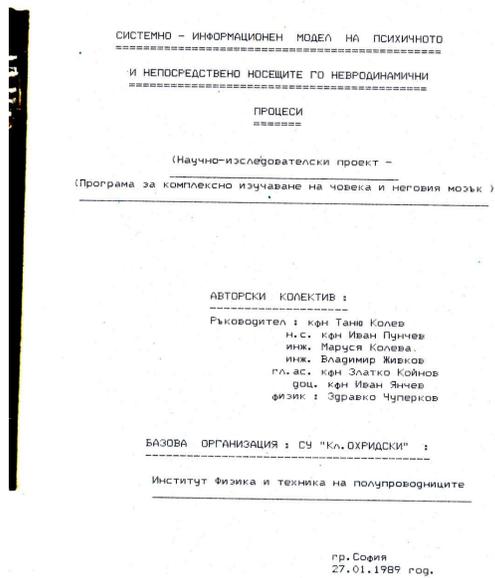
It was carried out by a strong team with interdisciplinary background, and it was using a solid methodological foundation. It had all pre-requisites to achieve success.

АВТОРСКИ КОЛЕКТИВ :

Ръководител : кфн Танив Колев
н.с. кфн Иван Пунчев
инж. Маруся Колева
инж. Владимир Живков
гл.ас. кфн Златко Койнов
доц. кфн Иван Янчев
физик : Здравко Чуперков

БАЗОВА ОРГАНИЗАЦИЯ : СУ "КЛ. ОХРИДСКИ" :

Институт Физика и техника на полупроводниците



Unfortunately, the social processes of transition to democratic government, which took place at that time, has led to termination of the research programs and the team has collapsed. The group entered into a standstill.

Years 1997 – 2011

During this period, members of the original research group, who did not give up from their research plans set out to restore the activity.

The tasks in this period were the following:

Creating a new research group.

Achieving scientific and R&D activity in new conditions. (doing science privately)

Creation of research and experimental base.

Building teams for specific tasks, equipment and financing.

At that time, we established contact with the group from the US, which maintained a website Immlnst.org (Bruce Klein). Subsequently renamed to longecity.org

We were able to publish our article from 1983 „Can We Put New Meaning into the Idea of



Personal Immortality” in discussion forums on the site:

Years 2011 – 2015

A new stage of development of the group has begun. Laws of the country already allowed us to institutionalize without begging for a permission. The association "Sub Specie Aeternitatis - 2011" has been formally registered.

Recruiting members

Promotion of the ideas.

Establishing contacts with Bulgarian and international scientific community

Creation of a database of ongoing research related to our topics

Formation of new research projects funded by the association

We have funded the development, maintenance, and social media promotion of several websites, most important of which are:

<http://bg.subspecieaeternitatis.org/> and on [Facebook](#)

<http://www.immortalitygst.com/en/> and on [Facebook](#)

<http://www.tanyukolev.eu/>

We have established relationship with the Russian organization that supports 2045.ru . We have achieved personal contact with its founder Dmitry Itskov and we gave our moral support for their activities. The names of the most active members of our association are listed and the site of 2045.



Liaising with Russian google group on technical immortality, and with first appearances on the forums of 2045 I met with Dr. Jan Korchmaryuk. It turned out, that we had similar views on the issue of cybernetic version of personal immortality. He demonstrated, invented by him

a very felicitous term "Settleretics" from resettlement of the personality from one carrier to another, based on the English word - settler.

We established a relationship, and we organised an open meeting, which we called the "First Bulgarian-Russian symposium on the problems of settleretics"

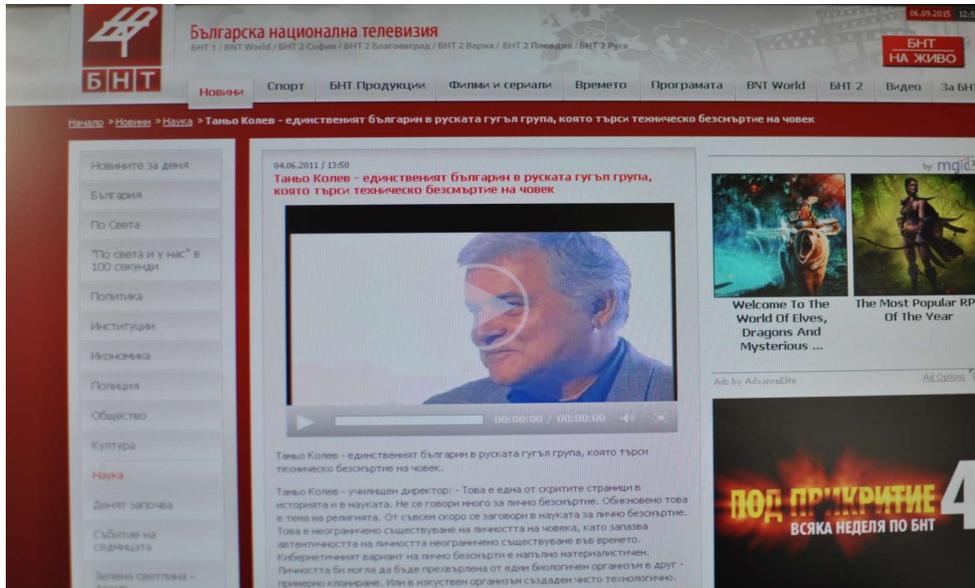
The reports of this meeting could be reviewed and seen [here](#).

