What is history? From the point of view of a physicist. Part II

Ikhlov Boris Lazarevitch

Lead Research Engineer
Perm State University

Abstract. The form of historical determinism and the conditions for the possibility of forecasting are determined.

Statistical approach

Let's take a closer look at physical determinism in history.

The social system, like many physical systems, is sometimes statistical. Examples of using the theory of probability in describing the mechanism of Mendel's genetic inheritance and the work of a telephone exchange can be found at least in P. Whitl [16]. According to probabilistic laws, psychiatric hospitals are filled, there is a statistical regularity of citizens getting hit by cars (since there is a physical connection, both of them move in the same plane, plus inattention, ignorance of traffic rules by both, drunkenness and those, and others. These are conditions that do not oblige a citizen to get hit by a car. He gets there according to a different law. An accident is the intersection of endless logical chains).

The fact of the applicability of the theory of probability in sciences other than physics, gave rise to the assertion that thermodynamics is not physics in general, like the equation of heat conduction. It has the first derivative with respect to time, while in all other fundamental equations of physics, the second derivative appears. In any case, the existence of the heat conduction equation indicates the identity of time in various forms of motion of matter and testifies against the assertion of the non-physicality of statistics (and also against a special biological time: statistical time and physical time are related by a system of equations, and there are no experimental data where the identity of times would be violated. Although the second law of thermodynamics itself does not have derivatives with respect to time. This point is an obstacle, in particular, in the generalization of thermodynamics and gravitation. Schemes for formulating the second law of thermodynamics in terms of the Hamiltonian formalism have not yet yielded tangible results (see, for example, [17]).

Of course, for statistical purposes, symmetry is also necessary, symmetry of space (for example, in order for the distribution to have a maximum of 50%, the coin must be symmetrical). If we try to choose not two, but three or more possible options (or we poorly mix, say, seeds of red and yellow flowers before planting in a flower bed, then they will grow in spots, the size patterns of which are not described by the theory of probability), we get fractional dimensions in p-adic theories. It is curious that the p-adic integral describing Brownian processes corresponds to the $SU(2)$ symmetry group. One could try, by analogy with mechanics, to connect the conservation law in thermodynamics with symmetry. However, as far as classical dissipative systems are concerned, the presence of spatial symmetry, which is only a condition for the conservation of momentum, still does not make it possible to use the variational principle.

The problem is similar to that arising in the generalization of gravity and quantum field theory (QFT), in particular, the standard temperature technique in the theory of many particles (see [18]). It cannot be resolved in supersymmetric models either. The gravitational field breaks the spatial symmetry: already in the special theory of relativity (SRT) in the 4-vector of displacement there is an additional time component. The classical theory of probability implies precisely spatial symmetry, for example, the symmetry of a coin toss. Consequently, the gravitational field violates the axiomatics of the theory of probability, and with it the logic of probabilistic determinism and modal logic in general. That is, there are difficulties in using statistical methods already within physics.

If we nevertheless assume a priori that there are a number of periods in history described by the theory of probability (with some kind of spiral symmetry), an event in history must be defined as the preparation of conditions Z and the effect <A> on object H under conditions of Z. Conditions Z should be an order of magnitude more severe than <A> and H: the experimenter should not be able to toss a coin so that it always falls, for example, in tails, i.e. should not know all the reasons affecting the coin, only in this case a statistical pattern will appear. So, roughly speaking, the event

$$E = Z + AH$$

If we know what will fall out, i.e. if we know how to toss, then we are talking about another event. If we talk about the result in an event (heads or tails), then it is necessary to supplement the result X with the method of tossing r, which splits into conditions Z and the type of tossing, which varies (with a machine or hand), therefore, only conditions Z can be considered. If Z are such that P (X) = 1, then we always have the same result and knowledge about Z is complete. The more knowledge about Z, and from a series of repetitive Z ', Z' ', Z'" ..., more and more identical Z are prepared, the more P (X) tends to 1.It is clear that the difference in Z is limited if we understand by Z a set of state parameters that still need to be defined as parameters of the state of the socio-ethnic system. If the difference in Z is comparable to Z, then we cannot even approximately indicate whether this or that result is possible, based on the theory of probability. In general, we must be prepared for the fact that only a limited number of phenomena are described by probability. "And, finally, since you do not think that every body / Smell and sound emits, then it comes out undoubtedly / That it is impossible to attribute sound or smell to everything." (Lucretius, "On the nature of things", 830). In this case, the concept of probability is meaningless, but this does not mean that there is no possibility of describing an event using other characteristics (quantitative or qualitative) of the random. For example, you can determine: for "approximately" equal, but rather rough (Z (i,j) - Z (m,n)<< Z) and unknown to the experimenter Z in cases of the type of a coin P (X) = 1/2. Moreover, complete knowledge of Z is impossible, however, changing the experiment, recognizing Z, we abolish spontaneity, introduce a monopoly. Thus, returning to [6], in the study, in any case, whether the epoch is described by the probabilistic method or not, it is necessary:

I. Determine the necessary, essential points of Z (conditions). Note the neglect of conditions in Stalinism and Trotskyism. For the former, the dictatorship of the proletariat and socialism are possible at any stage in the development of capitalism; the second complements the external conditions: a world revolution, but the level of productive forces is unimportant, the proletarian consciousness is assumed to be the determining factor. That is,

it is not social being that determines social consciousness, but the socialist (dictatorial) superstructure governs social matter.

