## From humanrise to humanset

**Abstract.** Subjective, limited perception makes people unable to objective understanding reality. Nevertheless, it provides a basis for them to feel united nature and its interconnection, modeling not only the area left by them, but also going far beyond its limits. It is possible on basis of the model of the physical interconnections to understand biological and other processes including the social ones, as well as the development of humankind, starting from its beginning all the way to our time and near future. One can see the possibilities of the influence on this development in limited, but significant for human beings, areas.

**Keywords:** Physics, biology, sociology, quantum mechanics, wave mechanics, period, resonance, local resonance system, soliton, confederative principle,

Human beings have guessed about their own inability of obtaining the knowledge about the world since the ancient times.

- N. Kuzansky: "Socrates was convinced that he knows only about his lack of knowledge; Solomon stated that things are complex and unexplainable... Aristotle writes that the nature of the most obvious things are just as difficult for us to see as it is difficult for the owl to see a sunlight... Every thing that we wish to know is an evidence for our lack of knowledge" ([2], page 51).
- N. Kuzansky: "The basis of knowing ignorance is the awareness of elusiveness of truth" ([2], page 53).
  - N. Kuzansky: "Positive statements of wisemen is a hypothesis" ([3], page 214)
- M. Haidegger: "The object cannot be [objectively] represented by consciouness; ... the conscious contemplation can not establish anything that it representets" ([4], page 375)

Hume, whose deep understanding was the basis of the Kant's philosophy, saw the reason of the human feeling subjectivity is his feeling-consciousness dualism:

- D. Hume: "These Exists a contrast between perception and an intellect" ([5], page 279)
- D. Hume: "The main reason ["of the impressions whose sources are feelings"] can not be explained by consciousness" ([5], page 140)

That's why

D. Hume: "The consciousness can not provide a satisfactory answer to the question as to why we have to expand our experience beyond the limits of special cases that fall into the area of our observations" ([5], page 147)

As has been written before, people makes it at the basis of their intuitive feeling of the world's unity. This feeling is the foundation of all our knowledge in spite of its visible exactness, including the modern physics.

A. Einstein: "The notions obtain the meaning only due to the fact that they connect ... with the subjective perceptions. This connection is not possible to discover with logical investigation" ([7], page 275).

A. Einstein: "The abstract notions often seem like the inventions of the intellect, disconnected from ... the world of perceptions. This point of view ... is wrong» ([7], page 283)

A. Einstein "The connection ["of the notions with perceptions»] is intuitive, and has illogical nature" ([14], page 263)

A. Einstein "The reality is not given directly. The only things given directly are perceptions" ([15], page 327)

No experiments using the most exact device can't to break the nature human blockade from objective perception and understanding of reality.

- V. Heisenberg: "The notions that we are forced to use in order to describe the experiments are too imprecise to represent what the nature shows us" ([24], page 40)
- E. Schrodinger "We do not understand how the real processes can be converted into perceptions or thoughts" ([21], page 85)
- V. Heisenberg "One has to take into account the interaction between an object and an observer" ([23], page 10).

This "interaction" is not accessible for the objective perception and representation.

At the end of XIX century a monument of Newton physics seemed firm collapse. Microworld turned out to be too complicated to be written by means of differential equations and geometrical ideas:

A. Einstein "The laws of nature are unlikely to be described based on the differential equations" ([9], page 60).

A. Einstein "The physical interpretations of the geometry can not be directly applied to the area of the space of the submolecular size" ([6], page 88)

The existing theory can't describe forming and structure of the substance:

A. Einstein "The most difficult part of the development of field theory is the interpretation of the atomic nature of the matter and energy, [because] this theory in its foundations ... is operating based on the exclusively continuous functions" ([13], page 185).

- V. Heisenberg "The atomic phenomena can not be described in our language. ...
- ... We do not have the obvious representation of the atomic processes" ([23], page 14).

Really our "obvious representations" are forming on the basis of human perception of reality. But subatomic microfield processes to thin for this representation (even rigged by the measuring apparatus). That's why they are not observed. But the theory is forming on the basis of feeling perception of reality, of its intuitive sensation.

