

УДК 2–1+2–335+101.3(470.5)

Significance of Digital and Numeric (Prolegomena to D. V. Pivovarov's Symphonica)

Aleksandr V. Pertsev*, **Elena V. Melnikova**
and Irina Ya. Sokovnina

*Ural Federal University
named after the First President of Russia B. N. Yeltsin
51 Lenina, Ekaterinburg, 620083, Russia*

Received 08.11.2018, received in revised form 30.04.2019, accepted 08.05.2019

Foundations of a new methodology for tolerant dispute proposed by Professor D. V. Pivovarov (1943–2016) are studied in the article. The purpose of the study is to clarify the essence of the concept of “symphonica” proposed by D. V. Pivovarov as a medium in the dialogue of secular and religion scholars. A distinction between “digital” and “numerical” mathematics is made based on Pythagoras, A. Comte, I. Kant and E. Husserl's teachings. It is proved that the positivist understanding of mathematics does not imply the meaning of numbers, whereas “numerical” mathematics only provides access to the “supratemporal realm of meanings” studied by phenomenology. In the present paper D. V. Pivovarov's “symphonica” is understood as a form of “inter-phenomenology” that ensures equal access to the ultimate phenomenological grounds of religions, philosophical systems and scientific theories.

Keywords: D. V. Pivovarov, “symphonica”, religion, philosophy of religion, “digital” mathematics, “numerical” mathematics, Pythagoras, A. Comte, I. Kant, E. Husserl.

Research area: philosophy.

Citation: Pertsev, A.V., Melnikova, E.V., Sokovnina, I. Ya. (2019). Significance of digital and numeric (prolegomena to D. V. Pivovarov's symphonica). J. Sib. Fed. Univ. Humanit. soc. sci., 12(5), 812–832. DOI: 10.17516/1997–1370–0425.

Introduction

Since I. Kant times there is a tendency in philosophy to separate “pure reason” and “practical reason”, “epistemological” and “axiological”. Cognition is on side, value orientations on the other. Science should not be painted in the colors of morality. Gradually, this trend has been logically developed. Since sciences are becoming

© Siberian Federal University. All rights reserved

* Corresponding author E-mail address: apertzev@mail.ru

ORCID: 0000–0002–7711–5098 (Pertsev)

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0).

practical, which leads to the scientific and technological revolution, technologies can and must exist beyond ethics as well.

If “technical aesthetics” is still recognized as some nonsense associated with sales, then “technology ethics” is already an absolute paradox. It simply cannot exist, as well as fried ice or a round square. “Polytechnicians” tolerated everything humanitarian for a long time, looking down on it. But after 1991, along with the collapse of the USSR, philosophy was no longer imposed by the ruling party as a basis of state ideology. This led to a sharp increase in the positivist tendencies that have always existed in Russia. The formula “Science Itself is Philosophy” is currently being implemented at the level of state policy. The philosophy course at universities is replaced by the course “History and Philosophy of Science”. A further step on the way to state positivism is the practice of dehumanization and dehumanitarization of philosophy by technologically “improving” its teaching using “technical means”: philosophical courses can presently be mastered “online” without communicating with a real person — a lecturer. This is comparable to the prohibition of worship in churches and transition to the distant care of congregation at home through TV and a computer. The church cannot be considered as solely a body that disseminates information about God. The very concept of “information” is intended to leave everything subjective: “humanitarian,” value-based and emotionally colored, behind brackets. This is knowledge without believing in it. This is positivist knowledge about the world in parts, supplemented by a fundamental antagonism to the very idea of a general meaning of the world.

Positivism decomposes the world into separate facts — just as liberalism decomposes society, preventing it to be seen in any other way, but as a mechanical total of fundamentally disintegrated individuals. Only individuals’ autonomy, and not even autonomy, but purely external coexistence of “virtuous anarchists” (Russell, 2009: 415) is believed to be an ideal of freedom (although, ideals beyond theory that is basically denied by positivism are impossible). Ideals assume absolute correspondence to meaning, and for positivism meaning is an empty shell. Since the time of F. Bacon, theories have been “The Idols of the Theater” (Bacon, 1978: 18), manifestations of anthropomorphism that impede cognition. Meaning includes consideration of the world as a play, which has a script writer and a producer. The positivist “information approach”, which proceeds into “technological” and “digital” approaches, denies any theory as a “conspiracy theory”. There are no script writers or producers in the world-theatre. Their presence is regarded as totalitarianism. Actors on the stage are not

independent — they are absolutely independent. Thinking can only be critical, that is, disobedience to power.

