

# Thermal Life In The Universe

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## Introduction



We try to capture the BEAUTIFUL moment. But it only emphasizes the LIFE of Nature in the continuously flowing Time. And in real LIFE there are not only beautiful but also gloomy moments, which are also engraved in our memory. Bunin, in his attempt to define Art, noted this with the formula: "Only the Beautiful and the Terrible can be called Art." But not only in the invented world of Art does ersatz-populism now supplant the EXCELLENT, but in real LIFE earthlings, in the current period of destruction of the Collective Consciousness we are all in a rather DARK ELEVATION. And in a DARK environment, even the art of finding BEAUTIFUL moments has faded. They've been replaced by horror movies to make LIFE seem BETTER. Now we are "like everyone else. But our country, which not so long ago many of us used to sing-feel like "I don't know another country where people can breathe so freely", where "elite clubs" were only needed for the growing gold mold, gave birth to the High Art. Because we didn't need any THICK elite clubs to capture the moments. At that time, in order to meet with the elite, it was enough to have

meetings with "Meridian" at the apartment of "janitor" chemist Vitaly Petranovsky or at the Tsoi's furnace room. Now, sadly enough, our homeland has become a prime example of THAT, where the modern "bard" says all he cares about is his children's survival. So now he has nothing to write about, and by and large nothing to write about. Russia has become like a police state, or rather an imitation of one. But this Dullness is now manifested not only in Russia, it is ubiquitous in most of the Leading Powers, which, even at the edge of Kyuu-Kyuu, think only of their own salvation. And it is quite natural that this Dullness characterizes the unpreparedness of mankind to solve Global Problems, which does not help to prevent the Global Catastrophe. And all the reasons for this CATASTROPHE is again in OUR HEAD, or, to be more correct, in the Society's lack of it. The police state has horns, hooves, claws and teeth, but there is no tangle of intersecting neurons in the gray matter. There is no such Social Institute as SCIENCE, which only supplements the BUTAPHORIA. Moreover, the modern bureaucratic scientific structure has become the main TORMAZ of True SCIENCE, replacing it with scientifically figurative reporting. I myself used to consider as manifestation of local negative effects in a science that mostly scientific mediocrities, but dexterous passers-by, have got into scientific bureaucracy. But now I am convinced that this is a Global Problem of Science - and in Science it has led to the fact that there is only an imitation of a Scientific Head, but it lives simply by scientific rules. In particular, RULES of Acceptance of Scientific Papers. Rules, of course, are necessary in

many cases, even, one might say, in most cases. Even Inanimate Nature "lives" by the Rules described by the Fundamental Laws. Without them there would be only CHAOS, while we can see beautiful Flowers and feel beautiful Moments beautifully. These are all manifestations of "Rules" on different scales. So the Rules are also needed on the "scale" of Living Nature. But the moment we come to the UNDERSTANDING and CORRECTION of the Fundamental Laws, rewriting the "Rules" of Inanimate Nature, quite naturally, comes into conflict with those already written, formulated, considered strictly proven, or built on the canonized in Science PREPOSITIONS. And in the crisis period of Science itself, it just rolls along the rails and only the Scientific Head is the Forward Lookout who can see that the rails are breaking over the rift-gap. And the very possibility of Society's Head in the form of Reasonable Social Institutions' Organization and the Head of the Institutions themselves, including Science, is naturally connected with individuals' heads. However, they, "according to their heads", can now be conventionally divided into those who "know" about thermal Death (the Universe) and consider themselves "scientists" and those who do not know about it, in the first sense - "ignoramuses". But, and those who consider themselves scientists - stuck on the hypothesis put forward back in the XIX century by Rudolf Clausius, are themselves behind in their understanding of THERMODYNAMICS, from the advanced works of Ilya Prigozhin to produce local ENTROPY of the mid-20th century, which the scientific officialdom has even slowed down. So also so-called official "scientists" have simply stupidly learned actually abstract limiting case - THERMOSTATICS, which and thoughtlessly rewrite in textbooks, not bothering to understand till now works of one of the worthiest Nobel laureates. Prigogine, D. Kondepudi, MODERN THERMODYNAMICS, From Heat Engines to Dissipative Structures, John Wiley & Sons, Chichester-New York-Weinheim-Brisbane-Toronto-Singapore, Editions Odile Jacob, 1999 \_\_\_\_\_ Мир, Москва, 2002,