S. Smith argues that "Marx had no theory at all ... The goal of his forty years of work was not at all to establish a system of ideas that could explain the world" [19]. However, in contrast to himself, he writes: "The followers of Marx ... like the materialists of the XVIII century, presented the social world as a type of complex mechanism, the parts of which interact according to open laws. The revolutionary party knows the secret of these laws ..." Smith does not understand Marxism and identifies it with mechanism, which is the opposite and identity of the Trocist-Stalinist voluntarism.

II. Before entering the data into the table, it is necessary to highlight the assumed necessary connections (which we are going to establish and investigate). If we have in mind commodity-money relations, then it is obvious that knowledge of Z does not at all cancel the old division of labor. Secondly, the leader cannot know Z, because Z is formed by the entire socio-ethnic system: alienation is universal. In order to more fully embrace Z, the apparatus of owner-managers must grow. Further, in order to preserve himself as an elite, he must stop growth and push out echelons of candidates for managers. At the same time, mediating economic functions and, due to the impossibility of embracing Z, the apparatus collapses. This is exactly what happened in the USSR.

It is obvious that the presentation of history as a struggle of classes, which was the most effective generalization, nevertheless reduces the general to the abstract particular. The class struggle turns out to be divorced from evolution, while in evolution itself progress as an ascent from the simple to the complex and regression turn out to be indefinite. Despite the apparent (due to its extensiveness) technical progress, labor is still partial: professionalism as mastery of logic turns into "professional cretinism" in the process of de-objectification. And not only in the case of manual labor. The programmer begins to think like a machine, which makes it impossible to adequately assess the social situation. Only because of this it is impossible to talk about the coverage of all historical conditions by a narrow social (party) group. (Obviously, we are talking about this type of identity of phenomenon and essence, about which L. Tolstoy said: "In the future, literature will not be needed - life will be more interesting than books." Of course, the description of each atom in a crystal is not part of the traditional science, and this is impossible. However, imagine that each of them is a person.). It is easy to see that the "romantic" understanding of the qualitative transition (Trotskyism, anarchism, Stalinism) concerns only changes in working conditions, changes in social forms, but does not affect the qualitative change in the content of labor. This is the other extreme in understanding historical determinism.

It is possible, of course, to think that the nature of labor is being transformed in an evolutionary way, but in practice modern technologies not only lead to replenishment of the reserve army of labor, but produce an army of push-button workers with the same depersonalization and alienation of partial labor, and also displace skilled labor in service sector with labor degradation.

On the other hand, modern social democratic and liberal currents focus on changing the nature of labor from above, that is, a competent group followed by the masses, while the subjects of history are classes. Therefore, the conditions of the "experiment" are left aside. (We will return to the subject of history below.) Even Ilyenkov ignored the nature of labor. conveyor, values of the highest order appeared ("Philosophy and Culture").

In fact, it is obvious that the content and nature of labor are related to each other. For example, creative work is not only obtaining something new with the need to define something new. It is associated with the involvement in the management of what is the planning of the whole, the general, in miniature, isolated in the planes of science or art. Or: to overcome the non-creative nature of labor, it is necessary to redistribute social funds.

It would seem that the content of labor rises from the abstract to the concrete, more and more creative. The share of living labor per unit of labor power is declining. The amount of required working time is reduced. But people don't change. On the contrary, the number of victims is growing from war to war, from ecology to ecology. The increasing complexity of the economic mechanism inevitably leads to an increase in the alienation of workers from management (to the polarization of the population, but not to the emergence of a middle class throughout the entire class), despite the increase in the number of workers with higher education in the 80s.

It should be remembered that the contradiction between labor and capital in material form fades into the background after October 1917. Although the upward trend in wages was clearly outlined in the last century, so the classics abandoned the thesis of the absolute impoverishment of the proletariat. It is removed within the capitalist mode of production - after the top could not manage absolutely impoverished workers who could not produce anything but low-quality non-competitive goods. The controversy was resolved through a reformist change in working conditions. And not with the filing of a group of competent economists - the "idea" of increasing workers' wages and improving working conditions and reproduction of labor was prompted by the same October (that is, someone's practical activity).

The contradiction is being transformed, even Bakunin wrote that the privilege of education is enough for the bourgeoisie to maintain its position.

Obviously, the antithesis between the growth of concrete labor and the growth of alienation from management and changes in the nature of labor intensifies to a contradiction. "The upper classes will not be able to," since the apparatus will not be able to cover all the wealth of economic ties, and will be forced to "share," "the lower classes will not want to," since the material form of exploitation in developed countries will soon be finally overcome. Reproduction of labor power increasingly requires a different nature of labor, therefore, overcoming alienation from management in order to change the nature of labor. This, in turn, requires universal higher education, the funds for which are forced out: in Canada, trade unions are fighting for universal education for workers, in France there are powerful demonstrations against elite schools to redistribute money for a higher level of universal secondary education, in Lebanon in December 1996, the protesters also demanded universal secondary education. The top may not be able to, but they cannot be willing to share. i.e,

III. it is necessary to understand that in the old scientific paradigm (namely: in the conditions of the old division of labor into those who think and those who do) it is impossible to encompass Z. It is only possible, having risen above clearly unknown conditions - after all, every single historical information has been obtained and presented by representatives of individual social groups, but not of the whole society as a whole, which, moreover, does not represent a whole due to the same division of labor, to find some "thermodynamic »Patterns in the past or take a step away from the old understanding of historical patterns. That is, there is no possibility of forecasting.