Interconnection of the objects each other is accompanied by their interinfluence. People can't observe the interinfluence between macroobjects. But it is considerable between microobjects. It takes place in interconnection between the device and the object. This interconnection must be taken in consideration to know the object's state without the device 's influence. Heisenberg painted out this:

V. Heisenberg "As Bohr has shown, ... [it is necessary] to take into account the parts of the studied under the measurement observations that are not under our control" ([22], pages 26, 27)

This remark is major. The existing physics does not describe the actual reality but only its subjective reflection in the experimental observation. The account of the fact of the action of the measuring apparatus was investigated in the theory of the decoherence by Everett and others, as well as in the Pilot Wave models by De Broglie, Bohm, and others. This implies the expansion of the area of the physical investigation, as well as major restructure of physics.

V. Heisenberg "We are not able to replace [classical description of experiment] by some other one" ([26], page 218).

V. Heisenberg "It is important to try to build the exact hypotheses regarding major dynamics of matter" ([25], page 177).

But we can't receive experimental data necessary for this.

A. Einstein "An attempt by Me to complete equations of the field theory in such a way that they satisfy in side the electrons did not provide the good results" ([8], page 457).

The reason of this is specific inside structure of elemental particles relatively the field Experimental data necessary for creating of the theory of this inaccessibly.

V. Heisenberg "To talk ["about what happens inside an atom»] in the terms of the old physics is not possible" ([27], page 261).

Quantum theory can't help also:

A. Einstein "The statistical nature of [quantum] theory is a consequence of the incompleteness of the description" ([17], page 338).

Schrodinger also talk about incomplectness of the experimental description.

E. Schrodinger "In theoretical description of an experiment we have to usually consider a lot of data that are not subject to measurement" ([19], page 251).

He wrote about the interatom structure's specification also:

E. Schrodinger "It is doubtful whether it is possible to understand the meaning of the motion inside an atom based on space-wave nature of thought" ([18], page 35)

- E. Schrodinger has attempted to go from the "smooth» description of microprocesses, by creating the wavelike theory with resonance interactions.
- E. Schrodinger "Suppose that ... it is necessary to think of the introduced wavelike system as sinusoidal wave" ([19], page 27).
- E. Schrodinger "The interaction between the two microsystems is controlled by the laws of resonance" ([20], page 267).
- E. Schrodinger "We are exploring the standing inner oscillations" ([16], page 18).

Schrodinger attempted to describe, by means of waves, the inner structure of the atoms:

E. Schrodinger "Instead of electrons, we introduce waves inside the atom" ([22], page 55).

The wavelike representation of the microprocesses due to Schrodinger, Everett, Bohm and others can represent some experiments (interferention, diffraction and others), but it is not sufficient to model all the specific field, interatom and interparticle interactions, because of its limitation by the existing physics.

D. Bom: "There is sufficient foundation to suggest existing of sub-quantum-mechanical level, elementary than suggested by the quantum theoretic's one. This new level qualitatively new laws can act, being leaded to the laws of the modern theory as approximate at limit causes" ([39], page 109).

D. Bom: "There were discovered some enigmatic common properties of the matter, including original combination of the wave and corpuscular properties" ([39], page 122).

The reality seems to be an extra complicated, diverse but also unit, interacted system of complicated wave interactions possessed wide spectrum of parameters energy, oscillation period, wavelength etc. Moving at different directions, waves interact each other forming different soliton — similar formations (let us name them solitons, though their nature much more complicate than the solitons learned by the modern theory). Solitons are formed at the basis of some main local resonance interconnections, but have big set of wave interconnections with other parameters also. Interacting each other, they sometimes form the solitons differ from the main ones. This wave processes occur both inside the basis solitons as well as their surrounding environment through which the solitons interact each other, forming sometimes new, larger systems of coherent soliton forms. These occurances take place throughout the entire universe, starting from unobservable by human eyes microworld, all the way to the equally unobservable galactic systems, leading to the formation of the most diverse objects — physical, biological, social, etc. this way the universe is "sewed" with this kind of soliton "net". We assume that unreachable for measuring apparati microsystems and their interactions in the substance that was called "dark matter" and "dark energy". They differ each other only by density of inside energy.