462 pp. И. Prigozhin, Nonlinear nonequilibrium thermodynamics, Moscow, Mir, 2005, 450 p. Prigozhin's works on irreversible processes, taking into account the Principle of Logarithmic Relativity, directly deal with Local Effects on all scales. And they fundamentally take into account continuously current TIME. Moreover, it is the "FORBIDDEN" for the existence of LIFE itself - that there is not enough time in the Universe for at least one organic molecule to arise statistically - that was obtained within the framework of the same thermostatic models. And, as a "lock" - justification for our existence, the "LIFE Game" was invented, where von Neumann's robot assembles similar robots. So Prigozhin's THERMODYNAMICS has long ago lifted this "Ban" on our existence. And the only question is, HOW do we arrange our lives? As Intelligent Humans or as fundamentally indistinguishable particles of inanimate Nature. So, what is there to ask of either the rulers or the average citizen, when even scientists are now not distinguished by their SUSTAINABILITY. On the contrary, both those and others, and even "scientists" now need to explain that REAL LIFE is much more complicated than bourgeois notions, which have now occupied the industry of scientific titles. And this clarification must begin with the scientific environment, before it completely degenerates into the usual, purely bourgeois one. Or maybe it's already too late? And scientific officials, though they are sitting in the compartment car, but together with the entire train is already going down the slope? This general discussion of the Rules applies to many Stories in Science with the Coryphaei. And stories with Planck, and with Pauling, and with Einstein, and with the already mentioned Ilya Prigozhin, which led to the immersion of their Ideas in the "cultural layer" of conjunctural "scientific" articles and dissertations. But I will describe a number of examples from my own scientific life, "I will share my personal experience" as I was asked to do by Clarivate, the firm which sets up our scientific indices. Strictly on Rules of Acceptance of Scientific Articles (and patents) I wrote when I only began to work in Academy of Sciences - last century. 5. S.V. Ordin and others, Expanding the working spectral range of the spectrophotometer, Solid State Physics, 1976, v. 15, № 3, p 541-544. 6. S.V. Ordin ets,

Plasma reflection of CoSi in the temperature range 80-300 K, *Solid State Physics*, 1979, v. 20, № 5, p 1541-1544. 7. S.V. Ordin, V.K. Zaitsev, V.I. Tarasov, "Optical Properties of Higher. Manganese Silicide," 1979, *J. Sov. Phys. Sol. State* v.21, № 8, 2517-2520, 1454. 8. Ordin S.V. "Source of Infrared Radiation", USSR Patent - Copyright Certificate No. 816250, November 21, 1980, Priority of Invention — Application No. 2853190 of December 14, 1979 And the deviation from the Rules, in principle, did not start on my part. Immediately after the publication of a modest, in principle, duty, my article (small academic bosses, unlike the head of the laboratory-scientist, simply co-authored it, because they assigned me to initially carry out this work, but did not make any creative contribution). 10. S.V. Ordin etc, *J. Sov. Phys. Solid State*, 23, № 2, 621-623, 1981. Peculiarities of a Crystalline Structure and Thermopower of Higher Manganese Silicide. I, having generalized numerous X-ray data, and using knowledge of the Theory of Numbers and Sets, constructed a non-dimensional model of the crystal lattice of higher manganese silicide and, within its framework, described optical effects and sent it for publication. But a competitor, having learned about it, persuaded the head of the laboratory to withdraw my article accepted for publication with the formulation: "In order not to disgrace the face of the laboratory". And the work, in principle, was done before the award of the Nobel Prize for disproportionality in fullerenes, so on the contrary, it could glorify the laboratory back then It was received with great acclaim and at conferences, in particular: 35. S.B. Vakhrushev (St. Petersburg), S.V. Ordin (St. Petersburg)]. In Book: *SUPERCONDUCTING MATERIALS. Phonon Anomalies in High T. C. Superconductors related to Charge*, Paris, 1997, p.367. 54. Ordin S.V., Zaysev V.K., Fedorov M.I., Vachrushev S.B., Dorner B., Ivanov A.I., Incommensurability of Crystal Structure and Huge Spatial Dispersion in IR-spectra, IX National conference on growth of crystals (NCCG2000), theses of reports of Moscow, Crystallography Institute of the Russian

