MY BIOGRAPHY

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Abstract. The biographical sketch describes the creative development of the theoretical physicist, mathematician, logician, and philosopher Temur Z. Kalanov. It is shown that scientific creativity is a manifestation of congenital quality of personality, a manifestation of loss of faith in scientific authorities, a manifestation of one's "Ego". The found "Ego" and faith in oneself are the impossible without awareness and recognition of the existence of the Supreme Intellect and of God. Faith in oneself and in the existence of the Absolute Truth are starting point of correct cognition. It is proved within the correct methodological basis – the unity of formal logic and of rational dialectics – that works of classics of sciences contain errors. The errors are an inalienable and essential part of modern sciences and characterize the inductive method of cognition.

Keywords: physics, mathematics, formal logic, dialectics, philosophy of science, history of science.

INTRODUCTION

Biography as a description of a person's life, revealing the cause-and-effect relation is just tip of the iceberg. Emotions and thoughts, hopes and disappointments – the invisible and major part of the iceberg – cannot be described for certain by biographers. Only an author can tell about emotions and thoughts, hopes and disappointments – about "life of the human spirit" (K.S. Stanislavsky). Sublime emotions (feeling of truth and of justice, feeling of harmony and of beauty, and feeling of love and of admiration) are the basis of person morality, cause and effect, the source and the driving force of creativity. The ultimate goal of this activity is the achievement of the greatest feeling: feeling of satisfaction. Creative activity determines the cause-and-effect relations of external facts. External facts ("facts of biography") represent only "reference points" for the emotional memory of the author. Emotional memory determines the style of the autobiography, and the style of the autobiography characterizes the author.

MILESTONES OF FATE

1. I was born in Tashkent (Uzbekistan) on September 30, 1944. In 1968 I graduated from the Department of Engineering Physics at the Tashkent Polytechnic Institute (Tashkent, Uzbekistan) by the speciality of "Physical Electronics" and took the degree of M.Sc. in Engineering Physics. In 1968-1971 I was postgraduate at the Institute of Electronics (Academy of Sciences, Tashkent,

Uzbekistan) by the speciality of “Physical Electronics, Including Quantum Electronics”. In 1971-1981 I worked as Junior Research Scientist of the Theoretical Sector at the Institute of Electronics.

2. In 1974-1978 I did promotion in physics under the direction of Professors A.I. Osipov and V.Ya. Panchenko on the Chair of Molecular Physics and Mechanics at the Department of Physics at the Moscow State University (Moscow, Russia). In 1979 I defended Ph.D. thesis on the following subject: “Vibrational relaxation in the gas systems with sources of the vibrationally excited molecules” at the Physical-Technical Institute (Academy of Sciences, Tashkent, Uzbekistan) - and I took the academic degree of “Ph.D. in Physics and Mathematics”. In 1981-2004 I was Senior Research Scientist at the Theoretical Sector of the Institute of Electronics (Academy of Sciences, Tashkent, Uzbekistan).

3. From 1980 until the present, I am an independent researcher (Home of Physical Problems, Tashkent, Uzbekistan). I work on the following problems: the critical analysis of the foundations of theoretical physics, of mathematics, and of philosophy.

4. Who can call in question of the foundations of theoretical physics, of mathematics, and of philosophy? Who can dare? Who can do it? Who is ready? Certainly, only the person who has found faith in oneself can do! Belief in oneself is the core of the personality. Such person is not afraid to be beyond the scopes of standard textbooks and monographs because he thinks independently.

Over the years, I developed the “hard” style of analysis, based on the use of the correct methodological basis: the unity of formal logic and of rational dialectics. Internal work began with what I had understood intuitively (i.e., I had guessed right) the existence of logical errors in the analyzed scientific works of the classics of theoretical physics. For a long time, Albert Einstein was my first and last serious opponent. The critical study of the works of the classics of theoretical physics was continued several years in nonstop run: during the day, I read the works of the classics (doing an efforts to penetrate deeply into the problem), I thought of the problem (trying to restate the problem and to construct proof of the problem on this basis), and I could not sleep at night because I continued to think. The long-time and continuous reflections over the concepts that seemed previously to me to be so clear and precise made them blurry, fuzzy, and shaky ones. This internal work can be compared with the movement through a fog (mist) towards light. In the process of the work, I came up close to the psycho-physiological border, limit of my life: I felt and was aware of the existence of this border (but I did not cross the border: survival instinct worked!). Being in such an extreme state, I began finally to feel that:

