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Dozy-chaos end of the human civilization

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It is proposed to consider human beings and human community as very complex molecular physical systems in which dozy chaos plays a governing dynamic role. Dozy chaos is the cause of molecular quantum transitions and various chemical reactions, and as a result, the evolution of the entire molecular matter, up to the emergence of life, genome, and human being as such. It puts forward a concept of self-examination of dozy chaos, from which it is shown that mankind is likely doomed to failure in the short historical perspective as a result of the disastrous rise of egoistic inner contradictions, unless it learns to recode its genome from egoistic to altruistic by controlling dozy chaos on a global scale. It is argued that from the perspective of the survival of humanity in conditions of the existing egotistic human genotype, bipolar political arrangement of the world is preferable to both unipolar and multipolar arrangements of the world. It is shown that the gap between the high, and further growing rapidly, level of technological progress and an extremely low level of altruism of the human genotype, caused by our biological origin from the animal world, is the main and fatal source of our likely collective and common suicide in the near future.

Key words: human civilization end; egoistic and altruistic human genotype; self-examination of dozy chaos; genome-code conversion; global dozy chaos control; technological progress; socium instability; physics of psychology and policy.

“... If you can fill the unforgiving minute
With sixty seconds' worth of distance run —
Yours is the Earth and everything that's in it,
And — which is more — you'll be a Man, my son!”

(Rudyard Kipling)

Introduction to Dozy Chaos

The death of a living being seems to be encoded in genes. What about the whole population as a system? In sum, is the end of our civilization encoded in human genome (Voloshin, 2015)? To answer this question, we ask the

questions: “How did life and then intelligent life originate, and how did the genome itself originate?” First of all, we state that life can only occur in a molecular medium, but one can not occur, for example, in an atomic medium. A human being can be thought of as a giant living supramolecule, and humanity — as a totality of ensembles of these supramolecules. What is the fundamental distinction

between molecules and atoms? In a molecule, atoms are bound by electrons and oscillate. What is the fundamental difference between quantum (electron) transitions in molecules and quantum transitions in atoms? In an atom, very light electrons are tightly bound to a single heavy nucleus and can not control its motion in quantum transitions. Electrons in an atom are like slaves towards the nucleus. In a molecule, electrons are bound to multiple nuclei (at least two), and in the processes of quantum transitions, on the contrary, can control the motion of the nuclei. As the saying goes, there is a reorganization of the nuclear motion. For example, as a result of an electronic excitation, the molecule becomes slightly swollen, and the nuclei in this excited state oscillate already about new equilibrium positions. The result of the reorganization of the nuclear motion is associated with a molecular reorganization energy, which can be calculated by quantum chemistry methods (see, e.g., Petrenko and Stein, 2015, and references therein). The question arises: “How do in a very short-time-quantum-transition light electrons manage to control the motion of heavy nuclei having huge inertia?” It turns out that before moving to an excited state, the electrons make the vibrational motion of the nuclei chaotic. (We can say that the dynamically active electrons, being inanimate in atoms, become quasi alive in molecules.) As a result, the vibrational motion of the nuclei is partially transformed into their translational motion to new equilibrium positions. At the end of the quantum transition, due to chaos the translational motion of the nuclei returns to their vibrational motion, but already to about new equilibrium positions. This chaos is called dozy chaos, and it arises only for a short time of molecular quantum transitions. Dozy chaos emerges as a combined effect of the collective chaotic motion of electrons and nuclei, and their chaotic electromagnetic interactions (dozy-chaos field or dozy-chaos radiation) in the transient state of molecules experiencing quantum transitions. Dozy chaos represents the universal physical phenomenon, universal to the same extent to which electrons and nuclei themselves are universal (Egorov, 2013a, b, c, 2014). Dozy chaos is the main physical element in the dynamic self-organization of molecular quantum transitions. Because of dozy chaos, electron transitions in molecules are no longer quantum jumps between the energy levels as occurs in atoms, and they have a continuous spectrum of electron-vibrational energies in the transient state. Thus, a molecule, being a quantum system in the ground and excited states, for the time of a quantum transition becomes the classical one, which, as is well known, has a continuous energy spectrum. The above physical picture of molecular quantum

transitions, based on the concept of dozy chaos, is confirmed by the successful qualitative and quantitative theoretical explanations for the large number of experimental data on the shape of the optical bands in polymethine dyes and their aggregates (Egorov, 2001, 2002, 2009, 2011, 2013a, b, c, 2014, 2017; Petrenko and Stein, 2015), as well as for many other experimental data related to the elementary electron-charge transfers (see references in Egorov, 2013a, 2014) — the simplest case of molecular quantum transitions (Egorov, 2013a, b, c).