On the other hand, overcoming the anarchy of social life, we are trying to establish certain patterns, for example, how to live better, more profitably if we follow them, that is, cancel the accidental thing that is called individual

independent thinking and action. Let us recall how Labriola, Plekhanov, Lukach and even Ilyenkov understood dialectics: as the most general laws of being and thinking, therefore, pouring out of a bath with water and a child - for a person it is the deviations from the abstract, averaged general that are important, on the contrary, the universal in a specific deviation, which Ilyenkov considered insignificant (see, for example, "Dialectical Logic" or "Art and the Communist Ideal"). Even worse:

IV. as we understood from the criticism of the statistical method, it is impossible to establish a pattern prior to experiment. It is established by will. The actual statistical (mathematical) regularity does not have to coincide with the historical necessary connection. Where is the exit?

About the so-called activity

Either we know how the social system moves, according to some objective laws that do not depend on consciousness, and therefore we cannot influence the situation (fatalism), or we bring something into the system of laws so that we get the opportunity to influence the movement of the system.

What are we bringing? Mathematically not formalized activity of the superstructure, consciousness, will.

The necessary conditions of the revolution are not canceled, the basis inexorably brings the superstructure into line with itself, instead of the world revolution, capitalism is legalized in the USSR.

Lenin, contradicting Kautsky, restricts: the introduction not from the side of the government "going to meet the proletariat", but into the government subordinate to the proletariat. In general, the role of Social Democracy is only to help organize the proletariat. As Marx emphasized: Communists can only ease the pain of childbirth for society, but they cannot give birth for society.

Obviously, the quality of the subjects of history is objective for the revolution - but not the activity of the working class.

If we focus on the primacy of social being, then the subjects of history and individual individuals cannot radically change anything. If the role of activity is reduced to facilitating the childbirth of society, then they can give birth even without active ones. If the appearance of active people in society is a pattern, then everything is natural. Therefore, everything is accidental.

The filling of the dialectical unity "natural - accidental" with the simplest specifics immediately leads romantics to a logical contradiction. The facts are that the old understanding of activity as a scheme "the party that understands the laws of motion the most, gives the program the masses penetrate and follow the program, the party comes to power and makes economic transformations" does not work. That is, it is necessary to reassess not only the role of the party, but also determinism in history - as in the natural sciences. Prigogine argues that the mechanistic understanding of determinism has migrated to all special sciences, and, consequently, to philosophy.

Society cannot take a step without planning, whether the plan is being implemented or not is the second question. Of course, Ilyenkov is right in particular: the most general laws of motion of the external world coincide with the laws of thinking. From the fact that it is light during the day and dark at night, it follows that the world cannot be arranged in any way. We shoot at the Turk, and the Turk is killed because he was hit by a bullet. Naturally, it was only possible to achieve such a brilliant result through long-term social practice. However, it is enough to ask the question: how does the eye form an image of a Turk (and the eye creates a lot of false images before sculpting an

adequate one (see, for example, [20]), as well as which part of the Turk's body was hit by a bullet, and we return the previous reasoning, because the distribution of bullets over the target has a Poisson character.

The equation of social movement, including the laws of society, must answer the question of what will happen to the system, taken under certain conditions, after a certain period of time. If we introduce the activity of subjects, the equation should get the future that we would like to see. Then the inverse problem can be solved. It is necessary not only to determine the initial conditions for the desired future, but to change the real initial conditions so as to get the picture we need in the future.

Here we know at best the method of change, which, moreover, changes depending on the circumstances. Added to this is the expectation that the conditions will "ripen" (either on their own or with the help of subjects) until the moment in time when there is only "obstetrics" left.

Is the problem still correct? For example, in the inverse problem of scattering or heat conduction, when it is necessary to determine the initial conditions from the final result, the solutions are unstable, but they can be obtained in principle. The situation is different in society.

On the one hand, if history is determined in the Cartesian spirit, there is no point in predicting (divining, etc.). On the other hand, if there is an equation of history, and we have received a solution of what will happen tomorrow, and if it is negative tomorrow, then with the available information the subject is able to avoid it tomorrow. So the social mathematical equation is false. History becomes non-deterministic. But only in the sense of mathematical formalization.

VI. Stochastic approach

A. Classification.

1) Laplace determinism: there is a point with initial parameters P (V, r, m, f). The future is derived from the present unambiguously.

2) Probabilistic-quantum: from P, regions of future values (V, r) are unambiguously deduced.

3) Intuitive-prophetic: from communication with something or an unknown way, the future is uniquely determined.

4) Cultural, civilizational (Toynbee), Marx: from the logic of a holistic culture (Marx includes the culture of production) a possible future is determined. Earlier it was assumed that physicists, for example, are not only "spontaneous materialists", but since they own a part of the logic of nature, which cannot be formal, thus also "spontaneous dialectics" (Ilyenkov, "Philosophy and Culture"). It was also assumed that dialectics brings together particular logics (A. Grigoriev, following Bibler et al., Preferred "polylectics", see [21]). Meanwhile, none of the logics is undeveloped, especially biology and history. Regarding the Marxian method, it should be noted that in the last century, the relationship between the subject of history (class) and the superstructure (for example, the party) was determined due to the underdevelopment of production in the spirit of Bernstein-Kautsky (for more details, see [22]). The idea of the last century about the physical impossibility of self-development of the working class, the need to bring the party (intellectual) consciousness (meaning the consciousness of the external social group) from "situational was raised to the rank of conceptual."

Therefore, it makes no sense to talk about modern unified logic, as well as culturology in its real meaning. The proof of this is the armada of political soothsayers.

5) Cluster approach in sociology.