(a) the mist was being dissipated, and a stable and permanent (long-time) lucid interval of consciousness was being occurred, i.e., clear and explicitly palpable understanding was being appeared, thoughts were being ordered, the concepts were becoming accurate, clear, precise ones. (A clear understanding, perceived as a peace and self-reliance is always the result of stable lucid interval (strikening, clarification, antireflection, Enlightenment ad vitam) for keeps, rather than short-time flash of inspiration. The flash of inspiration – short-time and

unstable lucid interval – does not lead to the change in the structure of consciousness. And the stable lucid interval (strikening, clarification, antireflection, Enlightenment ad vitam) for keeps always expands consciousness and changes its structure for keeps);

(b) the space around me was full of prompts, ideas. As a result of this experience, my mind was changed: I found a calm, stable self-reliance (independent of the opinions and relations of colleagues), i.e., I found the sensation of support which proceeded from the Supreme Intellect surrounding me. Finally, I understood the essence of errors in Einstein's papers and in the papers of other classics of theoretical physics. Then the classics of physics became my friends! So I became indifferent to the critical (i.e., incompetent) opinions and high-profile titles of colleagues. Thus, I found steady faith in myself, i.e., I found my "Ego".

Finding of my "Ego", impelled me to consider the part of the passed way of cognition in the deductive point of view. As is known, the inductive method of cognition does not allow reliably predict, explain the future events because the "future events" are not a simple consequence of the "present events". In the deductive point of view, the past "facts of biography" of the person are a consequence of the future "facts of biography" destined (intended) by the Supreme Intellect: destination is primary, and the "facts of biography" are secondary. So I realized that my destiny and my "Ego" are inseparably connected with the existence of the Supreme Intellect, are determined by the Supreme Intellect, and relied on the Supreme Intellect. Reasoning in this way, subsequently, I guessed right the theorem of existence of God. I expended several years to prove the theorem. The definition of the concept of "God" given by Isaac Newton in his work, "Mathematical Principles of Natural Philosophy", had an influence on my choice of method of proof.

5. Working at the Institute of Electronics as Senior Research Scientist, I wrote a series of original works. My pioneering works on the critical analysis of the foundations of statistical physics were published in the following journals: *"Reports of the Academy of Sciences of the Republic of Uzbekistan"* and *"Reports of the Academy of Sciences of the USSR"*. In 1993 I presented my doctoral dissertation on the following subject: *"The correct quantum-statistical description of ideal systems within the framework of the master equation"* (by the speciality of "Theoretical Physics"). The book, "*Surprises in Theoretical Physics*" by famous theoretical physicist Sir Rudolf Peierls, had the stimulating influence on my choice of the subject of the dissertation.

The following main results were obtained In the dissertation:

(1) an approach to the problem of substantiation (grounds) and of formulation of the unitary principles of statistical physics and of physical kinetics was proposed. The approach was based on the mathematical concept of random quantity. (It should be emphasized that the standard approach is not based on the concept of random quantity. The concept of random quantity is a starting concept of probability theory);

(2) the fundamental quantum-statistical theory of molecular normal (i.e., non-quantum) gas was developed. On the basis of the Gibbs quantum canonical

distribution (derived by me with the help of the theorem of multiplication of probabilities), the correct quantum-statistical definitions of statistical temperature T and entropy S of subsystem – the gas molecule – were given. (In this connection, the well-known formula $S = k\log W$ which was incused on the headstone of L. Boltzmann ceased to be a symbol of the correct physics). It was shown that the statistical temperature T of subsystem is the continuous quantity bounded above and below, and the value of $T = 0$ does not belong to the range of admissible values (i.e., the value of $T = 0$ has no physical meaning) because the energy of the subsystem is not a random quantity at $T = 0$;

(3) the fundamental quantum-statistical theory of physical systems (if the systems are body; electron, photon and molecular quantum gases) with a variable number of particles was developed. It was shown that the correct distribution function (in contrast to the Gibbs grand canonical distribution functions, the Bose-Einstein and Fermi-Dirac functions) does not contain the chemical potential. In other words, the Bose-Einstein and Fermi-Dirac functions contradict to the definition of statistical temperature T. Since J. Gibbs (see his book, "The basic principles of statistical mechanics") did not operate on the concept of random quantity, all his results reproduced in modern physics books are not free from objections in the point of view of probability theory. (See, for example, my articles: *"On the statistics of the photon gas". Reports of the Academy of Sciences of the USSR, Vol. 316, No. 1 (1991), p. 100; "On the statistics of the electron gas". Reports of the Academy of Sciences of the USSR, Vol. 316, No. 6 (1991), p. 1386*). It was elucidated that the Maxwell distribution function describes not normal gas (in which the interaction between the molecules is occurred in collisions, and therefore energy of a molecule is a random quantity), but describes the quantum gas. There are no interactions (collisions) between molecules in quantum gas, and the number of molecules in a certain quantum state is a random quantity (see my article: *"On the statistics of the photon gas". Reports of the Academy of Sciences of the USSR, Vol. 316, No. 1 (1991), p. 100*). Therefore, the standard operation of averaging of rate coefficients with the help of the Maxwell distribution function is pseudoscientific operation in physical kinetics. It was proved, in particular, the following theorems: (a) the Einstein radiation coefficients (proposed by Einstein in connection with the kinetic derivation of Planck's formula and inserted by Einstein in the detailed balance equation) are nonzero if and only if, firstly, they depend not only on the quantum states of the molecule, but also on the quantum states of the photon gas, and, secondly, they are equal to each other. (As is known, the equation describing the state of statistical equilibrium must not contain any rate coefficients); (b) state of quantum gas (in particular, photon gas) is not characterized by temperature;