Dozy Chaos as the Physical Cause of Life and Genome :

Dozy chaos is the cause not only of molecular quantum transitions, but also of the whole variety of chemical reactions, and as a consequence, is the origin of evolution of the molecular matter, until the emergence of living matter and the man himself (Egorov, 2013b). Dozy chaos is the main physical element in the dynamic self-organization not only of molecular quantum transitions and chemical reactions, but also in the self-organization of molecular matter and life itself in all its manifestations. It is the aforementioned classical nature of the joint motion of electrons and nuclei in the chaotic transient state of quantum molecular systems that provides an extremely high efficiency of the processes of self-organization in molecular matter and their not only incidental, but also highly focused nature. One might say, during the evolution of living matter, dozy chaos searches a comfortable refuge for itself and takes it in the form of the brain, the human brain in the end. The living human brain is a receptacle of “a large amount” of dozy chaos, so the brain functions effectively (Egorov, 2013b). In parallel with the long evolutionary process of search for the “refuge-brain”, dozy chaos “created” the genome that provided a fast reproduction of this brain in large quantities as a result of natural reproduction of living organisms (Egorov, 2013b). Dozy chaos is the essential physical substance, from our genome as if it reads out our way of thinking, our will, our feelings, the character of our behavior, etc. As a result of our death, the main component of dozy chaos — dozy-chaos radiation — comes out of our brain and body (which, being alive, effectively held it within themselves), being dissipated in the surrounding space, and thus, the mentioned process of reading, characteristic of a living organism, becomes impossible. In the extremely long biological evolution, the death of any living organism, and subsequently, of any individual human, “was necessary” for dozy chaos to complicate and develop the genome. The death of an individual human being was a tool that dozy chaos used to improve the whole of humanity. And in the human genome his death is anyhow encoded. The evolution

and progress of humanity could occur only through the death of an individual, both natural and violent one.

Self-Examination of Dozy Chaos :

Our egoistic genotype as a consequence of human origin from the animal world :

Is the death of humanity itself encoded in the human genome? In fact — yes, the death of humanity is encoded in the genome of any individual. For dozy chaos “it made sense” to improve the genome, a variety of forms of life, and humanity itself as the highest pinnacle of its development only up to a certain limit, namely, up to the reflection of dozy chaos in itself. This self-examination of dozy chaos manifests itself, for example, in clear awareness of our own “I”, and in the majority of cases this “I” has an egoistic character. When this process of awareness of their egoistic “I” covers the huge masses of people who, for various reasons, gain a feeling of inner freedom, in other words, when, in this sense, all mankind greatly breaks away from the animal world, from which it is derived, the process of improving the genome by dozy chaos comes to an end, even if there is the regular death of individuals. Put simply, because of the overwhelming predominance of the egoistic genotype, which is a consequence of our origin from the animal world, mankind can steadily evolve only as a biological species. The stability of the evolution is rapidly lost at the end of the biological stage of evolution and during the transition to a non-biological evolution (scientific, cultural, technological, economic, social, etc.). The possibility or impossibility of the further non-biological evolution of humankind is directly related to the ability or inability of refusal, in any case, of the egoistic genotype (see below).

Examples of self-examination of dozy chaos in our life and policy :

One of the striking examples of self-examination of dozy chaos is the process of self-destruction of the young part of humanity, taking place currently in the war of modern civilization with a significant radical and aggressive part of youth, who has failed to perceive the traditional cultural and moral values (because the appropriate social and ideological conditions were not created for this perception), but, because of the presence of modern communication and information technologies, it already possesses a sense of inner freedom, which is certainly

false. Note that one of the evidences of the fact that the progressive process of evolution, which is characterized by the individual’s will to live, begins to break, is the emergence among this part of the youth of such an unusual phenomenon that can be characterized as the will to death. This is expressed in the mass drug addiction, the growing number of suicides, the rejection of traditional family relationships, the fanatical defending of false social and religious notions, right up to terrorism, etc.