K. Popper: "Matter and energy are human conceptions... It's impossible to make a border between them" ([35], p. 71).

However, there are some theories of modificated gravitation without dark matter and dark energy. Inner and outward non basic interactions lead to decreasing of the basic energy and at the final to falling on the solitons to composite solitons. Every soliton has some time of life.

Interaction with the environment and through it with each other, solitons are constantly moving with different by size and direction velocities.

There is a natural question of formalization of these phenomenons whose microparameters are too thin for observation. This question is fundamental because previous physics has based on modeling of experimental data. For describing of non-observable processes new physics must be created.

There is another fundamental difficulty: at what parameters these phenomenons must be described?

T. Lipps: "Description at the natural science is really using not of sizes but of attitudes between sizes which are not defined" ([38], page 15).

Space — time coordinates, with which physics works long since are artificial-abstract: there are no immovable points and coordinate axises at microenvironment. There is no united global rhythm there also: the solitons are constantly "chaotically" moving. Every of them has its own basic wave frequency.

K. Popper "Our European intuition of time is significantly based on the Greek roots of our civilization, with its accent on discursive reasoning.

... Our intuition of time can change with the evolution of our theories...

... Our intuition of time is based on criticism and correction, just like it is true with our intuition with space" ([33] pp. 135, 136).

K. Popper: "[Kant:] Our representation of the space and time is not applicable to the universe as a whole" ([35], p. 91).

A. Einstein "It is important to avoid the dogmatic use of the modern theory in the search of the unified basis of all physics" ([34], p. 32).

T. Koon "Paradigms can not be fixed within the framework of normal science ... [crises] are solved not through the contemplation and interpretation, but through unpredictable and unstructural [solution]" ([37], p. 220).

Modeling of real microprocesses must be created not at artificial but at natural basic parameters: energy of wave processes, wave length as the unit of distance, wave period as the unit of time.

The structure of every soliton and the processes, taking place there must be described at its own set of basic parameters.

But there is the previous question: at what parameters we must describe the *non-visible* microprocesses? I think that this parameters must be created as hidden ones by analogy with the observed processes because of unity, interconnection of the world. After going out of the model on the observed level it must be corrected and, if it is necessary, this model must be changed.

Experiments show that biological structures, like physical ones, are formed on the wave soliton-similar basis.

K. Lorenz: "Inside the living system there are infinitely many cycles of regulation" ([28], p. 15).

Living world is the natural part of the nature, organically connected with it. Such was the humanity in pre-civilization time. But people have intellect. "There exist a contrast between perception and an intellect" (H. Hume, [5], p. 279). That's why the forming and following development of civilization broke the natural feeling of the nature and caused by interaction with the nature. After the introduction of the agriculture, the natural interaction of human with nature has changed to the intense use of the soil, during which the soil did not have time to recover the natural condition, by the time of any given agricultural season. Both the tools for agriculture and weapon for hunting accelerated the process exhaustion of the agricultural and animal worlds. This gave birth to the immigration and the related world, whose

intensity grew with the production of weapons. By destroying their environment and themselves, the humankind arranged their own home in the world.

However, the unified world system rejects everything that is contrary to its unity. That is why human attempts to form their own world were the beginnings of its way to destruction. This motion of humankind towards distraction becomes more and more noticeable. Its sources and reasons are clear. That is why it is not possible to agree with K. Popper, who used the unknown nature of social process to conclude that it does not exist [36].

K. Lorentz: "The interaction within the system of animals, plants and mushrooms is very diverse and complicated. The adjustment of the diverse kinds of alive organisms during the periods of time, comparable ... to the geological periods, leads to the equilibrium, ... that is easily vulnerable ...

Ecological medium of human kind changes much faster than the one of other living organisms. The speed of this change is caused by the development of technology... That is why human being causes deep change and often a complete distraction of biocinosis while it is alive. The only exceptions are the rare wild tribes that do very little agriculture.

...The barbarian actions [of humans] hurt [his] soul" ([28] pp. 22–23).

K. Lorentz: "The cognition of the environment leads to the death of humankind. The latter is under the threat of suffocating within itself" ([28], p. 17).

The "cognition" is a subjective process that is part of the main avenue of the interaction of human being with nature. As was stated above, this (interaction) is directed towards the humans forming their own world, which does not correlate with the universe.