(4) a heuristic principle of the interrelation and mutual transformation of the "internal" and "external" (i.e., translational) motions of free microparticle was proposed. According to this principle, the frequency ν in the de Broglie-Bohr formula $E = h\nu$ (i.e., in the formula that connects the energy E and the frequency ν) has meaning of frequency of mutual transformation of the "internal" and

external" motions of particle. The formulation of the principle is as follows: $E_n = h\nu_n$ where E_n and n are the particle energy and energy quantum number, respectively. This principle represents the solution of the complex problem on which Boltzmann, Planck, Einstein, Fermi, Bohr, and many other well-known theorists reflected.

6. In 1995-1999 the following my pioneering works devoted to the critical analysis of the Larmor-Lorentz-Poincare-Einstein special theory of relativity were published:

T.Z. Kalanov, "Correct theoretical analysis of the Michelson-Morley experiments". Reports of the Academy of Sciences of the Republic of Uzbekistan, No. 11-12 (1995), p. 22-25;

T.Z Kalanov, "The proof of incorrectness of Lorentz transformation". Reports of the Academy of Sciences of the Republic of Uzbekistan, No. 1-2 (1996), pp 32-35;

T.Z. Kalanov, "On the theory of relative motion". Reports of the Academy of Sciences of the Republic of Uzbekistan, No. 12 (1997), p. 15-17;

T.Z. Kalanov, "On the theory of time". Reports of the Academy of Sciences of the Republic of Uzbekistan, No. 5 (1998), p. 24-26;

T.Z. Kalanov, "$E \neq mc^2$: The most urgent problem of our time". Reports of the Academy of Sciences of the Republic of Uzbekistan, No. 5 (1999), p. 9-11;

T.Z. Kalanov, "Kinematics of the material point: A modern analysis". Reports of the Academy of Sciences of the Republic of Uzbekistan, No. 7 (1999), 9-11.

In these works, for the first time in the world, I proved rigorously that:

(1) The contradiction between the experimental and calculated data of Michelson-Morley is due to that the fundamental comparison between them was made incorrectly. In fact, the experimental and calculated data belong to the different systems of reference: the experimental data belong to the reference system related immobility with the Earth, and the calculated data containing the velocity V of the motion of the Earth belong to the reference system related immobility with the Sun. Therefore, the comparison of this data with each other is the first and principal formal-logical error. This error leads inevitably to the contraction hypothesis and its mathematical representation – Lorentz transformation formulae. In the case of resting frame, Michelson-Morley' formulae do not include the velocity V and, therefore, the experimental and calculated data of Michelson-Morley are in complete agreement with each other. This implies that the Michelson-Morley experiments refute the special theory of relativity. This is a formal-logical law!

*(2) the Lorentz transformation formulas are the result of the substitution the Galilean transformation formula $x_M = x'_M + V_M t$ (which describe the object **M** moving with a relative velocity $V_M = \left(x_M - x'_M\right)/t$) in the equation $x_L^2 = c_L^2 t^2$ of motion of the light wave front (which is the object **L** moving with velocity c_L). The substitution $x_M = x_L$ signifies mathematically the intersection of mathematical objects and signifies physically the coincidence of physical objects **M** and **L** moving at different speeds. Formal-logical error is as follows: the Lorentz*

*transformation formulas describe the coincidence of the objects **M** and **L** at any time.*

Thus, the existence of formal-logical errors in the special theory of relativity signifies that the special theory of relativity is wrong in essence. Elimination of the logical errors leads to the abolishment of this theory. The abolishment of this theory leads to the "emancipation (unfettering) of the physical picture of the world from the individuality of creative mind" (Max Planck).