In the political aspect, the self-examination of dozy chaos is reflected in the recently emerged but already very popular idea of creating a so-called multipolar world. However, it should be noted that the multipolar world, if it ever happens, would be an extremely unstable global political configuration that, in fact, the entire historical experience of mankind has been showing. (Suffice it to refer to the permanent wars in Europe, when its political configuration was multipolar.) In a multipolar world, it will obviously be extremely difficult to come to any agreements that would suit all “polar parties”. A multipolar world will lead to the banal erosion of responsibility for the fate of the world and humanity. Furthermore, the recent political experience of mankind of the second half of the 20th century demonstrated the stability by no means of a multipolar world, but of the bipolar political configuration of the world, as the United States and the Soviet Union, and the rest of the states, one way or another, joined to them. In a multipolar world, if it ever happens, political coalitions will inevitably be formed, significantly reducing the number of its poles, and the likelihood of local conflicts will also increase, which could turn into a global conflict. In the end, the political system of the world, if it could still remain alive, will come again to the global bipolar configuration. However, this world will be much less stable in comparison with the world in the second half of the 20th century, paradoxically as it may sound, if we take into account the real threat of global nuclear war in those days. This lower stability of the bipolar world in the future stems from the fact that there will be a large number of countries which, due to more than currently existing egoistic sense of their own “I” (simply put, due to the greater inner freedom), will often change their political allegiances, making the oscillations from one pole to another.

The end of our civilization as a result of a fatal imperfection of the human genome :

So, self-examination of dozy chaos is its ultimate goal. This is the highest point in the evolution of molecular matter, the pinnacle of evolution of both the genome and the whole of humanity. It is in this pinnacle of the development that the humanity is now. Further, the process of “development” of humanity will go quickly in the

descending curve, and humanity will be “effectively degraded”, if, of course, this humanity will not try to learn how to control dozy chaos itself. But alas, at present the scientific community has a vague idea of dozy chaos, not to mention the whole of humanity that has been actually created by dozy chaos.

Thus, in the end of the entire evolution we currently have the existing human genome. What is its quality? The author believes that the quality of this genome is very low. How is it shown? This is manifested in the fact that the existing genome creates a very certain kind of behavior of both an individual and groups of people, as well as large communities of people. This kind of human behavior can be characterized as egoistic (see Figure 1). It is this kind of behavior that is an absolute dominant in the animal world. Whereas to save humanity as such, a totally different kind of behavior is required, namely, the altruistic kind of behavior. A striking attempt to get this kind of behavior by creating altruistic human beings by means of education was launched in Russia in 1917 – 1991, and as you know, it ended in failure. Note that religion, for example, one of the branches of Christianity — Orthodoxy, has been trying to make the same thing for a long time. Therefore, in order to survive it remains for us essentially just the only chance, namely, it is required to recode our genome from egoistic to the altruistic one. To do this, we must first learn how to control dozy chaos that has just created this genome. I am afraid, for the implementation of such a grandiose plan we do not have enough both mind and time allotted to us by our own genome, as well as material resources.

So the most likely cause of the destruction of humanity, with rapid demise, will be humanity itself, or more precisely, a fatal imperfection of the human genome.¹ A clear sign of the already started development of this disastrous process is an ever increasing number of contradictions in the world and a permanent demonstration of the inability to resolve these contradictions in a peaceful way, which is especially dangerous in the current circumstances of having a huge number of nuclear weapons, the use of which is known to be able to guarantee destroying the entire human civilization. Therefore, in the circumstances, every act of strengthening the institution of Traditional Church, perfectly adapted to both the upholding of traditional moral values and the ritual of escorting our universal transfer into nonexistence, must be considered by all of us, including science, as an extremely positive factor, preventing the onset of turbulence in the development of human civilization. Thus, after the discovery of dozy chaos that created us and, most likely, can not be largely controlled

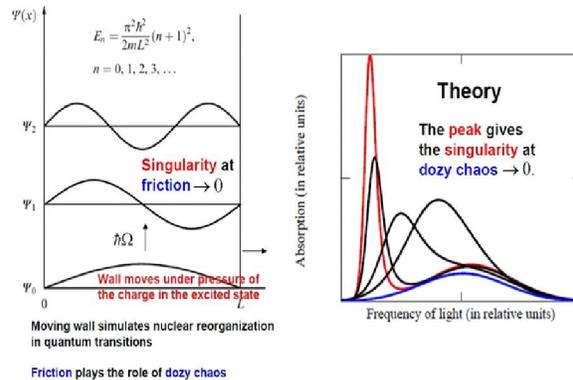
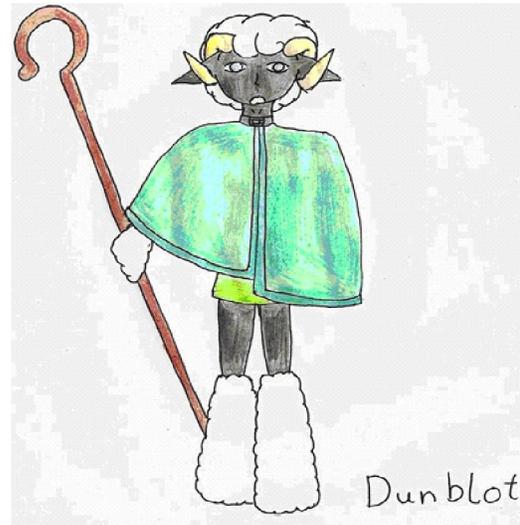