The attack on philosophy and theology, which was always evaluated by D.V. Pivovarov as a general positivist attack on meaning, could not but end up with an attack on mathematics. Mathematics, after all, describes — albeit in a different than theology and philosophy way — a timeless “realm” of meanings, where “meaningful unities” exist (Husserl, 2011). The positivist approach, in essence, assumes separation of physics from mathematics: there are no “physical and mathematical” sciences. There are experimental physicists, there are too many philosophizing theoretical physicists, and there are absolutely abstruse mathematicians who like to think “soaring in the infinite”. We are persuaded that at the current time of crisis we should be more specific. It is even necessary to stop experimenting. An engineer can be represented as an experimental physicist who has stopped experimenting. He has focused on standards implementation. Technologies are to be imposed from above. It is not creativity that is required of a person, but “skills,” that is, developed to automatism actions, the meaning of which a person does not think about, since the “skill” is to perform actions. At that point the positivist war with meaning and the “ghosts of the Theater” is over. The whole globalized world should live according to universal, standard technologies, which are not subjected to interpretation.

Statement of the problem

In October 2018, speaking at the Moscow International Forum “Open Innovations”, the head of Sberbank Herman Gref stated about the need to close physical and mathematical schools. This fact surprised a lot of people, especially among humanitarian scientists. As a matter of fact, a few months earlier, H. Gref’s co-thinkers in the Government of the Russian Federation had planned Russia’s transition to digital economy. Humanitarian scientists, who do not distinguish between numbers and digits are puzzled: in what way physical and mathematical schools hindered digital economy? Isn’t mathematics connected with numbers? Can mathematics hinder numbers? Is there mathematics without numbers, and numbers without mathematics?

Theoretical framework

As M.N. Rutkevich’s student, D.V. Pivovarov was keenly interested in all these issues from his university days. M.N. Rutkevich wrote his famous textbook on dialectical materialism based on the lectures he delivered to physics students. Acquainting physics students with philosophy was a matter of principle. At M.N. Rutkevich and

D.V. Pivovarov's school it was considered as a fundamental overcoming of the gap between scientism and anti-scientism, as restoration of the unity of human culture destroyed by positivism which had not been divided into "epistemological" and "axiological" for many centuries.

Since F. Bacon's time positivism is not keen on clarifying concepts. Words were generally perceived with frustration as "idols of the marketplace" that generally entail a lot of irrelevant meanings. And here is a boundary between empiricism and rationalism. Throughout its history, empiricism has tried to give every word, borrowed by science from everyday language a strictly unambiguous meaning. However, having abandoned the hope to get rid of all inevitable involuntary associations, passed on to the words from dead languages and after that to logic and mathematical symbols. Rationalism sought to clarify meanings but was absorbed by them and left real practice forever, striving for universal and even transcendent meanings.

D.V. Pivovarov sought to overcome these extremes dialectically. Hegelian reproduction of a thing in the abundance of abstract definitions had always been concrete for him. He constantly taught to ascend from the directly concrete, given in experience to feelings (which are always "theorists") to the abstract, and further to the abstract-concrete as theoretical.

The clarification of concepts, to be more precise the concepts of the ultimate degree of generality, which are called categories in philosophy, had always been his favorite occupation, which he taught not only philosophers, but physicists as well. This is what the authors of the present paper are concentrated on — to define concepts to see how many things become more distinct in the process.

Methods

As M.N. Rutkevich and I. Ya. Leufman's disciple, D.V. Pivovarov gave lectures and seminars, which started not with "pictures" providing examples, but with a detailed clarification of categories, which in their complexity were at the same level as good medieval scholasticism. For D.V. Pivovarov, as for most Soviet philosophers, scholasticism had never been an abusive word. On the contrary, even during the state examination in philosophy at the Faculty of Philosophy, as a member of the state examination commission D.V. Pivovarov demanded to start an answer with a strict definition of the concepts self-evident in their meaning.