7. Understanding the scientific significance of the obtained results, I sent my manuscript to peer-reviewed journals.

In 2004 my article, "*On logical errors underlying the special theory of relativity*", was published in the peer-reviewed journal: *Journal of Theoretics (USA). Vol. 6 (2004) (www.journaloftheoretics.com).* It was a joyous event because the journal had a good reputation and published works of creative physicists. This article was the first important step towards the recognition of my results.

In 2007 my article, "*Critical analysis of the special theory of relativity*", was published in the peer-reviewed journal: *Bulletin of Pure and Applied Sciences, Vol. 26D, No. 1 (2007), pp. 1-15.* A discussion of my articles was started. The number of my adherents was rapidly increasing. And I planned to do an analysis of quantum mechanics.

8. In 2004 my original article was published in peer-reviewed journal: *T.Z. Kalanov, "The correct theoretical analysis of the foundations of quantum mechanics". Journal of Ultra Scientists of Physical Sciences (International Journal of Physical Sciences, India), V. 16, No. 2 (2004), pp. 191-198.* The generally known experiments relating to elastic scattering of atomic particles was analyzed in this article. As is known, the complete diffraction picture does not appear as a result of elastic scattering of a single particle. The complete diffraction picture is the result of the scattering of the beam (i.e., set) of non-interacting particles. Basing on this fact, I proved the falseness of the de Broglie (Nobel Prize winner, 1929) hypothesis of the particle-wave dualism (nature) of atomic particles. I proposed a new model of atomic particle. The model is as follows:

(a) atomic particle represents the object which is rotating, is stretching, and is shorting (like a worm), and, therefore, it is in translational motion (like a worm);

(b) translational motion is the absolute one (i.e., the motion which does not depend on choice of the reference system);

(c) elongation and contraction is oscillatory process; particle diameter is the distance passed by the particle over one period of oscillation; (d) atomic particle motion is not a wave motion; particle motion does not associate with wave motion.

This implies that the wave function Ψ (i.e., the psi-function, a dimensionless quantity not having statistical meaning) and the square of modulus of the wave function $|\Psi|^2$ (i.e., a dimensionless quantity not having statistical meaning) which are used in standard quantum mechanics are a mathematical fiction and have neither statistical meaning nor physical meaning. (As is generally known, the physical quantities have dimensions: for example, meter, kilogram. The physical quantity is a property of material object or phenomenon, which can be measured.

Therefore, the quantities which have no dimensions and cannot be measured are non-physical quantities and have no physical meaning. For example, probability is a dimensionless quantity, it has no physical meaning). Moreover, the quantity of the "square of modulus of psi-function" cannot be defined and interpreted as a probability. Therefore, the probabilistic interpretation (statistical interpretation) of $|\Psi|^2$ proposed by Max Born (Nobel Prize winner, 1954) is formal-logical error. The sense of the expression "probabilistic (statistical) interpretation of $|\Psi|^2$" can be clarify as follows. It is generally known that $|\Psi|^2$ is not a probability; however, it is postulated that the $|\Psi|^2$ is a probability. But science demands from researchers to obey to the formal-logical laws (i.e., the laws of correct thought) in all cases!

9. In 2007-2009 the following articles on the critical analysis of the foundations of classical thermodynamics were published in peer-reviewed journals:

T.Z.Kalanov, "The correct theoretical analysis of the foundations of classical thermodynamics". Bulletin of Pure and Applied Sciences, Vol. 26D, No 2 (2007), pp. 109-118.

T.Z.Kalanov, "The correct theoretical analysis of the foundations of classical thermodynamics". Indian Journal of Science and Technology, Vol. 2, No 1 (2009), pp. 12-17.

It was proved in the articles that classical thermodynamics is a phenomenological theory (i.e., a description of experimental data), but not the correct objective theory because its foundations (i.e., first and second laws, equation of state, the concepts of internal energy, of thermal energy, of entropy, and of temperature) contain formal-logical errors. It was proposed the correct formulation of the foundations of statistical thermodynamics, in particular, the correct definition of entropy: $s = E/T$, where s is entropy of molecule, E is average energy of molecule, T is statistical temperature of system. This definition represents consequence of Gibbs quantum canonical distribution derived by me with the help of the theorem of multiplication of probabilities. (The concept of "Gibbs canonical distribution" has only historical sense: Gibbs canonical distribution has no scientific significance because it represents logical error, and therefore it does not a scientific achievement).

It was shown that the thermodynamic potentials are not the result of correct statistical construction of the theory. Moreover, thermodynamics does not represent a logical consequence of statistical principles. (The method of thermodynamic potentials was created by theoretical physicist J. Gibbs in 1874-1887. It should be emphasized that all the works of Gibbs (see, for example, his book, "The basic principles of statistical mechanics"; the works on mathematics including vector calculus) are such "achievements" which even Einstein could not understand). This implies that the classical thermodynamics is a phenomenological (non-objective) theory created by the engineers and researchers: J. Mayer (1842), J. Joule (1843), G. Helmholtz (1847), N. Karnot (1824), R. Clausius (1850), W.