Figure 1. From Egorov, 2015: the result of self-examination of dozy chaos in symbolic form (top panel), or in other words, a symbol of the pinnacle of human civilization development already achieved to date, as such fatal egoistic imperfection, which in fact could only be created by dozy chaos in the evolution of molecular and living matter; at the bottom the symbolic definition of dozy chaos is given (see details in Egorov, 2013a).

by us, science objectively ceases to have a monopoly on the truth and now has to share it with the institution of traditional religions, which are known to contain an apocalyptic prophecy of the upcoming end of the world as a natural result of the sinful (i.e., inherent to the egoistic genotype) behavior of mankind. Thereby, the fact of discovery of dozy chaos indicates the upper limit of our

¹Obviously, both threats emanating from the depths of our planet (such as volcanic activities and earthquakes, and the associated catastrophic climate change, as well as dangerous viruses) and threats coming from outer space (such as asteroids and comets) can act as potential competing causes of the death of mankind.

ability to cognition of the surrounding world and mankind itself, and moreover, the upper limit on the lifetime of human civilization. However, the final decision on the problem of a possibility of controlling dozy chaos, that is having a steady trend towards self-examination, and on related questions about the fundamental limitations of our ability to cognition and the inevitability of impending end of our civilization due to a fatal inferiority of the human genome, are still undoubtedly open questions. Note that in contrast to the pessimistic viewpoint presented above, earlier the author suggested a less substantiated optimistic view on the future of humanity (Egorov, 2013b).

Self-examination of dozy chaos and dialectics. On the preference of the bipolar world :

The concept of dozy chaos, put forward earlier by the author (Egorov, 2009), and the concept of self-examination of dozy chaos, put forward in this article, can be interpreted in essence as the development of Hegel's concepts (Hegel, 1807) of the absolute idea and the absolute spirit — the self-conscious absolute idea as the apex of its development — by filling them with the concrete physical content, which Hegel did not have due to objective historical reasons. By the way, from the Hegelian dialectics, as well as from the dialectics in general, stability follows as a global political configuration, not of a multipolar, but of the bipolar political world (see above) under the conditions of the existing paradigm of egoistic human genotype. This paradigm serves as a key point in understanding the current and future political reality. The main and common danger of the current political moment is not so much the absolute dominance of one pole known in policy nor the lack of a rather ghostly multipolar world, but the lack of such a clear second pole, which would be able to really oppose itself in all respects to pole number one (see **Box 1**). A multipolar world, as a unipolar world, though, would be more stable and more efficient than the bipolar world only if we learn how to control dozy chaos so as to recode our egoistic genotype to altruistic one.

BOX 1. The world's future in condition of the current egoistic genotype :

The presence of the second pole in policy presupposes that this pole is of such economic and political system that would substantially differ from the economic and political system of the pole number one. Therefore, a real contender for the role of the second pole can currently be only China with its huge population and most original political system in the world, in which the bourgeois market economy is successfully combined with the presence of the Communist Party. Of course, the huge progress of China's national economy, as it currently exists, also contributes to its advancement in this direction. By the way, in the