6) Pluralistic approach. Yu. Olsevich [23] suggests looking for the logic of social science, in particular, economics, generally bypassing the specifics of correlating theory with reality. Proceeding from the fact that opposite doctrines appear in completely identical social conditions, Olsevich declares that "the pluralism of theories is precisely the locator that allows observing the internal multidimensional changeable space of the economic system." That is, pluralism itself is a reflection of reality, although in reality it is "unobservable", pluralism belongs to the elite. The rest of society is dictated by the media.

Olsevich counts Keynes and Walter Euken as his predecessors (Fundamentals of National Economy, 1940). Many theories are being investigated, the discrepancy between theories of reality is being questioned (and indeed the theory is built on the basis of empiricism and reflects the level of social development. Or its side). For example, the degradation of the Russian economy to a raw material appendage of the developed countries, according to Olsevich, should lead to the resuscitation of the parcels of physiocrats.

Is it permissible to ignore the connection between social theory and what really exists - with class interests? To mix into a single operator positions belonging to antagonistic social strata and to consider a specific theory as one of its eigenvalues, projections, which alone are, in contrast to the operator itself, observable?

In this case, the mechanistic understanding of determinism has led to the reduction of social dynamics to the group properties of a number of theories, known only to the degree of proximity of theorists to the elite. But Olsevich's idea is not interesting already because theories are mixed, firstly, dissatisfying practice, and secondly, deliberately built within the framework of the old understanding of determinism, while practice insistently advises us to come to a new one.

The anarchist and neo-positivist Paul Feyerabend argues much more transparently, from different positions and about the same thing (see [24]). The premise of his objection to "methodological coercion" is an objection to scientific bureaucracy: when choosing theories, only non-theoretical motives prevail, just the supporters of one theory by any means defeat the supporters of the other. Who exactly wins? Who is close to the elite. I.e. we are talking about an objection to liberalism and its identity - Stalinism: "Idealism believes that practice ... is only raw material, which is shaped by reason. Practice is capable of creating in itself the elements of reason, but only in a random and unsystematic way "(p. 470). Secondly, reason is ascribed to a narrow group of persons: "... we are gradually inspired that such theories (ie theories needed to solve social problems, BI) should be developed by specialists, ie. intellectuals; intellectuals determine the structure of society, intellectuals explain what is possible and what is impossible, intellectuals tell everyone what to do "(p. 471).

At the same time, "problems are solved not by specialists ... but by interested persons," while the desired democracy "is a gathering of mature people, and not a bunch of fools, led by a small group of smart people." Therefore, Feyerabend, quoting Lenin abundantly, asserts that "theoretical anarchism is more humane and progressive than its alternatives based on law and order" (p. 142).

Feyerabend, unlike Olsevich, takes as a fact not the manifestation of class interests, but the very dependence of social theory on social interest, considering it as a phenomenon, but takes a step "for the fact", declaring it to be a reflection of the actual development of all science, not only social. Cognition as a whole, according to Feyerabend, is random, the development of science is chaotic. Moreover, he, like Olsevich, uses examples of

correct "incorrect" hypotheses, but from the natural sciences. In fact, pluralism or anarchism is a reflection of something very different. The point is that in the course of dialectical development, society is not always at the points of revolution, i.e. in moments of exacerbation of contradiction, integrity (totality, in the words of Berdyaev). The working class of Russia in 1917 represented something unified, while today it is infinitely fragmented - for the anarchic period lasts, the period of accumulation of diversity.

Thus, Feyerabend, despite accurate observations, makes the mistake of denying determinism in history.

7) Synergetic, stochastic approaches, the approach of the theory of catastrophes.

For example, G. Bystray, D. Pivovarov [25], recalling that sociologists are unable to predict and even explain sharp changes in public opinion or the behavior of any social group, draw analogies in the behavior of a statistical ensemble described using the theory of catastrophes, originating from the general theory of systems by A. A. Bogdanov and L. von Bertalanffy. Social phenomena, the authors believe, like synergetic ones, are essentially non-linear, while most sociological models are based on the ideas of linearity and convexity. The authors believe that "in the methodology of sociological research, the theory of catastrophes and the principle of stochasticity should take their proper, if not leading, place" (p. 159). Of course, one cannot pose a bare problem: there is a method, so shouldn't it be transferred to the area of problems that are not native to him? But synergetics arose as a combination of problems that were not related to each other in physics (billiards, pendulums with friction), chemistry (Belousov-Zhabotinsky reactions) and biology. Quantum mechanics can be viewed as a method of group theory in describing the behavior of particles, and GRT - as a rewriting of Newtonian mechanics in the pseudo-Riemannian metric. Who is stopping the row from continuing?