Thomson (1851), and others. However, all the old theories created by classics of science are in need of radical revision or abolition now.

10. In 2007-2009 I constructed the theoretical model of God and proved the existence and uniqueness of God. The results were published in the following peer-reviewed journals:

T.Z. Kalanov, "Theoretical model of God: The key to correct exploration of the Universe". Bulletin of the Amer. Phys. Soc. (April Meeting), Vol. 52, No. 2 (2007);
T.Z. Kalanov, "Theoretical model of God: proof of existence". Indian Journal of Science and Technology. Vol. 2, No 3 (2009), pp. 80-88;
T.Z. Kalanov, "The theoretical model of God: Proof of the existence and the uniqueness of God". Scientific GOD Journal. Vol. 1, No 2 (2010), pp. 85-97.

How did I do it? I guessed right the theorem of existence of God. Then I guessed right and constructed a proof. I understood that my proof could not be the special scientific (i.e., physical, mathematical, etc.) proof: my proof must be the general scientific (i.e., philosophical) one. Therefore, I chose dialectical materialism as the starting philosophical system. But the critical analysis of dialectical materialism showed that this doctrine is not free from objections.

The objections, first of all, are related to the Lenin definition of matter and to epistemology. I realized that the fundamental theoretical proposition of dialectical materialism what there exists only matter (in other words, what the unity of the world is its materiality) contradict to the law of unity and of struggle of opposites. Really, the principle logical completeness formulated by me requires the existence of the following unities: "matter + non-matter" and "material + non-material". "Non-matter" and "non-material" are information. And material object is a bearer of information).

Matter can be in different states: for example, the zero (vacuum) state, the object state, and the other intermediate states. All the states are coexisting ones. The zero (vacuum) state does not have any properties and therefore cannot be detected by some kind of instrument, device. The object state is a set of material objects which have properties. Properties are the result of the mental division of an object into aspects. The essence of the world is information. And material objects are a manifestation of information. The unity of the world represents the unity of matter and of information.

On the basis of this idea, I arrived at the conclusion that human knowledge (i.e., the ordered information in the form of text, formulas, laws, etc.) are the essence of the world, and material objects under consideration are a manifestation of this information. Then I understood that I ought to use the theoretical propositions of cybernetics (control theory) which is a concretization of the basic principles of dialectics. In the point of view of cybernetics, if there exist connected objects, "world + non-world", then one of them is a controlling object, and the other is a controllable object.

The object "world" is mentally divided into aspects, and the object "non-world" is not mentally divided into aspects. The object "non-world" is unique one. Therefore, the object "non-world" is outside the object "world" (i.e., "non-world" does not belong to "world") and is the Absolute, the Creator, and the Lord of the

Thus, I proved the existence and uniqueness of the Absolute, the Creator and the Lord, i.e., God.

The scientific proof of existence and of uniqueness of God leads to the formation of a new epistemology and correct definition of reality. I proposed the following logical and dialectical (not Lenin's) definition of reality. The reality is the unity of two eternal aspects: God and matter. God, an aspect of reality, exists as the Absolute, the Creator and the Lord of essence (i.e., information) and of phenomena. God is a religious name. Absolute is the logical name. Creator and Lord are the philosophical name of the same aspect of reality. It is not granted to mankind more than recognition of the existence and of uniqueness of God! The existence of God can and should be recognized in science only by means of deep scientific research of God's creations. Thus, the solution of the basic question of philosophy as the starting conceptual framework of science (i.e., science paradigm) is as follows:

(a) God exists;

(b) the Universe is the Living, Rational, Thinking Organism created by means of the creation and of the control of information, i.e., by means of the materialization of information, i.e., by means of insertion of information in the physical vacuum from which material objects are born;

(c) physical vacuum is an "organ" which implements birth of material objects (i.e., materialization of information inserted in the physical vacuum);

(d) black hole is the effaceable material object, i.e., the material object that God destroys by removing information from it. (In this connection, it should be noted that currently accepted theory of black hole is an erroneous one).

The theoretical model of God was used by me as a basis for construction of a theoretical model of man. Man represents a unity of the following material aspects: physiological body and psychical body. Physiological body is the machine which is intended for performance of work and which is worn out over time (grow old, die) and can be replaced. Psychical body is the controlling body (aspect) that can exist without and beyond the physiological body. Death of physiological body means the decomposition (disintegration, decay) of the unity of the physiological body and of the psychical body. The psychical body is the unity of Intellect and of Soul. The decomposition of this unity signifies the following fact: the Intellect becomes food for the Supreme Intellect (which is a material object), and the Soul goes to Heaven or Hell (both of them are material objects) in accordance with the deeds (good-deeds or misdeeds) of man.