presence of the Communist Party, the current market economy in China can be easily reconstructed and used as a springboard for the successful construction of a completely different economy, namely, the mobilization-type economy. Under the conditions of a high level of the teamwork inherent in the national mentality of the Chinese people, this "mobilization project" can be very successful and lead to a substantial restructuring of the political and economic picture of the world. Therefore, if we fail to re-encode our egoistic genotype to altruistic one on a global scale, in condition of the current egoistic genotype, the Chinese civilization of the communist kind would dominate the entire globe in a short time. To prevent such a possible scenario and preserve the vital ethnic diversity on our planet, Russia, with its vast intellectual and military resources, well protecting its vast territory rich in natural resources, will play in the world order, apparently, the main stabilizing or destabilizing role, depending on whether it "sits down to play" on the side of the weak pole against the strong pole, or vice versa. The first type of policy would have contributed to the successful balancing of the world on the brink of a thermonuclear catastrophe, giving us more time and opportunity to find a practical answer to the question posed in this article. Namely: "Will we be able for saving human civilization to improve radically the nature of the human genotype by controlling dozy chaos on a global scale?" (See also below.) Note that the current political situation is the exact opposite of the possible situation that supposed above, and therefore it is quite favorable for the formation of a stable bipolar political configuration of the world in the very near future.

Noosphere. The Need for the Forced Anthropocentric Biological Evolution :

The concept of self-examination of dozy chaos, which is put forward in this article, is closely related to the concept of a noosphere, which was launched earlier by Le Roy (1927), Vernadsky (1944, 2014), and de Chardin (1956). The noosphere is determined by our difference from the animal kingdom and is associated with our intellectual and spiritual activities. Using the concept of the noosphere, it can be said that self-examination of dozy chaos is the highest point in the development of antagonistic contradictions between the noosphere and the human egoistic genotype, which is determined by our origin from the animal world. This antagonistic contradiction in its highest aspect can only be resolved either through the mutual annihilation of the noosphere and the existing egoistic genotype or through recoding this genotype into an altruistic genotype by means of targeted, constructive, and long-term control of dozy chaos. Note that the frozen tenets of traditional religion fix, in fact, a certain constant level of contradictions within the

general system of contradictions between the noosphere and the egoistic human genotype, thus converting them from the antagonistic contradictions into the non-antagonistic contradictions, that is, setting a compromise between “spirit and body” as “infinite” in time — a compromise between the static part of the noosphere, which is religion, and egoistic human genotype virtually unchanged in time. In practice, this compromise is most clearly expressed in the form of confession of a sinful man and remission of his sins by Church. In the absence of force majeure circumstances (e.g., war), this compromise between “spirit and body”, which is carried out by the traditional religion, is almost the only permanent source of stability of socium. (The Institute of the traditional family and marriage, which, by the way, is sanctified by Church, is another permanent source of stability of socium.) Unfortunately, under the conditions of the egoistic human genotype, this permanent source of stability of socium proves to be very weak in comparison with the main permanent source of instability in socium — the technological progress of mankind.² The technological progress can not be halted, but we can try to transform it from a source of instability in socium into the source of its stability through the creation of a fundamentally new type of technologies, namely, technologies for code conversion of the current and egoistic human genotype into an altruistic human genotype, which could be based on controlling dozy chaos. Unlike conventional technologies, resulting, ideally, in improvement of the human environment, the technologies for code conversion of the human genotype by controlling dozy chaos must, ideally, lead to improving the human nature itself (see **Box 2**). In other words, for the survival and further preservation of all mankind as a biological species, it is necessary to carry out the forced “switching-on” of a radically new type of biological evolution, which is not directly related to the entire living nature, but relates only to the human species. This forced and anthropocentric biological evolution, initiated by the man himself, would allow, ideally, eliminate disharmony in the coexistence of human socium and conventional technological progress.

BOX 2. On the genome-code conversion :

The author would like to emphasize that the question here is not about eugenics, with its idea of selecting human beings according to any grounds, and is not about the manipulations with the genome, which are intended to change the individual and which, if to the great misfortune for all humanity will ever be carried out systematically, are

inherent in genetic engineering. We are talking about the manipulations, agreed with each other, of the genome of huge masses of people and of all humanity, which are characteristic of the biological evolution controlled by dozy chaos, and which take a very long time. Such a nontrivial manipulation of the genome must be carried out through the control of dozy chaos on a global scale, and in contrast to the possible manipulations of the genome in genetic engineering, which, even with a positive ethical mindset of researchers, can either improve or worsen, for accidental reasons, the human nature, these manipulations of biological evolution, with a positive ethical mindset of researchers, can only improve the human nature. (As it follows from the basic idea of this work, the deterioration of the human nature and its transformation into a primitive animal state is going to happen by itself, namely in case if we do not undertake such manipulations of biological evolution.) Of course, the author does not deny, but on the contrary, actively supports the traditional methods of ethical and political sense in regulating the life of the human community, if they demonstrate a positive role and a high efficiency. The idea is that at the present time, these conventional regulators of socium, which are based on traditional religion, universal human culture and humanitarian science, already cannot cope largely with their functions, and therefore there is an urgent need to create fundamentally new regulators of socium, which would be based on the most advanced achievements of not only humanitarian, but also of natural sciences.