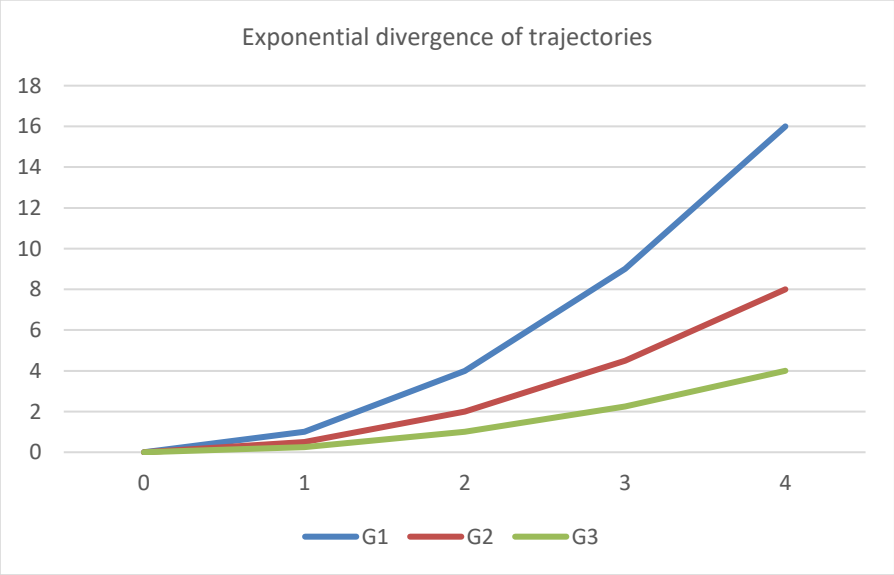
B. Malinetskiy G.G. in his work "Nonlinear dynamics and" historical mechanics "[26], summarizing the research on this topic, notes that it is impossible to extrapolate the historical trajectory, since" the equilibrium is irreversibly violated. " It is unlikely that the latter can be considered a premise for thought: 1) there are laminar processes in history, 2) if the matter is only in the openness of the system, then sources can be introduced, 3) if the trajectory exists, then we need to talk not about extrapolation, but about finding patterns ... The leitmotif of Malinetskiy's work is obvious. He writes: "With the help of these concepts (historical materialism, the methods of Sartre, Jaspers, Popper; B.I.), it is not possible to build a bridge to the specific tasks that arise before the state and interstate associations in strategic planning ... After the meeting in Rio de "Janeiro, who showed that the concept of sustainable development, shared by the main historical actors, is absent, the need for such planning is difficult to question." I.e., services are offered to any political group. In fact, the concept was absent not only at the 1st "Global Forum" in Rio de Janeiro in 1992, but also at the 2nd in Manchester in 1994, and at the 3rd in Istanbul in 1996 ... For example, in Manchester there were over 1,500 people, of which only 600 were delegates. But Malinetskiy oddly identified the main historical subjects. Until now, subjects have been thought of as social strata or parties, but not their individual representatives.

As an argument in favor of the need to develop a unified formula for state (more precisely, party) programs, Malinetskii cites the work of A. Andreev and M. Lewandovsky [27], where "an analysis of the time series characterizing the strike activity ... process and identify the presence in this dynamics of a special period of chaos. "The work, as the authors themselves write, is" the first step in creating adequate mathematical models of the internal mechanisms of the development of social conflicts. "

The statistics of strikes in the Vladimir province from 1895 to 1905 were studied. The following restrictions were introduced: 1) information is transmitted through personal communication without the participation of professional agitators (but there are workers who become agitators), 2) the constancy of the number of workers employed in production is assumed; 4) in a given locality; it is believed that the Vladimir region was not in the study period in a state of qualitatively accelerated development. The result obtained by stochastic methods is trivial: the authors noticed seasonal activity of workers. V. Ponomarev, researching the strikes of 1988-90 in the USSR, noticed the same thing without resorting to mathematical models), which "makes it possible to supplement the missing historical facts."

Does the repetition of the result by Ponomarev mean confirmation of the adequacy of the method? After all, the conclusion about the localization of the result within the Vladimir province suggested itself. There is no objection to the use of stochastic methods for the analysis of history. But if the climate has changed, or the workers, having learned about the Andreev-Lewandovsky method, decided to change their tactics?

Stochasticity, in contrast to the bifurcation of the transition from one limit cycle (an attractor, an equilibrium point near a pendulum or a circle, or a strange attractor in the three-dimensional case) and from a catastrophe, a sharp change with a known slow change in the parameter, means the fundamental unpredictability of the particle behavior. Small random deviations of the initial conditions lead to exponential divergence of trajectories. Beams of trajectories G1, G2, G3, G0 emerge from the region G0 - the origin of coordinates. Due to random deviations, a particle enters each of the beams with probability P1, P2, and P3, respectively.



Malinetskiy introduces jokers of the region inside G1, G2, G3 with Laplacian determinism. In G0 "the dominant role is played by volitional decisions that lead to paths with probabilities P1, P2, P3."

The scheme is somewhat similar to the one outlined in Mein Kampf. "Society is an amplifier," writes Malinetskiy, "of individual actions and thoughts." The proposed program is enough, and if you are in power, you can change the course of history. Society will strengthen. More precisely, the media will strengthen, the society, like an automatic machine, will repeat. Malinetskiy cites in confirmation the book by Ch. Snow "Two Cultures", where the author writes: "... one of the difficult problems is the selection and promotion of talented, energetic people to lead society at the top of the social hierarchy."

Also quoted is the work of the Trotskyist D. North [28]. North conducted a comparative analysis of the economic development of Spain and England, which, according to North, since the XV century have had similar economic indicators, and came to the conclusion that the organizational structures that "reflected at the time of the emergence of the traditions of society ... the alignment of political forces and the psychological state of the elite "(for Lenin:" the one who explains political actions by the character traits of a politician is a swindler ").

In order for the actions of a politician to be clear to the voter, it is possible to use the spin glass model. It allows one to take into account the influence of the media on public opinion, its polarization and consolidation, as well as provide for mass sobering up when the influence of the media ceases (Malinetskiy quotes [29]). In a word, society is understood as a Cartesian system, which, like Kozma Prutkov's horse, if snapped on the nose, flaps its tail.

In fact, it is obvious that the influence of the media is possible only when the employee is alienated from the means of production and working conditions. In this case, the intermediary between them (capital) is free to substitute mass media fetishes for real relations between people.