The existence of the Human Intellect is a consequence of the existence of the Universe Intellect. The principle of development of Mankind is a consequence of the existence of the Universal Moral (i.e., Absolute Moral, Universe Moral, Universe Morality). In accordance with the Universal Moral, destination of Human Intellect to be absorbed by the Universe Intellect.

11. In 2010 the following monograph was published in Germany:
"The Critical Analysis of the Foundations of Theoretical Physics. Crisis in Theoretical Physics: The Problem of Scientific Truth" (Lambert Academic Publishing, 2010) by T.Z. Kalanov,

My main articles published in peer-reviewed journals were set out in the book. It is proved in the book that theoretical physics comes into the greatest crisis caused by existence of formal-logical errors in the foundations of theoretical physics. And the existence of formal-logical errors is caused by the inductive development of science. Obviously, the crisis will inevitably lead to a general crisis of sciences.

Withdrawal from the crisis is seen in the following acts: (a) a deep and clear understanding of logical errors in sciences by the scientific community; (b) changing and addition (supplementation) of the methods of cognition, i.e., the supplementation by the meditative (i.e., non-analytic-synthetic) method of cognition; (c) creation of a new epistemology. The principle of the existence of God ought to be the starting point and the foundation of all sciences. Because scientific knowledge are only a means of comprehension of the Supreme Truth, Absolute Truth, and God. Faith in God is faith in oneself. Faith is the power for man tending to comprehension of Truth!

12. Currently, I work on the following problems:

(a) the problem of quantization of energy that is not solved until now by physicists (starting with Schrödinger). Publication is as follows:

T.Z. Kalanov, "On a new approach to the solution of the problem of quantization of energy". Bulletin of the Amer. Phys. Soc. (April Meeting), Vol. 51, No. 2 (2006), p. 62.

A new solution of this key problem can break down stereotypes in the thinking of contemporary scientists and can open the way to solve the problems of elementary particles and gravitation. In my opinion, way of unification of modern theories, for example, based on the principle "relativism + gravity + quantization + ..." can lead to the creation of a theory about which Einstein would say: "The more successes... are achieved by the theory, the more goofy it looks");

(b) the critical analysis of the theory of Big Bang. Publications are as follows:

T.Z. Kalanov, "Where are the logical errors in the theory of Big Bang?". Bulletin of the Amer. Phys. Soc. (APS April Meeting), V. 60, No. 4 (2015).

T.Z. Kalanov, "Where are the logical errors in the theory of Big Bang?". Scientific GOD Journal, V. 5, No. 5 (2014), p.432-433.

It is proved by me that the theory of Big Bang contains three basic logical errors;

(c) the critical analysis of the foundation of the differential and integral calculus. My article was published in several peer-reviewed journals:

T.Z. Kalanov, "Critical analysis of the foundations of differential and integral calculus". MCMS (Ada Lovelace Publications), (2011), pp. 34-40.

T.Z. Kalanov, "Logical analysis of the foundations of differential and integral calculus". Indian Journal of Science and Technology, Vol. 4, No. 12 (2011).

T.Z. Kalanov, "Logical analysis of the foundations of differential and integral calculus". Bulletin of Pure and Applied Sciences, Vol. 30 E (Math.& Stat.), No. 2 (2011), pp. 327-334.

T.Z. Kalanov, "Critical analysis of the foundations of differential and integral calculus". International Journal of Science and Technology, Vol. 1, No. 2 (2012), pp. 80-84.
T.Z. Kalanov, "On rationalization of the foundations of differential calculus". Bulletin of Pure and Applied Sciences, Vol. 31 E (Math. & Stat.), No. 1 (2012), pp. 1-7.

It is shown that the concept of "derivative" in standard mathematics is based on the introduction and consideration of two independent variables: x and increment Δx which are not connected by any relationship. Moreover, the increment Δx is not defined in standard mathematics. In this case, the derivative is a function of the argument x. But it can be shown that x and Δx are connected quantities: $\Delta x = x - c$ where c is a constant. Then the derivative is a function of the constant c. It is asserted that the standard foundations of differential and integral calculus is based on logically and practically erroneous concepts of "infinitesimal quantity", "derivative", "derivative as a function of variable", "differential". Explanation of the errors is that the mathematical formalism does not represent a process. Thus, the differential and integral calculus are incorrect basis of mathematics;