Nowadays, when we face with a loss of not only the scholastic culture of working with terms, but the culture of any theorizing in general, when all definitions do not

answer the “what” question, but the “when” question, and few understand that a reason becomes a reason only at the moment when consequences appear, it is impossible to avoid some necessary explanations, starting immediately with definitions. After all, F. Bacon was partially right, demanding definitions in science, but a priori not believing in the effectiveness of this activity. Scholastic philosophers, in his opinion, can maliciously take advantage of theorizing for their own purposes: he called words “ghosts of the marketplace” specifically because scholastic philosophers initially aroused F. Bacon’s suspicion. Just as a tradeswoman in a medieval market square achieved her goal by chatting up customers, so a scholastic philosopher, according to F. Bacon, confused all questions due to intentionally inaccurate use of words. In the opinion of “The New Organon’s” author, even conscientious scientists are forced to take words to designate something scientific from the everyday language, since there is no other place to take them from. And there are always inaccurate words with vague meaning, or even synonyms or homonyms in everyday language (even ancient languages were once everyday!), which existence a scientist cannot completely comprehend. After all, any scientific phenomenon should be named unambiguously. It does not matter many times concepts are defined in science, but still, there will be fruitless disputes around them, especially today, when all discussions are open, and there is a dozen of “laymen” for one expert who do not define any concepts at all.

But we are going to deal with the definition of concepts not only in commemoration of D. V. Pivovarov, because he loved this activity. We are going to define concepts to demonstrate how much this can help to understand what a non-conceptual British empiricist or an American pragmatist sees as the chaos that they, nevertheless, control. In fact, there is no chaos anywhere, there is only something that moves incomprehensibly. It moves in an incomprehensible manner just because there are no definitions and theories for its understanding.

The concepts of “digit” and “number” seem to be the simplest ones. This illusion arises due to the fact they were given at the very first lesson of mathematics at school and, therefore, were supposed to be understandable even to a child. But after leaving primary school, a student would hardly bother with them. After all, even being a good specialist in the subject, a teacher did not quite understand that these concepts are deeply philosophical ones. They point to opposite philosophies and confusing them is unacceptable.

A “digit” is one thing, and a “number” is another. And in this case, there can be “digital economy”, as well as “numerical economy”. We will try to suppose how these

concepts could have been distinguished by D. V. Pivovarov. Honoring G.W.F. Hegel, he always considered logical in its historical formation. It was an absolute strong point of the master: he had plenty of historical and philosophical knowledge, and students always understood the result better if they repeated the path that the humanity used to comprehend it.

The logical is certainly not reduced to the historical. Anyone who tries to do it incompetently will simply find out that similarly looking and sounding concepts signified different things at different times. D. V. Pivovarov started with the fact that concepts are usually defined through class and type form difference. For instance, when defining what a chair is, it is necessary to point out what type of furniture it belongs to, and then how it differs from other items of this type. A chair is a piece of furniture people sit on.

However, continued D. V. Pivovarov, in case if we need to define philosophical categories, we cannot define them through class and type difference for the simple reason that they are concepts of the ultimate degree of generality. There are no more general and class concepts above them. There is no such concept that would be above the concept of “existence”. No category covers all philosophical categories: “object”, “property”, “relation”, “cause” and “effect”. That is the reason why all philosophical categories are defined not through class and type difference, but through each other.

It is simply impossible to understand the essence of such a definition without preparation. And preparation can only involve tracing the history of a concept as a first step. (G.W.F. Hegel believed that there is only one way for mastering philosophy and understanding its logic — by mastering the historical development of philosophy, and method in general is a historical movement of some content).

D. V. Pivovarov indicated the main milestones of the way that humanity has made, defining the concept we needed better and better, to each of his students. Hence, for him the history of philosophy had always been prolegomena — it led students to the logical, which they discovered themselves through enlightenment. So, Socrates led his student through a dark forest of knowledge, walking behind him, but lighting the way with a lantern in a way that it seemed to the student that he himself could find the right way. D. V. Pivovarov seemed to be saying: “I do not want to impose anything on you. You will get to everything by yourself. But look what Pythagoras said about numbers. And now let us go further. Who can we see in the light next?”

We will also use this way, coming to the understanding of the fundamental difference between “digital” and “numerical” economies (politics, cultures, logistics,

medicines, etc.). Let us start with Pythagoras' teachings. This person believed that the world is *ruled by numbers* (in fact, absolutely all mathematicians believe in it till the present days, they just cannot express it clearly).