In general, the meaning of such theories is obvious: a group of competent people determines how everyone will live. That is, the position of Ortega y Gasset [30], Keynes, modern social democrats, and finally, the CPRF, have been repeated without distortion. Obviously, it is necessary to reject the application of the "new thermodynamics" to the dynamics of society as unscientific, opportunistic.

You can also find a direct discrepancy: in order to get into the most acceptable region G (i), it is useless to write programs, a small deviation must be random, unknown. The main objection to the application of stochastics to history, in fact to the stochastic plan, is the fact of the collapse of the plan in the USSR, starting with the first and ending with the last.

As for the work of Andreev-Lewandovsky, to a positive example of which Malinetskiy refers, there is a suspicion that the authors, instead of finding new historical facts from extrapolation, threw out of consideration a lot of existing ones: they were based on a more complete analysis of V. Bavykin, L. Borodkin and Yu. Kiryanov strike movement in Russia in 1895-1913.

In addition, the criticism of purely mathematical models is given above and previously given by Mirkin, Sargsyan and Sargsyan. The factors determining the dynamics of strikes and the connection between them remained behind the scenes. The meaning of the work is absent, as well as the meaning of the machine's work to identify the relationship between the number of flies in the room and the shift of the NMR spectra. The authors explain the shortcomings of the model (overestimated figures) by the shortcomings of the source and the need to consider even smaller territorial units (the latter, on the contrary, see above the link to Sargsyan and Yuzbashyan, it is impossible without knowledge of the dynamics as a whole. That is, the explanation is an obvious excuse).

But Lewandovsky and Andreev object to scientism, oppose abstract history divorced from people. "Creation," the Whitehead authors quote, "is the actualization of potentiality, and the process of actualization is an event of human experience ..." It would seem that there is one step to Marx's thesis about Feuerbach (if we add to the thesis a change in history not by philosophers, but by the masses, following Marx's formula: socialism is the living creativity of the masses, and understanding by creativity not only political activity). Unfortunately, they also have a liberal attitude. The authors reduce the analysis of living history to Popper's logic of the situation:

"For the historian, the actions, the history of which he deals with, are not spectacles given to observation, but a living experience that he must go through in his own mind; they ... can be cognized by him only because they are simultaneously subjective, that is, they are the actions of his own consciousness."

Of course, the authors would like to formalize historical causality, but they believe that 1) it is impossible to make predictions at a "critical point", since during this period a choice is made between different paths of development; 2) this choice is subjective, depends on one person or subject of history and can be analyzed only within the framework of the specific logic of the situation; 3) only tendencies can be formulated that include many paths.

The unsatisfactory transfer of the ideology of statistics or synergetics to society is explained by the well-known fact of the qualitative difference between the laws of society and natural science laws. Transference ideologists operate in the spirit of reductionism, although biology is not reduced to chemistry, and chemistry is not reduced to physics.

Let's say a mathematical model should be supplemented by the specifics of the situation. This is the understanding of many Marxists: the general scheme has already been discovered, it remains to fill it with the specifics of the moment. However, how exactly the choice takes place and whether the result is the embodiment of the will of the subject is not explained.

In addition, due to the disintegration of the productive forces, the most productive Marxist scheme has not been overcome, although it is based on the old understanding of dialectics, which brings together the logic of the sciences of a century ago. This is also manifested in the understanding of overcoming alienation by reducing the necessary labor to a vanishingly small amount (Capital, Volume III), to equalization in the form of a change in labor (formal equality), and not by transforming the socially necessary labor itself.

Marx, unlike Popper (or Friedrich Schlegel), could hardly have reduced living experience to "experiencing the mind" or "actions of consciousness" instead of social practice. Or consider the general scheme unchanged. Let's say we supplement the diagram with a situation. If the result of the additive changes radically, then there is no scheme. If it is insignificant, then the Popper addition does not eliminate fatality. Meanwhile, it is not that the additive, but the random deviation from the general contains the essential, these are not small fluctuations over equilibrium, narrowed down to the law. The essence is in individuality, in deviation from the general. The thesis about Feuerbach, which contains the definition of the essence of a person, through the external, like the intersection of social lines, is contradictory, which reflects, rather, not a contradiction in the scheme noted by A. B. Grigoriev, but a social contradiction (Heidegger's "technicalization of the soul" or Marx's depersonalization abstract work as dominant, see [31]).

Marx is forced to state that by virtue of depersonalizing socially necessary labor, the party of the class is made up of representatives of other social strata (see [22]). However, the consolidation of situational thought at the conceptual level logically leads to the same Bernstein-Kautsky scheme: a group of competent people gives a program and forms a government "meeting the proletariat halfway."

This practice has become obsolete today, although the armies of the "active" have not yet realized that in the dialectical pair "class-party" the class is primary, the party is secondary.

On the relationship between changes in social conditions and the nature of work

In the aforementioned work "The strike movement of Russia in 1895-1913. Bavykin, Borodkin and Kiryanov tried to establish a rigid connection between the structure, connections and development of industry and the change in the economic situation of the proletariat. " Although the very posing of the question of the level of economic development is positive - against the Trotskyist-Stalinist-anarchist romanticism with the denial of the necessary conditions for the revolution. Lewandovsky and Andreev move away from this specifics, wanting to distinguish their point of view from the work of Bavykin et al. [27].

However, in general, the mathematical formalization of history, the selection of essential factors run into the following difficulties:

1) Incomplete knowledge of events, from which researchers also exclude conditions.

1a) Lack of acceptable time coordinates, it doesn't matter if we want Laplace determinism, quantum, or whatever.