(d) the critical analysis of the foundations of geometry. Publication is as follows:
T.Z. Kalanov, "Analysis of the problem of relation between geometry and natural sciences". Prespacetime Journal, Vol. 2, No. 1 (2011), pp. 75-87.
I found the solution to the problem of relation between geometry and physics (it is the problem that Einstein discussed in the article, "Geometry and Experience"). I showed that the classification of geometries, in accordance with the formal logic, should be based on the essential feature and not on the unessential feature. I proposed a correct physical interpretation (explanation) of the Lobachevski geometry (i.e., Lobachevski function. One who studied the course "Resistance of Materials" in student years can easily guess how to do it). I researched the question (which mathematicians never asked yourself!) why Euclid's fifth postulate is not a logical consequence of all the other postulates of the axiomatic system of Hilbert. I showed that Hilbert's axiomatic system is incomplete one because it does not contain the concept of the triangle. I proved Euclid's fifth postulate within an approach similar to Legendre's approach (of course, I studied all the comments of Lobachevski to this effect);

(e) the critical analysis of the Pythagorean theorem and the problem of irrational numbers. My relevant article was published in several peer-reviewed journals:
T.Z. Kalanov, "The critical analysis of the Pythagorean theorem and of the problem of irrational numbers". Basic Research Journal of Education Research and Review, (ISSN 2315-6872, http//www.basicresearchjournals.org), Vol. 2, No. 4 (2013), pp. 59-65.

T.Z. Kalanov, "The logical analysis of the Pythagorean theorem and of the problem of irrational numbers". Asian Journal of Mathematics and Physics, (ISSN 2308-3131, http://scienceasia.asia), Vol. 2013 (2013), pp. 1-12.
T.Z. Kalanov, "The critical analysis of the Pythagorean theorem and of the problem of irrational numbers". Bulletin of Pure and Applied Sciences, Vol. 32 (Math & Stat), No. 1 (2013), pp. 1-12.
T.Z. Kalanov, "The critical analysis of the Pythagorean theorem and of the problem of irrational numbers". Global Journal of Advanced Research on Classical and Modern Geometries, (ISSN: 2284-5569), Vol. 2, No. 2 (2013), pp. 59-68.

It is shown that: (1) the Pythagorean theorem is a conditional theoretical proposition because, in some cases, the theorem contradicts to the formal-logical laws and leads to the appearance of irrational numbers; (2) the theoretical proposition of the existence of incommensurable segments is a mathematical fiction; it is a logical consequence of the violation of the logical law of identity of forms; and it is the violation of the law of absence of contradiction of forms; (3) the concept of irrational number is a result of the violation of the dialectical unity of the qualitative aspect (i.e., a form) and of the quantitative aspect (i.e., a length, area) of geometric objects. Irrational numbers represent the process and, therefore, they do not exist on a numerical scale. There are only rational numbers on a numeric scale;

(f) the critical analysis of vector calculus. My relevant article was published in several peer-reviewed journals:

T.Z. Kalanov, "On the logical analysis of the foundations of vector calculus". International Journal of Scientific Knowledge. Computing and Information Technology, Vol. 3, No. 2 (2013) pp. 25-30.
T.Z. Kalanov, "On the logical analysis of the foundations of vector calculus". International Journal of Multidisciplinary Academic Research, Vol. 1, No. 3 (2013).
T.Z. Kalanov, "On the logical analysis of the foundations of vector calculus". Journal of Computer and Mathematical Sciences, Vol. 4, No. 4 (2013), pp. 202-321.
T.Z. Kalanov, "On the logical analysis of the foundations of vector calculus". Journal of Research in Electrical and Electronics Engineering (ISTP-JREEE), (ISSN: 2321-2667), Vol. 2, No. 5 (2013), pp. 1-5.
T.Z. Kalanov, "On the logical analysis of the foundations of vector calculus". Research Desk, (ISSN: 2319-7315), Vol. 2, No. 3 (2013), pp. 249-259.
T.Z. Kalanov, "The foundations of vector calculus: The logical error in mathematics and theoretical physics". Unique Journal of Educational Research, Vol. 1, No. 4 (2013), pp. 054-059.
T.Z. Kalanov, "On the logical analysis of the foundations of vector calculus". Aryabhatta Journal of Mathematics & Informatics, (ISSN: 0975-7139), Vol. 5, No. 2 (2013), pp. 227-234.

T.Z. Kalanov, "Critical analysis of the mathematical formalism of theoretical physics. II. Foundations of vector calculus". Unique Journal of Engineering and Advanced Sciences (UJEAS, www.ujconline.net), , Vol. 01, No. 01 (2013).
T.Z. Kalanov, "Critical analysis of the mathematical formalism of theoretical physics. II. Foundations of vector calculus". Bulletin of Pure and Applied Sciences, Vol. 32 E (Math & Stat), No. 2 (2013), pp.121-130.
T.Z. Kalanov, "Critical analysis of the mathematical formalism of theoretical physics. II. Foundations of vector calculus". Bulletin of the Amer. Phys. Soc., (April Meeting), Vol. 59, No. 5 (2014).