Summary and Discussions :

Let's sum up the main principles. This article puts forward the concept of self-examination of dozy chaos that is the main element in the dynamic self-organization of the transient state of molecular quantum transitions and their cause, as well as the cause of various chemical reactions, and as a result, evolution of the entire molecular matter, up to the emergence of life, genome, and man himself. Self-examination of dozy chaos is the superfluous examining of its own “thoughts”, “ideas”, and “feelings”, which leads to a strong instability of the non-biological evolution of the most highly organized molecular matter in the form of humanity at the end of its existence as a biological species having a pronounced egoistic genotype. Self-examination of dozy chaos is the pinnacle of evolution of dozy chaos, similar to how the Hegelian absolute spirit is the pinnacle of evolution of the Hegelian absolute idea. Self-examination

²The apocalyptic doomsday scenario that exists in religion comes into contradiction with its main mission as a permanent source of the stability of socium. This means that in religion there is the recognition that at some point in the future it will not be able to cope with its primary mission. This recognition of its weakness is associated with the presence of the technological progress as a permanent source of instability in socium, which is significantly superior to religion by the power of its effects on human civilization.

of dozy chaos may be illustrated by a simple thought experiment that is given below in **Box 3**.

BOX 3. A thought experiment illustrating self-examination of dozy chaos :

It is well known that in physics for deep clarifications of the essence in any physical problems it has become a tradition to consider the so-called thought experiments. Suffice it to refer to Einstein's thought experiments on his theory of relativity (see, e.g., Einstein and Infeld, 1938). Here, let us not ignore this great tradition. So, let's say, for example, that Africa is a continent, heavily isolated from the outside world, which suddenly left all the people (for example, moved to other continents of our planet). Thus, in Africa, only the flora and fauna have remained on hand. Let's equip with modern gadgets for all the wild animals there. Assume that the beasts will be able to use these gadgets as well as modern people, but the beasts remain the same who they really are, that are the beasts with all their beast instincts. It is clear that in this case the role of the gadgets reduces simply to a multiple and effective enhancement of their savage instincts. So, giving the start for such "advanced beast civilization", let's ask ourselves: "How long will such a "civilization" survive until its natural end?" It is easy to understand that the connection of enhanced communication between, for example, wildebeests, will lead to the rapid disappearance of the grass cover throughout the African continent, and the connection of enhanced communication between, for example, crocodiles, will lead to the rapid disappearance of the wildebeests themselves throughout the African continent. A similar situation will be also with other kinds of beasts included in the overall food chain. As a result, we get a quick extinction of the whole "savage civilization". From general considerations it is clear that such a "beast civilization" will survive in Africa no more one year. (Within one year a full cycle in changing the year seasons will occur, as a result of which the total unbalance in the food chain by enhancing savage instincts due to gadgets will be likely to have time to happen, and the whole animal kingdom will perish.) It is obvious that in their mind humans are superior to animals in qualitative terms — for example,

animals are unable to invent and create gadgets. However, in their ability to survive humans are superior to animals, unfortunately, only in quantitative terms — although humans tend to live longer than animals, but they die as animals, too. Just as the "beast civilization" has disappeared in our thought experiment, as well the human civilization will disappear in a reality, and for the same reason — as a result of self-examination of dozy chaos. In other words, the advanced human civilization, reinforced by powerful means of communication, in conditions of its egoistic genotype, that exists at present, will survive on planet Earth only a little longer than the "beast civilization" in our thought experiment. A simple estimate of the lifetime of the human civilization is given below in **Box 4**.