In contrast to a practitioner and even a physicist, a mathematician believes that there is a wave motion formula that embodies itself in the matter of the world, creating, thus, sea waves, electromagnetic waves, light waves, sound waves and all other possible waves. All these natural phenomena are merely manifestations of the same mathematical formula. This formula just plays with us, pretending to be one thing or another, trying to draw attention to itself and be discovered by us. Physicists and lyricists are distracted with a phenomena, but a mathematician penetrates into its essence.

Pythagoras and his fellow thinkers believed that all processes and phenomena in the world result from the fact that numbers enter into some kind of relations with each other forming, thus, mathematical formulas. In contrast to modern young people who do not explain their *entry into relationships*, Pythagoras even had to create a kind of mathematical mythology, assuming that some numbers love other numbers, while hating all the rest. There was an abyss of meanings and habits behind each number that were brought to light in its attitude towards other numbers. The older generation of readers still remember different sorts of mathematical leisure activities, which mathematics teachers offered their students to entertain themselves with in their free time. It is entertaining when it turns out that all the numbers multiplied or divided eventually give the same result! It captivates and distracts from the street! (This is the reason why H. Gref wants to ban of all these mathematical leisure activities, both as spare time and falling into mathematical mysticism).

The Pythagoreans enjoyed exploring these habits of numbers and considered their comprehension as the highest wisdom. In other words, numbers were a kind of gods, but they did not have any visible image. Their relations — attraction and rejection, contradiction, etc. — determined the mathematical dynamics that generated formulas. Formulas were later embodied in the world, becoming its laws. Looking at this world — both in a microscope and in a telescope — did not make sense. As G.W.F. Hegel said, the laws of nature are not produced by heaven. No matter how long you look through a telescope, you will not see them. Empiricism will not give anything. Even if you install security cameras at every corner, they will not give us understanding of the meaning of what is happening. If we tell someone: “Go there I don't know where, observe I don't know what and then, no matter what, act at your discretion,” we will only get an

effective manager or a commander without a strategy and the General Staff: “I came, I saw, I conquered, and the war will reveal the plan itself.” But the General Staff indeed delves into the subtleties of the relations between numbers: there must be three times more attackers than defenders, in this case there is no balance, etc.

Discussion

So, the world is ruled by numbers. And what are digits?

If we follow the spirit of Pythagoras’ teachings (it has not come down to us in detail), then digits are just pictures expressing the invisible noumenal. They do not have any values in themselves, just as icons would not have any value if there was no God. Since there is no God in icons. They only signify Him, “send a message” that He exists. There cannot be “icon” faith. For the same reason Moses broke the tablets, that is, the stone plaques angrily, as he could not see the fundamental difference with the golden calf in them. God is neither in gold nor in stone. But gold and stone are needed to point to Him.

And digits are just a visible picture, which has to say about the unspeakable and to express the inexpressible. For the sake of simplicity let us take only Arabic numerals, where numbers are expressed using angles. One is one angle, two is two angles, three is three angles, etc. This poses the question, is it possible to express a number using digits? Do these lines, which form angles on paper, express all the variety of complicated relationships between numbers and all the beauty of the formulas they create, or, on the contrary, all their ugliness? (Only real mathematicians know whether there are ugly formulas, if there are beautiful formulas).

In this way digits can be compared with musical notes. Can these signs express all the music of the Universe? There is definitely no music in the musical notes themselves. Why are they needed in this case? Only to give one musician an opportunity to share the beauty of the melody he found with another *musician*? He or she would naturally have played it themselves, but this is not always possible. The great saxophonist from Sverdlovsk Vladimir Nikolaevich Chekasin can play two saxophones at once and moreover, he can play different parts. But still sometimes it is necessary to invite an ensemble, or even an orchestra, to “sound” a piece acquired due to inspiration. This is when you need a musical score written with the help of musical notes. Few people are able to “read musical score” to make an orchestra sounds in their heads. But Herman Gref can read reports written in numbers, and that is enough for him. Everything else is unnecessary, it distracts from the vision of real economy.

Notes are necessary to share the acquired piece of music with friends. And sometimes composers recorded a melody acquired due to inspiration (we are not talking about plagiarism!) with notes just for themselves, as it could not have been reproduced in the same way again.