It is proved that the vector calculus is an incorrect theory, because: (1) it is not based on the correct methodological basis: the unity of formal logic and of rational dialectics; (2) it does not contain the correct definition of the concepts of "movement", "direction of movement", and "vector"; (3) it does not take into consideration of the dimensions of physical quantities (i.e., the number name, concrete number) which characterize the concept of "physical vector", and, therefore, it has no natural-scientific meaning; (4) the theoretical propositions of vector calculus relating to "physical vectors" contradict to formal logic;

(g) the critical analysis of the foundations of trigonometry. My relevant article was published in several peer-reviewed journals:
T.Z. Kalanov, "On the system analysis of the foundations of trigonometry". Journal of Physics & Astronomy, (www.mehtapress.com), Vol. 3, No. 1 (2014).
T.Z. Kalanov, "On the system analysis of the foundations of trigonometry". International Journal of Informative & Futuristic Research, (IJIFR, www.ijifr.com), Vol. 1, No. 6 (2014).
T.Z. Kalanov, "On the system analysis of the foundations of trigonometry". International Journal of Science Inventions Today, (IJSIT, www.ijsit.com), Vol. 3, No. 2 (2014), pp. 119-147.
T.Z. Kalanov, "On the system analysis of the foundations of trigonometry". Pure and Applied Mathematics Journal, Vol. 3, No. 2 (2014), pp. 26-39.
T.Z. Kalanov, "On the system analysis of the foundations of trigonometry". Bulletin of Pure and Applied Sciences, Vol. 33E (Math & Stat), No. 1 (2014), pp. 1-27.

It is shown that the foundations of trigonometry contradict to the principles of system analysis and contain formal-logical errors. Fundamental logical error is that the definitions of trigonometric functions represent quantitative relationships between different qualities: between qualitative determinacy of the angle and qualitative determinacy of the line segments (the legs) in a right triangle. These relationships do not satisfy the standard definition of a mathematical function because there are no mathematical operations that should be performed on a qualitative determinacy of the angle to get a qualitative determinacy of legs. Therefore, the left-hand and right-hand sides of the mathematical definitions do not have the identical meaning. The logical errors determine the essence of trigonometry: standard trigonometry is a false theory;

(h) the critical analysis of the theory of negative numbers. Relevant article published in several peer-reviewed journals:

T.Z. Kalanov. "Critical analysis of the foundations of the theory of negative numbers". International Journal of Current Research in Science and Technology, Vol. 1, No. 2 (2015), pp. 1-12.
T.Z. Kalanov. "Critical analysis of the foundations of the theory of negative numbers". Aryabhatta Journal of Mathematics & Informatics, Vol. 7, No. 1 (2015), pp. 3-12.

The results of the critical analysis of the theory of negative numbers within the framework of correct methodological basis - the unity of formal logic and of rational dialectics - are as follows:

(1) negative numbers and the concept of "number sign" are inadmissible ones in science because they represent a formal-logical error;

(2) all the numbers are neutral ones because the number "zero" is a neutral one;

(3) signs "plus" and "minus" are only symbols of mathematical operations;

(4) the operational form of mathematical operations furnishes the clue to understanding of the operation of inversion of operation.

The obtained results are the sufficient reason for the following statement: the essence of the theory of negative numbers is that the theory is a false one;

(i) the critical analysis of the foundations of mathematics. Relevant article was published in peer-reviewed journal:
T.Z. Kalanov. "On the formal–logical analysis of the foundations of mathematics applied to problems in physics". Aryabhatta Journal of Mathematics & Informatics, Vol. 7, No. 1 (2015), pp. 1-2.

The main result is as follows: the concept of "mathematical quantity" – the central concept of mathematics – is meaningless, erroneous, and inadmissible one because it represents the following formal-logical and dialectical-materialistic errors: negation of the existence of the essential feature of a concept (i.e., negation the existence of the essence of the concept) and negation of the existence of measure of material object. The obtained results lead to the conclusion that the generally accepted foundations of mathematics should be reconsidered.

CONCLUSION

I have approximately 200 publications. From 2004 until the present, I work at my home which I name "Home of Physical Problems". This is a house with a small garden, built by my parents: my father Z.Z. Kalanov and mother K. Fazilova who were famous people and the great parents (for example, see site: www.facebook.com). There is a good aura here. Nobody prevents me from thinking over the problems that interest me here.

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