Self-examination of dozy chaos is expressed in practice in the emergence, as a result of the progress of human civilization, of superfluous freedom in human being as a representative of biological species *Homo sapiens*. This comes at a time when his biological evolution has already basically ended. This superfluity of freedom leads to instability of the process of further non-biological evolution (social, economic, technological, cultural, scientific, etc.), not only to instability of the social and economic evolutions, that is the most pronounced, but also to instability of the technological, cultural, and scientific evolutions, that is the least pronounced. Thus, the current and absolute dominance of non-biological evolution over biological evolution is the determining factor of instability in the whole of *socium*. The instability of non-biological evolution can be overcome only through the recoding of human genotype from egoistic one, being immanent to biological evolution, to altruistic genotype, which alone can be immanent to the future non-biological evolution of humanity. Such a recoding of our genotype can be carried out by us only through a long process (over many generations) of the purposeful control of dozy chaos that created the current egoistic genotype earlier in the course of biological evolution.³ Under normal conditions (in the absence of force majeure conditions, such as, for example, war) the level of freedom in a sustainable social system must correspond to the level of altruism of its members. The more altruism is in a society, the more freedom in its political system can and must be admitted, and vice versa.⁴ The further destiny of mankind depends entirely on how quickly it recognizes the vital importance of the task of creating a balanced relationship between the

³The question of what exactly would constitute a mechanism of the purposeful control of dozy chaos remains entirely unclear. Equally unclear is also the question of the mechanism of the process itself of self-examination of dozy chaos as a process occurring at the molecular level and even the very posing of such a question is highly controversial. First of all, we should at least make a direct detection of dozy chaos in the experiment.

⁴Currently, we are obviously not in a position to quantify both, but it by no means follows that for this reason we must avoid to raise such an extremely important question for humanity, as the question about the conditions of its survival.

level of freedom and the level of altruism, and also of the problem of purposeful control of dozy chaos with the aim of creating a more altruistic genotype, whether it will be able to put these two problems properly and to solve them effectively.

In formulating these two problems one should proceed, as the author believes, from the following possible scenarios and their probabilities. Self-examination of dozy chaos is when our non-biological evolution enters into the fundamental antagonistic contradiction to our, biological in its nature, egoistic genotype. The resolution of this contradiction can only lie in the path of destruction, one way or another, of the egoistic genotype. This genotype is transformed into altruistic one through a targeted control of dozy chaos, which is consciously, and for a very long time, carried out by the entire human civilization in the most difficult to implement and therefore extremely unlikely event for humanity. The egoistic genotype is simply subject to physical self-destruction as a result of our continued non-biological evolution, which, any way, leads eventually to the global thermonuclear conflict in the easiest to implement and therefore the most likely scenario for mankind. A possible way to resolve the above antagonistic contradiction through the destruction of the second component in this antagonism — non-biological evolution — is equivalent to either the abovementioned natural embodiment of the self-destruction of the egoistic genotype as a consequence of the global thermonuclear war or transformation of non-biological evolution into biological evolution, simply put, our return to the primitive state of animals as a consequence of the global thermonuclear war as well. As a result, in this case the disharmony of non-biological evolution with the egoistic (biological) genotype would be overcome and biological evolution would be restored in its entirety and the most severe harmony with the egoistic genotype.

The most direct expression of self-examination of dozy chaos is the fact of its discovery in theory (Egorov, 2001, 2009, 2013b) and a very likely possibility of its direct detection in experiment in the near future. The quality of the continued existence of human civilization will depend entirely on how quickly after the direct detection of dozy chaos we could learn how to operate on it in order to create an altruistic human genotype. We emphasize that we are talking about controlling dozy chaos not in some particular and local physical experiment that is likely to be implemented in the short term, but about controlling dozy chaos on a global scale (see **footnote 3**). If we consider that our mind and the time that is allotted to us in order to

achieve the above objective, are determined, ultimately, by dozy chaos itself, the natural question arises: “Can we, in principle, implement such an ambitious project on the forced improvement of the nature of human genome?”⁵ (See **Box 2**.)

As history shows, philosophy alone does not give us a solid foundation for the definitive conclusions regarding the structure of the current and future humanitarian and political reality. However, as demonstrated in this article, it gives us some scientific landmarks in the entanglement of non-empirical knowledge of, as yet far undiscovered by us, the evolution of our own civilization in conjunction with the new physics of molecular quantum transitions. The posed in this article question of the urgent need to improve the human nature through the use of advanced methods of the natural sciences and the ensuing technological progress may initially be perceived as a utopia. However, even if we accept for a moment this kind of perception, we should realize that there is a much greater utopia, being very dangerous, by the way, that is the widespread idea of the possibility of almost limitless, within certain limits (see **footnote 1**), progressive development of the human civilization within the framework of the current and egoistic human genotype. The huge material and intellectual resources are expended by us on the development of space sciences, high-energy physics, controlled thermonuclear fusion, etc. However, no one would need the fundamental knowledge and applied results in these wonderful and similar areas of science and human practice, if, perhaps, in a couple of centuries, the human civilization will no longer exist on our planet. Today we have to focus on what matters most— on learning and improving ourselves, and on everything that is directly related to it, including a substantial reallocation of our very limited material and intellectual resources in favor of targeted natural science research to improve the human nature and the human communities of various scales and calibers. We must not allow our own self-destruction. The gap between the high, and further growing, level of technological progress and our, almost frozen, and egoistic, and therefore primitive mentality (in other words, an extremely low level of altruism of our genotype), caused by our biological origin from the animal world, will rapidly increase with time. So we have very little time in order to prevent our global suicide (see **Box 4**), and the successful use of this time and other resources would be the genuine and only justification for