Academy of Science, 2001, p. 43. But I made the international publication of this, rejected out of order complete article only many years later, when perestroika interrupted my cooperation with many organizations in developing devices based on the Fundamental Laws of Physics and I took it out of my archives, having been engaged in their rechecking: 93. S.V. Ordin, in Book: *Optical Lattices: Structures, Atoms and Solitons*, "Giant spatial dispersion in the region of plasmon-phonon interaction in one-dimensional- incommensurate crystal the higher silicide of manganese (HSM)", Editors: Benjamin J. Fuentes, Nova Sc. Publ. Inc., 2011, pp. 101-130. 241, ISBN: 978-1-61324-937-6 (Ordin Stanislav Vladimirovich, A.F.Ioffe's Physico-Technical Institute of the Russian Academy of Sciences, Russia)pp.101-130 Series: Lasers and Electro-Optics Research and Technology Physics Research and Technology, Binding: Hardcover, Pub. Date: 2011 Pages: 241.pp, ISBN: 978-1-61324-937-6 But during its numerous experimental rechecks I was lucky to run into the Big Scientist, the creator of boron nitride, from whom I simply asked his crystals for testing and used in the interpretations of theoretical models. And this man, unlike petty competitors, first invited me to a conference he himself held at the First Atomic Station, and then supported the further advancement of my research work 27. S.V.Ordin, B.N. Sharrupin, IR INVESTIGATION OF BORON NITRIDE STRUCTURE ORDERING, Abstract MRS95- L, Symposium AAA at the 1995 Fall Meeting Symposium Title: Gallium Nitride and Related Materials. And in fact, Sharupin invited me to refute what was written in his book. And the article on perfect boron nitride crystals grown by Sharupin, which was not pushed by the Rules, including Sharupin posthumously, I published much earlier 37. S.V. Ordin, [B.N. Sharrupin], Normal Lattice Oscillations and Crystalline Structure of NonIsotropic Modifications of a Boron Nitride, *J. Semiconductors (FTP)*, 32(9), 924-932, 1998. But there was also the international sad experience of resisting my publication outside of the Rules. Two clever theoretical physicists of my age, Alexander Zyuzin from our Ioffe Institute (who now heads the theoretical branch of the Institute) and Boris Shalaev from the Steklov Mathematical Institute (who, unfortunately, has already died, not without help of

doctors) persuaded me to send the article "Harmonic oscillator and lattice vibrations in crystals" to Pys.Rev. Pys.Rev. editorial board accepted my article and received positive reviews and even helped me to correct the purely technical errors in the text and drawings. But after my last revision-consideration I receive a letter from the editorial office: "Immediately forward the article to another journal - we have been banned from publishing it". I was still holding on a little bit, and then discussed this incident in my kitchen in St. Petersburg over a bottle of cognac with Dmitry Gidman, a former colleague of the Landau Institute. Then, at a similar meeting in the kitchen, but in his Moscow apartment with his former colleagues from the Landau Institute, we all laughed about this story together. But I got used to "laugh" seriously too, so I wrote and Dmitry edited my Open Letter and sent it to the editorial boards of many leading Physics Journals. And in the letter he explained that some Rules of Acceptance, in particular, the BANNING of Phenomenological and Calculus papers to Physical Journals prohibits to give Scientific Explanations of New Effects, and the authors- ignoramuses and conjecturers are allowed to state the utter nonsense, i.e. they do not know, or hide about contradictions in their "Discoveries" with the Fundamental Laws. Ban from the Rules has been removed. But not only that. It so happened that with this Open Letter Dmitry and I paved the way to the creation of Scientific Open Access and to the fact that the World learned about Grigory Perelman's work, originally rejected by the mathematical journal. But, if two independent mathematical schools in 4 years, having written two books on Perelman's work UNDERSTANDED its validity, the developers of "Quantum Mechanics", having moved away from the Fundamentals of Quantization Planck(photon physics), and then having moved away Planck UNDERSTANDING Einstein, who, in fact, extended Quantization to Mechanics (phonon physics), then the developers, one may say, drowned the Ideas of the coryphaei and have been conducting Quantization for 100 years by

the bullet of a rough model, which, in principle, cannot be considered as a BASIC for Quantization. Here is about ELEMENTARY Errors of the Schrödinger Equation and attached to this second Open Letter, my article "Gaps and Errors of the Schrödinger Equation". And ELEMENTARY correction of ELEMENTARY errors of Schrödinger equation for Harmonic Oscillator in principle also already done on the basis of de Broglie waves. But I think the psychological shock of the publication of Errors should be experienced before getting acquainted with the Full Article: "Changeover the Schrödinger Equation". In principle, I do not object to its publication in a journal, but in any case it will soon be included in the second edition of my book: "Stanislav Vladimirovich Ordin, Book: "FOUNDATIONS OF PlanckEinstein Quantization (Thematic collection of recent studies reviewed in scientific journals).", LAP LAMBERT Academic Publishing, 2021, ISBN 978-620-4-21066-7, 110 pp. " And this book, in principle, is itself a highlighted chapter of the Evidence-Based Physics book I am completing.