1b) The rudimentary understanding of determinism already in the natural sciences. The world is not arranged in such a way as to determine the future by owning the initial conditions. This is an incorrect formulation of the question, just as one cannot ask which of the two slits a particle will fly into if we want to have an interference pattern on the screen; a particle is not so arranged as to be considered structureless or with a structure identical to a macroscopic body.

The identification of statistical or stochastic patterns is impossible, because

2) historical and economic parameters are not immanent properties of objects (for example, the value of goods), as mass is a property of a particle. Unlike Toynbee or Gumilyov, Marx analyzed a holistic process, linking political and economic factors with historical ones, although he was far from economic fatalism.

3) For example, in a quantum experiment, the way the device and the subject change (under the influence of a particle) are unchanged. In the process of objectification-de-objectification, the subject of history becomes identical with the object (not in Popper's sense) and changes itself: classes arise and are destroyed.

4) Unlike electrons, which in the system must be identical to each other, despite the fact that individual consciousness depends even on the mass media, not to mention the primacy of production relations, from the beginning of the emergence of society there is a special parameter: the uniqueness of the "I". The growth of the creative principle in labor (the ascent of labor from the abstract to the concrete) means an ever greater uniqueness of the product of socially necessary labor. But there are no quantitative parameters to measure the uniqueness of the manifestation of "I". Does this mean that the emancipation of labor is a transition to the realm of free will, that is, the disappearance of any social determinism at all?

5) The consequence of paragraphs 2), 3) and 4) is the difference from natural science laws that these laws are objective, independent of the observer (although they change over time). In history, subjects change social laws. A regularity that does not depend on the subject exists only in periods between radical changes in social relations and productive forces.

It would seem that even the history of Peter I convinces of the opposite: nothing significant would have changed if he had not come to power. He only continued the traditional expansionist policy of Russia, and began with defeats in military campaigns in the same way as his rival Vasily Golitsyn, who, moreover, was going to abolish serfdom and allot land to the peasants (see at least [32]). In history, contingency, despite the ridicule of Marx and Russell, hastens after the Hegelian idea and unfolds like a fatal necessity. Is human life really predetermined, as

in the physiological example given by Haken: if you simultaneously wave the fingers of different hands, placing them in parallel, then regardless of the will, with an increase in frequency, a jump occurs, the fingers, instead of parallel movement, will move towards each other.

Is Saint Augustine really right in opposing the skeptics who asserted the possibility of only probabilistic knowledge (now we can say - not Laplacian determinism) - no matter that the methodology chosen by Augustine for comprehending the truth is Holy Scripture or divine enlightenment ("Against the Academicians"). The point is in principle: is the world really arranged according to Tolstoy: "the worm gnaws the cabbage, but before it perishes" and "not by our mind, but by God's judgment"? Do I need to judge Annushka for spilling oil? If you do not put the restrictive second "shoe", a train accident can occur. And when it happens, it seems that all the little things begin to play a threateningly fatal natural role. All reasons wind up around one moment into an extraneous contradiction, which is presented as the main one. It turns out that the more holistic the research, the tougher the "primacy of the general over the particular" and the less room for chance. In the limit, infinite wisdom - Sophia - will always give an accurate forecast, and the probability, according to Locke, is just "the appearance of a correspondence based on not entirely reliable conclusions."

It would seem that with ignorance of the laws, everything is accidental, and, therefore, rigidly regular, fatal. But is it possible to derive historical categories when they have not yet matured in society? For example, Aristotle was unable to deduce the category of value with undeveloped commodity-money relations (see Ilyenkov, "Dialectics of the abstract and the concrete in Marx's Capital"). But this pattern cannot be such as to manifest itself independently of consciousness.

Fyodor Dostoevsky argued most strongly about the existence of a pattern in history.

First - an objection to the law standing above man, even if it comes from God, according to the principle of morality. Alexey Karamazov denies the existence of God (and his law!) If the law humiliates a person (depersonalizes, teaches, etc.) ("The Brothers Karamazov"). The existence of a lawmaker is illogical: "Let the consciousness be kindled by the will of a higher power ... and let it suddenly be ordered by this higher power to be destroyed, because there it is ... it’s necessary ... Can’t you just eat me without demanding praise from me that eaten me? Will anyone really be offended that I don't want to wait two weeks? I don't believe it; and it would be much more accurate to assume that my insignificant life, the life of an atom, was needed here to replenish some universal harmony as a whole, for some plus and minus ... how every day the life of many creatures will need to be sacrificed, without whose death the rest of the world cannot stand ... but ... if once I have already been given to realize that 'I am', then what do I care about the fact that the world is arranged with errors and that otherwise it cannot stand? " ("Idiot").

In essence, a person is not a "tablet" or "piano keys"; he does not need someone's will (or fate), but an independent desire. Sometimes whim or destruction, and not at all benefits and benefits. Moreover, one can theoretically talk about this problem ad infinitum ("Notes from the Underground").

That is, the next step should be the transition to a thinking and active electron, to changing the law in practical social activity. That is, the pattern can be found only in one's own social practice, primarily political, which corresponds to the Marxian scheme (not referring to bad practice).