And here the most important question arises: why do composers write notes for themselves? Don't they compose music as they wish — how and when they want? If it was so, a composer could proudly say: “Music is what I am playing now.” And he/she would turn out to be as proud as Emperor Paul I, who declared: “A nobleman in Russia is only a person I am talking to now, and only as long as I am talking to him”.

In fact, even the greatest emperor cannot “make nobility” at his will, unless it is personified to him. As well as music is not created by a person — a composer but reveals itself to him/her. Music simply has not revealed itself to the great majority of contemporary composers. It did not reveal itself to Salieri, despite all his work and efforts, but revealed itself to gifted Mozart, bestowing him with itself. A brilliant musician lives in the world of music, or, to be more exact, communicates with it in the moments of its revelations. He/she is constantly in anticipation of such a music revelation and always tunes him/herself to receive it, in the same way as a radio operator uses an oscillator to tune in to the needed wave, or simply to search for something on the air from sheer boredom. But a radio operator uses a ready for service receiver to catch music. And a composer has to be made such a music “receiver” if we expect from him/her something new that is not “on the air” yet. Experienced teachers first teach a future composer to enter into that small part of the world of music that has already been opened by other composers and has been conveyed to the conductor and musicians, who “has played” this music more or less successfully. (Hölderlin said the same things about poetry: a poet perceives it as something red-hot, directly from gods and wraps it into words conveying to people, so that they do not get burned) (Guardini, 2015). Great composers do not like to listen to their music, as well as masons cannot look at the walls they have laid, they see all the downsides and are ashamed of them. The aforementioned is enough to understand that there is no meaning in digits themselves, as well as there is no music in musical notes. Once F. Nietzsche said either about poetry, or philosophy: “I caught this insight on the way and quickly seized rather poor words that were closest to hand to pin it down lest it fly away again. And now it has died of these arid words and shakes and flaps in them — and I hardly know anymore when I look at it how I could ever have felt so happy when I caught this bird” (Nietzsche, 2014: 494).

All by itself the note symbol “la” is an absolutely meaningless sign, as meaningless as, for instance, figure “three.” The figure exists only to let one person convey the meaning to another one. This illustrates a wonderful anecdote, comparable to Buddhist parables in its depth.

An aircraft is flying. The captain shouts to the navigator:

- Navigator, instruments!
- 86!
- What is 86?
- And what about the instruments?

Without understanding the general meaning, people can exchange numbers, diagrams and pie charts as long as they want. All of these is visual statistics, it does not make any sense until a person finds it there. Here D.V. Pivovarov would certainly contrast *numerical* economy as an economy of sense to *digital* economy as a senseless economy. And here again, he would provide a historical example illustrating the possibility of such an economy.

He would certainly have chosen A. Comte for this. He would tell about the fate of this man, since it is quite similar to the life path of modern effective managers. A. S. Pushkin (Pushkin, 1977: 57) saw his contemporaries in the following way:

“We all aspire to be Napoleons;
Two-legged creatures in their millions
Are no more than a tool for us,
Feelings we find ridiculous.”

Napoleon Bonaparte was, in fact, a kind of “technologist” in relation to people. His commanders were extremely irritated by the emperor’s habit to say with annoyance: “big loss” while observing the distant battle when he saw heavy casualties. He received information from the battle. But the battle was not digital at all!

It was Napoleon who denied the importance of all kinds of ideologies, that is, he did not believe that “armed with theory” people like Count Destutt de Tracy could control society. It was Destutt de Tracy whom Napoleon called “the ideologist”, saying this word disparagingly for the first time. They could not consider battles as accountants, based on digits, having estimated the *inflow* of troops and their *losses*.

Being a politechnician in his mindset, Napoleon especially favored the Polytechnic School in Paris — the first institution that trained engineers and became a prototype for countless polytechnic institutes and technical universities all over the world.