The disractive nature of the humans on the nature is obvious (let us remember D. Hume).

Really, in the summer 2010 Russia was "suffocating" not in smoke and carbon monoxide, but "within itself", because the fires were caused by the administrative destruction of the forestry. This is one of numerous manifestations of "soliton's" disintegration (this is formerly of USSR and now in Russia) at their elements — clans working for themselves. One of such clans is the Russia's leadership.

A process of democratic's degeneration (however, Russia has not been ever such) t tyranny has been written by Plato 2,5 thousands years ago.

Plato: "The transition from democracy to tyrany can be easily accomplished by the leader that knows how to use the antagonism between the poor and the rich that exists in democratic society, and who can develop his own army: his first goal will be to constantly involve people in different kinds of wars, so that they can constantly feel a need of a leader" ([32], p. 76).

Plato: "The government in such situation is constantly getting sick, and has wars with itself for the smallest reasons" ([32], p. 4).

The same process takes place in a disintegrating biological organism:

K. Lorentz: "When the cell is refusing from the properties that make it the full member of the tissue, it is undergoing the regression towards ... earlier phase of development ... the cancer [develops]" ([28], p. 49).

Analogous "solitonlike partition" is characteristic to humankind as a whole:

K. Lorenz: "Indivisibility of human norms and rituals can lead to religious war" ([29], p. 156157).

This have been several times before.

The conflicts arise not just between the cultures but within them:

K. Lorentz: "Between the divergently developing "embrionic cultures» the barriers arize: the cultural devision [occurs]" ([30], p. 518).

The human is not capable to adjust to self-induced change in the environment:

K. Lorentz: "Despite almost unlimitted compactness of genome ... [its] cognitive mechanism can not adapt to the quick changes in the environment" ([30], p. 359).

Attempts to resist to the disintegrating process by means of revolution led (at the case of success) only to change of leadership. But the disintegrating process continued, sometimes even increasing. This is consequence of that the root reasons have not been corrected. Attempts of artificial organizing of the situation, whose nature was unknown, led only to its sharpening. A sad confirmation of this is Russia.

U. Schekochihin: "Through the last 40 years in our country 43 millions of people went through camps and prisons and 76 millions collided with police-prison system" ([31], p. 348).

Disintegrating of the USSR accompanied by plundering of the government property and by forming of criminal clans:

U. Schekochihin: "After break-down of the USSR and crush of the C.P.S.U "party money» turned out... at account of several thousands of our happy compatriots" ([31], p. 131).

To such self-happinied membered (and at first turn) the country's leadership:

U. Schekochihin: "For the leadership their country in first of all themselves" ([31], p. 49).

U. Schekochihin: "Mafia is... system of attitudes turned out the society" ([31], p. 167).

Soliton-similar disintegrating of the country has epidemic character, covering all spheres — industry, agriculture, public health, culture, art etc. All the attempts to counteract destruction of the country ruthlessly stop.

However, in situation of total disintegrating of the country and right unlimity turned out organizing of the work of soliton-similar (that is federation) principle. This was made by M. Khodorkovsky at the oil-getting company UKOS.

A. Garanov (the past employee of the leadership of UKOS): "The situation that, from one point of view, acquire "daughters» were independent juridical agencies, and, from the other point of view, were a part of UKOS, in considered normal" ("Novaya Gazeta", № 83, 02.08.2010, p. 12).

Company's work is closely connected with partners. That's why Khodorkovsky tried very much and put in much means in the cause of normaling of situation in the country. It was carried out wide program of computering, including mounting of modern computers and mass preparation of serving and using staff. There was organized mass system of educational institutions through all the country. There was offered much financial help to the State:

P. Lebedev: "In the spring 2003 Khodorkovsky... passed [to Kasjanov] offer from a group of large-scale businessmen to compensate expenses of privatization... by means of payment of compensation (near 20 millions of dollars) in budget of Russia Federation... It was intended to concentrate these money at the special

national fund for financing of strategic staff programs. Putin put this project under cloth" ("Novaya Gazeta", № 95, 30.08.2010).

Soon after this Khodorkovsky without known reasons was arrested and company UKOS was plundered, turning from a modern effective company into group of little unprofitable enterprises. There were no any "strategic staff programs" after this. Country economics continued to disintegrate.