Spots from the meeting and the acute discussion:

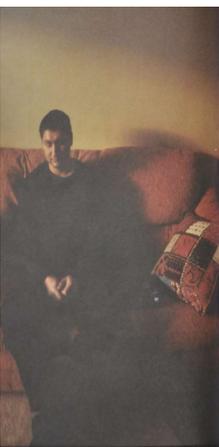
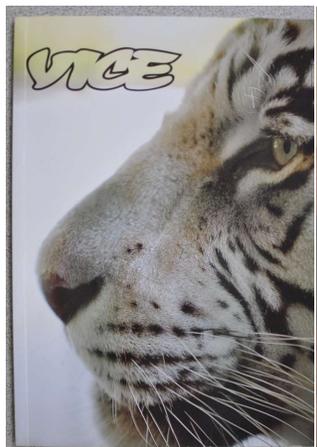


We implemented broadcast on Bulgarian National TV at their invitation, but unfortunately the goal of the organizers was to have the cybernetic immortality rejected. At least, what we did achieve is that more people heard that there is such an idea.

[Bulgarian National TV link](#)



In this period few of our popular articles and interviews have been issued in newspaper "Republic", Vice Bulgarian Eddition, **Meanstream Magazine**



The approach of the Bulgarian group of investigators, it is truly original and quite distinctive from others who gained popularity lately:

Mind Uploading

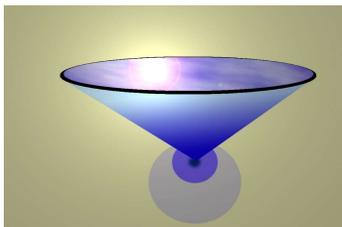
или

Whole Brain Emulation: Reverse Engineering a Mind

<http://www.carboncopies.org/>

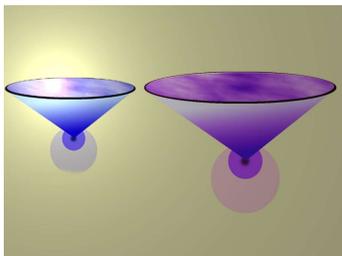
Our approach can be described with the following sequence of diagrams:

№1



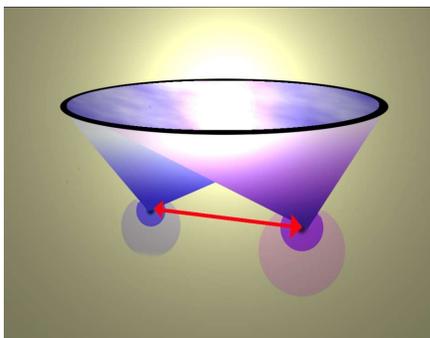
Schematic representation of the human individual (starting point)

№2



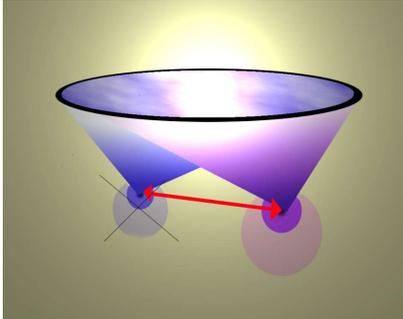
In purple is represented an artificial organism, a dedicated receiver of personality, It is not necessarily the receiver to be based on another substrate different than biological one.

№3



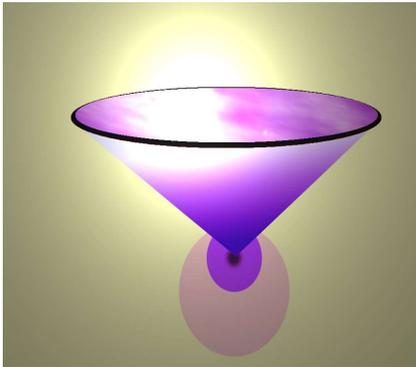
Creating artificial commissure between two organisms (the red bi-directional arrow), that will provide a common area (the black ellipse) of existence and development of the personality (the luminous orb)

№4.