⁵It would be easy to imagine the enormity of this project to radically improve the biological nature of human being and the consequent fundamental possibility of an “infinite” existence of human civilization, if we agree that the implementation of this project can be equivalent, in some sense, to the practical implementation of the religious beliefs of an infinite afterlife.

our appearance on this planet. Finally, we note that, among other things, necessary and substantial reallocation of our material and intellectual resources mentioned above, would greatly slow down technological progress in general, and therefore would give us more time, and consequently, more chances to succeed in our struggle for the global survival, the struggle that has already started and is expected to be exhausting in the near future.

BOX 4. On the lifetime of the human civilization:

Let us try to estimate the amount of time that remains in the modern human civilization to its end. We can assume that the modern technological progress, based on using the laws of physics, started with the physical experiments of Galileo Galilei, who, substantially for these, was persecuted by the Church. (We can say that already then the Church had a presentiment of the great danger of a forthcoming technological progress to the very existence of the human civilization.) As an evaluation of the specific date of the beginning of the technological progress we can take the date of publication of the famous “Dialogues” of Galilei, *i.e.*, 1632 (Galilei, 1632). The same date can be taken as the beginning of development of the modern technological civilization. As the top of development of the human civilization should be taken, as it follows from the previous one (see above, **section “Self-examination of dozy chaos and dialectics. On the preference of the bipolar world”** and **Box 1**), 1991 — the year of the collapse of the most stable, bipolar political system in the world. (Any summit of technological progress, obviously, does not exist. We can try to stop it only by a great effort of the reasonable and collective will of humanity, the presence of which in any of its form is even difficult to imagine at present.) So, already for 25 years, we all are going down to our end.⁶ Everyone knows that the ascent to the top of the mountain takes a lot more time than a free fall from it. Apparently, the same will be the case with the human civilization end — the end of mankind will most likely be not only the tragic event, but also a dramatic one, and therefore a fast event. “A lot more” usually means 10 times more. However, theoretical physicists often believe that “a lot more” means that it is enough to take 3 times more. So, how much time is left us to our end? As is clear from the foregoing, the following numerical estimate should be:

$$\left(\frac{1991-1632}{10} - 25 \approx 35.9 - 25 = 10.9 \approx 11 \right) \text{years} . \quad (1)$$

Thus, we have in stock the time 11 times greater than in our

thought experiment with the “advanced beasts” (**Box 3**). A theoretical physicist would have made a less cautious estimate (less cautious in the sense, but not according to the result), not dividing by 10, but dividing by 3:

$$\left(\frac{1991-1632}{3} - 25 \approx 119.7 - 25 = 94.7 \approx 95 \approx 100 \right) \text{years} . \quad (2)$$

Thus, according to the latest assessment, in the face of the current egoistic human genotype and the lack of a clearly defined second pole in the political system of the world, humankind can still survive for only about a hundred years. Absolutely clear that in such a short time to recode the human genotype from egoistic to altruistic, unfortunately, will not succeed. However, in practical terms, the numerical estimates of equations (1) and (2) give us the lower and upper limits of the time that we should at least manage to create a stable, bipolar political system in the world.

We have been able to substantially subdue all flora and fauna on our planet. Will we be able then to subdue ourselves as well? In other words, will we be able to get rid of the aftereffects of our fatal genetic heritage — our origin from the animal world, to get rid of these aftereffects at least in part? Will we be able to get rid of the dominance of egoistic genotype among us — the main and fatal source of our likely collective and common suicide in the near future?

The author believes this article is a first step in direction to future physics of psychology and policy — a new field of science.

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⁶Originally this article was entitled “Is the end of our civilization encoded in human genome and by dozy chaos?” and, except for a few minor amendments, was first presented to the scientific community to publish more than a year ago, *i.e.*, quickly after the publication of its basic idea in the public domain (Egorov, 2015).

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