What UKOS's experience talks about?

- 1. About effectiveness of correctly organized federative principle.
- 2. About impossibility of its using at situation of dictatorial regime because of unacceptable by it of any independent of the structure of "power vertical" activity.
- 3. About expediently of spreading of confederative principle and international scale to counteract to destructive, deadlock development of international unity and to form united system of interacting to each other state and confessional formations.

How much is it possible? Upper it was talk that formation of a soliton is a synthesis of smaller solitons, each of wich has much set of frequent oscillations, at the basis of the common basic frequency. When the basic frequency grows weaker, the soliton disintegrates. In example is fate of some powerful empires, for example, Russia. Forming by means of power, at the middle centuries, the country kept unity, continuing to widen, at the basis of some spiritual community together with powerful police system. To the end of XIX century the synthesis potential weakened.

This was showed as an international region (defeat in the war with Japan, then evident weakness at the I World War), both and at inner politics (mass unrest at 1905 year, and the following final defeat at 1917 year). The reason of this war was not weakness of the tsar, but the natural inner exhaustion of the country (original exhaustion of the basic soliton power).

After catching up the rule, dropped by autocracy, bolsceviks could keep it during 70 years on the same double-united basis: artificially inculcated ideology, whose mistakenness was much compensed by mass pepressions through almost all the country's population (by U. Schekochihin's data, 119 millions from 150).

Already at the end of fifth ten years of bolshevism became obvious its emptiness.  $60^{th}$  years made it obvious, but they couldn't find at new "soliton basis". That's why the soviet order, pulling rusty screws' could with gritting to decrepit 3 tens years more.

So, the history of Russia and USSR illustrates necessity of the "soliton basis" for country's being. This did not understood by Gorbachev. That's why deprived of an inner spirit basis "perestroyka" reduced only to disintegrating of the country, whose escalating is continuing now.

UKOS was formed at the united basis, the base of the following progress. I think, this basis did not reduce to economic one (though economic interesting of every subdivision was secured). Only one economic interesting unites a group of fellow-travelers which disintegrates at the first obstacle.

That's why, if deep potential of Russia and international unity is not fully exhausted, it is possible to hope that UKOS's experience can be used there also. For this is expediently organizing participation of Khodorkovsky. (Of course, this situation much more complicated, than organization of an oil-getting company. But the main organizing confederative principle is same. It is the basis of all the world.)

The main components of this program are:

- 1. Release of Khodorkovsky and other collaborators of UKOS from unlawful arrest.
- 2. Liquidation of despotic regimes in view of their unhuman essence and aggressive incompatibility with the common-human confederative principle.
- 3. Organization of the system of the mass education towards understanding by the population of the essence of civilization's history development and of present situation.
  - 4. Professional of specialists capable to realize this program.

At the essence, this program of international unity's organizing is unalternative because of, in the first, its natural basis and, in the second, being the single possibility

## References

- [1] A. Whitehead "Isbrannye raboty po philosophii", Moskva, 1990.
- [2] N. Kuzansky "Ob uchenom neznanii", Sochinenie v dvuh tomah, Tom 1, Moskva, 1979.
- [3] N. Kuzansky "O predpolozheniah", Sochinenie v dvuh tomah, Tom 1, Moskva, 1979.
  - [4] M. Haidegger "Tesis Kanta o bytii", Moskva, 1993.
- [5] D. Hume "Traktat o chelovecheskoy prirode", sochinenie v dvuh tomah, Tom 1, Moskva, 1996.
- [6] A. Einstein»Geometria i opyt", sobranie nauchnih trudov v chetyreh tomah, tom 2, Moskva, 1966.
- [7] A. Einstein "Problemmy prostranstva, efira i polia v fisike", sobranie nauchnih trudov v chetyreh tomah, tom 2, Moskva, 1966.
- [8] A. Einstein»Predlogaet li teoria polia vozmozhnosti dlia reshenia kvantovoj problemmy?", sobranie nauchnih trudov v chetyreh tomah, tom 3, Moskva, 1966.
- [9] A. Einstein "O sovremennom krisise teoreticheskoy fiziki", sobranie nauchnih trudov v chetyreh tomah, tom 3, Moskva, 1967.
- [10] A. Einstein "Priroda realnosti. Beseda s Pobernuatom Togorom", sobranie nauchnih trudov v chetyreh tomah, tom 3, Moskva, 1967.
- [11] A. Einstein "Epilog. Sakratovskij dialog", sobranie nauchnih trudov v chetyreh tomah, tom 3, Moskva, 1967.
- [12] A. Einstein "Zakluchenia o novoj postonovke problem v teoreticheskoj fizike", sobranie nauchnih trudov v chetyreh tomah, tom 3, Moskva, 1967.
- [13] A. Einstein "O metode teoreticheskoj fiziki", sobranie nauchnih trudov v chetyreh tomah, tom 3, Moskva, 1967.
- [14] A. Einstein "Avtobiographicheskie zametki", sobranie nauchnih trudov v chetyreh tomah, tom 3, Moskva, 1967.
- [15] A. Einstein "Pismo k G. Samuelu", sobranie nauchnih trudov v chetyreh tomah, tom 3, Moskva, 1967.