Further, Dostoevsky's objection to the already impersonal, natural law follows: "... - Ugliness and chaos are everywhere, madam, you will find," said Lebedev's nephew, significantly, however, puzzled. - Yes, not like that! Not the same, priests, as you have now, not like that! - Lizaveta Prokofievna chimed in gloatingly, as if in hysterics. - Yes, will you leave me, she shouted at those who persuaded her, no, since you yourself, Evgeny Pavlych, have just announced that even the defense lawyer himself announced at the trial that there is nothing more natural than to kill six people out of poverty, so it really is the last times have come. I haven't heard that yet. Now everything has been explained to me!" ("Idiot"). There is no talk of an objection to fatalism: Dostoevsky, as if on purpose outside of time, confronts objective and subjective causes, systemic and accidental, when the contradiction between them in society has not yet matured.

Of course, we are not talking about imagining free floating in the universe, where any desires are fulfilled, where thoughts create the world. It is necessary to imagine the universe of people with the presence of abstract labor with the ensuing laws. Another thing is that abstract labor, as determining at the level of the universal, must give way to the concrete, creative.

It remains to combine practice with consistent theoretical approximations, to follow Descartes' advice: in order to know, you need to "pass"? Or, according to Feyerabend, "connect reason with practice"? To create the predicted by force, if there is no power to predict before experience? True, but only not in the divided social strata according to Bernstein-Kautsky, but in the same subject of history. There is a prohibition against stealing fire from the gods alone. The point is not in collective creativity (collective intelligence does not exist) or in technical difficulties such as life expectancy, but in the impossibility of cognition by a narrow dependent social group in general.

Secondly, even God (king, general secretary or other owner) "does not foresee the future if we are endowed with will, or he is unjust if we are deprived of free will." (Lorenzo Valla, On Free Will). The prohibition can be formulated in the following anti-Gödel form: it is impossible, being outside the relations of the system, to cognize the system. Let's turn the Marxian thesis about Feuerbach: it is impossible not only to change the world outside of social practice, but also to understand and predict it (Augustine spoke about will, but a separate will is not enough to reveal the essence of man).

The second moment of non-participation, alienation, is a person's separation of himself from his activities; it is obvious that there is a return to animal beingness, "naturalness", identification of oneself with one's activity at a new level, the transformation of man into a kind of thinking-acting superman.) When the contradiction between the need to reproduce labor force in the process of creative production and its impossibility ripens the identification of patterns, in particular, in history can be considered formulated.

It's a paradox, but the mechanics are such that only a soldier can predict the outcome of a war.

P. S. The article was written in 1997, in a truncated form was published in the journal "CLIO" (St. Petersburg, 1998, № 1 (4), P. 16-24), criticism of the transfer of the philosophy of synergetics to society was given; a few years later, Immanuel Wallerstein came up with the idea of transferring. The article is published in full for the first time.

References:

1.Prigogine I. Questions of Philosophy. №6, 1991.

2. Ibid.
3. E. Mandel. Power and money. General theory of bureaucracy. M., "Economic Democracy", 1992.
4. S.G. Kara-Murza. New theory of revolution. The website "Internet against TV".
5. Natalia Melentyeva, General Theory of the Rebellion by Gred Bergflet. www/anarh.ru
6. A. Sarasov, On the silent people. Russia XXI. №5-6, 1996.
7. Ikhlov B.L. Revolt the City. Sight. №40, 1996.
8. Philosophy questions, №2, 1997.
9. Bakunin M.A. Philosophy, sociology, politics. M., Truth, 1989.
10. Sargsyan S.M., Sargsyan S.M., in collection of Mathematical modeling in economics. Yerevan, 1979.
11. Mathematical modeling in economics, collection of sci. op. of the USSR Civil Code on Narobraz, Economic and Statistical Institute, 1992.
12. Ploshko B.G. On scientific directions in modern theory of statistics. M., Statistics, 1971.
13. Sargsyan S.M., Yuzbashyan G.B., in sb. Mathematical modeling in economics. Yerevan, 1979.
14. Mirkin B.G., in coll. Mathematical modeling in sociology. Novosibirsk, Science, 1977.
15. Svasyan K.A. Phenomenological knowledge. Yerevan, AS USSR, 1987.
16. Whittle P. Probability. M., Science, 1982.
17. Arnold V.I., Mathematical Methods of Classical Mechanics. M., Science, 1989.
18. Ikhlov BL Higgs vacuum in the gauge theory of gravitation. Abs. cand. diss., M., MSU, 1988.
19. Smith S., Marx's Conception of Science. International Socialist Forum, August 1997, V.1, №1.
20. Porshnev B.F. On the beginning of human history: problems of paleopsychology. M., Thought, 1974.
21. Grigoriev A. Dialectical contradictions of the evolutionary process. Abs. diss., MSU, 1989.
22. Ikhlov B.L. Class and Party. Sight. № 40, 1996 or at VIBIR, Kiev, №1-2, 1996.
23. Olsevich Yu. Towards relativistic economic theory. Economic issues. №6, 1997.
24. 23. 18. P. Feyerabend, Selected Works on the Methodology of Science, M., Progress, 1986.
25. Bystray G., Pivovarov D. Non-equilibrium systems: integrity, efficiency, reliability. Sverdlovsk, USU, 1989.
26. Malinetskiy G. G. Nonlinear dynamics and "historical mechanics". Social sciences and modernity. №2, 1997.
27. Andreev A., Lewandovsky M., in sb. "Mat. Modeling of historical processes", M., 1996.
28. North D. What Impedes Economic Growth. Chemistry and Life. №3, 4, 1994.
29. Dotsenko A.V. Spin glasses - new thermodynamics. Nature. №12, 1994.
30.Ortega y Gasset. Revolt of the masses.
31. Ikhlov B.L. Afterword. Sight. №38, 1996.
32. Valishevsky K. Peter the Great. M., IKPA, 1990.