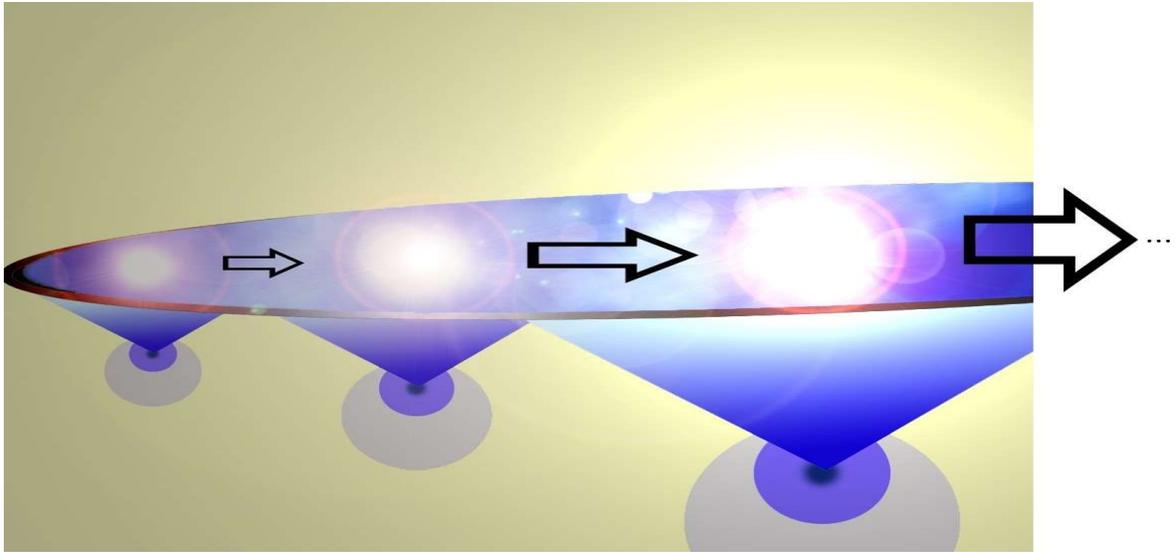
Removal of the old body, temporarily or permanently, after the conduct of a specific test.

№5



Existence and development of the personality in the new body, resettlement in a new body.

№6



Existence and development of the human personality in a series of bodies with continuity and growing perfection!

This scheme overcomes a number of difficult and uncomfortable issues that may be obstacles for the other approaches! The scheme is described in detail in Bulgarian [here](#).

ЛИЧНОТО БЕЗСМЪРТИЕ НА ДНЕВЕН РЕД!

С помощта на държавата или без нея,
така или иначе ние ще открием специализиран център в Русия
и той ще се занимава с разработката на технологиите на
кибернетическото безсмъртие при човека.
За първи път в света.
Ние сме уверени, че такъв проект може да се осъществи
и без държавна поддръжка,
с помощта на Интернет, обединявайки заинтересованите хора.
Но тази държава,
която ще подкрепи идеята и инвестира в нейната реализация,
в бъдеще ще стане
икономически и политически лидер на света.

Дмитрий Ицков – инициатор на Движение „Россия 2045“

Ню-Йорк 15 октомври 2011г.

Идеята за кибернетически вариант на лично безсмъртие беше поставена решително и категорично от общественото движение „Русия 2045“ днес, но тази идея е формулирана и обсъждана още от средата на XX-ти век и има доста дълга история. Зародишът може би се съдържа в една много ранна публикация¹ на физика Джон Бернал в която той изказва илюзията, че многобройните ограничения, присъщи на човешкия организъм, могат да бъдат преодоляни с помощта на изкуствени органи-протези, продукти на конструкторската и технологична активност на хората.

Футурологът Артур Кларк в своята, почти забравена вече, пълна с прогнози книга² „Профили на бъдещето“, в главата „Човечеството остарява“ още през 60-те години постави на обсъждане въпроса за личното безсмъртие и усъвършенстване на хората, чрез сливане с машините. Сливане до такава степен, че всички човешки органични компоненти да отпаднат и от човека да остане само духа, съзнанието, личността върху изкуствено създаден носител, по-съвършен от органичното тяло на човека. Тогава тези виждания бяха наречени „разюздани сциентизъм“ и предизвикаха силна негативна реакция³, която почиваше повече на политически и идеологически аргументи, отколкото на анализ, наука и разум. Често привържениците на тези идеи бяха обвинявани в некомпетентност и некоректност, сплекулиращи с авангардни научни постижения.

Толкова по-ценна е позицията, която акад. В. Глушков смело заяви пред цялата общественост по това време:

*„Аз мисля, че човек ще може да придобие на машината много повече. Накъде на последния стадий на предаване на информация към компютъра, човек като че ли вписва в машината своето самосъзнание и изведъж започва да чувства, че той, това е той и в същото време, той – това е машината. Такава възможност не е изключена, ако центърът на самосъзнанието не е свързан неразривно с определени клетки в мозъка, а е в състояние да мигрира... Ето, това е то – окончателният преход, т.е. преход в компютъра не само на интелектуалната мощ, но и на самосъзнанието на човека, това фактически е пълно безсмъртие...“*⁴

Като коментар, продължение и конкретизация на вижданията на акад. Глушков са и нашите първи публикации⁵ и опити⁶ кибернетичният вариант на лично безсмъртие да бъде изтеглен от нивото на журналистическите сензации и коментари до нивото на научно изследване и разработка.

More information and resources could be found in the following web addresses:

<http://bg.subspecieaeternitatis.org/>

<http://www.tanyukolev.eu/index.php/ct-menu-item-1.html>

<http://www.immortalitygst.com/en/>