- [16] E. Schrodinger "Kvantovanie kak zadacha o sobstvennyh znacheniah. Pervoje soobshenie". Izbrannye trudy po kvantovoj mehanike. Moskva. 1976.
- [17] "Einstein Schrodingeru". 22.12.50", E. Schrodinger, "Izbrannye trudy po kvantovoj mehanike", Moskva, 1996.
- [18] E. Schrodinger "Kvantovanie kak zadacha o sobstvennyh znacheniah. Vtoroje soobshenie". Izbrannye trudy po kvantovoj mehanike. Moskva. 1976.
- [19] E. Schrodinger "Osnovnaja ideja volnovoj mehaniki". Izbrannye trudy po kvantovoj mehanike. Moskva. 1976.
- [20] E. Schrodinger "Sushestvujut li kvantovye skachki". Izbrannye trudy po kvantovoj mehanike. Moskva. 1976.
  - [21] E. Schrodinger "Moj vzgliad na mir". Moskva. 2005.
- [22] V. Heisenberg, E. Schrodinger, P. Dirac "Sovremennaja kvantovaja mehanika", Moskva, 1934.
  - [23] V. Heisenberg "Phisicheskie principy kvantovoj teorii" Moskva, 1932.
  - [24] V. Heisenberg "Philosovskii problemmy atomnoj phisiki", Moskva, 1953.
- [25] V. Heisenberg "Chto takoje elementarnje chastitsi", Shagi za gorisont, Moskva, 1987.
- [26] V. Heisenberg "Iazyk i rialnost v sovremennoj phisike", Shagi za gorisont, Moskva, 1987.
- [27] V. Heisenberg "Abstraktsia v sovremennoj nauke", Shagi za gorisont, Moskva, 1987.
- [28] K. Lorentz "Vosem smertnyh grehov tsivilizovonnogo chelovechestva", Sbornik "Tak nazyvaemoe zlo", Moskva, 2008.
- [29] K. Lorentz "Tak nazyvaemoe zlo. K estevstvennoj istorii agressii", Sbornik "Tak nazyvaemoe zlo", Moskva, 2008.
- [30] K. Lorentz "Oborotnaja storona zerkala", Sbornik "Tak nazyvaemoe zlo", Moskva, 2008.
  - [31] U. Schekocihin "S lubovju", Moskva, Sankt-Peterburg, 2006.
  - [32] K. Popper "Otkrytoe obshestvo i ego vragi", tom 1, Moskva, 1992.
  - [33] K. Popper "Objektivnji znania. Evolutsionnji podhod", Moskva, 2002.

- [34] K. Popper "Kvantovaja teoria i raskol phiziki", Moskva, 1998.
- [35] K. Popper "Znanie i psihophizicheskaja problemma", Moskva, 2008.
- [36] K. Popper "Nisheta Istorizma", Moskva, 1993.
- [37] T. Kun "Struktura nauchnyh revolutsij", Moskva, 2001.
- [38] T. Lipps "Philosophia prirody", Moskva, 2007.
- [39] D. Bom "Prichinnost' I sluchainost' v sovremennoj physike". Moskva, 1959.

Mark Sverdlov