Having received education inspired by the image of victorious Napoleon, technologists were convinced that everything was subjected to technology, as Napoleon, after all, was invincible. There is nothing that is technologically impossible in principle. Morality, as well as other humanism, should be wiped out, since this is just a verbal support for the former inefficient technologies. There is such an opinion among effective managers that in the past people gave birth to many children only with the purpose that when they are old and disabled there would be someone to take care of them. Family, in this way, is an inefficient way of taking care of elderly people. But it can be replaced by a more technological and optimal social policy: for example, by saving or insurance, a pension fund or by something else. And the so-called “family values” are just an ideological support for an ineffective project of the past. Any talks about parental love and love for parents, about the value of family, about the strength of marital union, about love for home, native country and hometown are just an ideological support for an imperfect social model, which will be replaced by another, more technological one. After all, having had appropriate performance indicators even parents express themselves digitally. And therefore, pension reform annoys the “population” since it expresses a purely digital, informational vision of the world.

Similarly, any battle for Napoleon was just a technology that allowed for a purely accounting description — inflow, loss, and other calculations. There is simply no place for morals in war: the so-called military tricks are just a euphemism that covers the fundamentally immoral technological nature of military actions.

A. Comte, as well as many of his classmates at the Polytechnic School absorbed this revolutionary cynicism and, as a result, he was expelled and sent home under the supervision of his father. He was taught a brutal lesson of authoritarianism, but he did not understand it, still connecting technology and freedom. Such connection is on the verge of schizophrenia. A technician makes and maintains mechanisms where nothing should “hang loosely”, since “a small knock always turns into a big accident”. All screws must be tightened, all gaps must be within the permissible limits (such as making jeans without branded Western labels in the USSR). How can the concept of freedom and creativity appear if engineers are trained for the mass production of standard products — the ones that won’t let an inventor into the workshop?

A. Comte studied mathematics but did not become a great mathematician. He did not even become a professor of mathematics at the Polytechnic School. He did not become a member of faculty. He had to be content with the role of a tutor in mathematics — as they would say now, at the preparatory courses at the Polytechnic

School. So, as well as H. Gref, A. Comte did not have any idea about numbers. Only about digits. He perceived mathematics in the form of statistics and accounting, since throughout his life he had not experienced “soaring in the infinite” and breakthroughs — revelations in the “supra-temporal realm of meanings.” He was Salieri, but not Mozart in mathematics. That was the reason why he created the philosophy of positivism.

All low-performing students tend to advocate for equality. They do not like any mathematical olympiads that are simply unthinkable without insights, in addition to the fact that they take place frequently and are strictly limited in time given for solving creative tasks that do not imply a typical, technological solution. Therefore, these were low-performing students who created their anti-ideal “ideal” of equality of everyone.

The “ideal” of the French Revolution that proclaimed equality as its main principle, was created by a total loser who alternated notes rewriting with a gardener job and a gigolo’s life with rich women. J-J. Rousseau simply could not come up with anything outstanding. But the grateful revolutionaries — low-performing students reburied him after the revolution in Paris. But even J.-J. Rousseau did not dare to transfer the principle of equality from politics to culture. This was done by A. Comte. Being a low-performing student, it was he who declared experience, but not theoretical knowledge and not the ability to create, to be the main person’s asset. Low-performing students do not have much knowledge, but they have rich experience. Even jokers of the Ancient East, who said: “If the roads passed gave intelligence, donkeys would be the smartest creatures” made fun of this. The priority given to experience in the theory of knowledge corresponds to the proclamation of equality in politics. And in science, experience equals a low-performing student with an excellent student, since they have the same experience of attending lectures (and an excellent student is even less experienced). A low-performing student has an experience of visiting the library. The results, however, are not impressive. But after all, everyone in the country writes reports on the work done, but not on its results.

Experience generally equalizes all. A factory director and a laborer also have experience, and they could exchange them freely — on an equal footing. A professor should share his/her experience with a student, but the latter will not necessary recognize this experience as valuable, since “the reality has changed a lot”.

Science has always been associated with a difficult climb to the top using the steepest trails. One can see far from the tops of theories. There is an opportunity to generalize, especially when you are standing on the top and you can see three countries at once but, at the same time, you do not notice minor aspects and details. Experience

does not involve projection and prediction. People who live only by experience are like blind people touching an elephant. They constantly share information about what they have managed to touch. One person says that the elephant is like a colon hanging from the sky, the other one claims that the elephant is a warm column. The third defines it as a living burdock that hangs down and moves. It is necessary for everyone to touch both the column, the colon, and the burdock. Peer-reviewed journals describing direct experience were invented for this purpose. The Vienna Circle proposed an ideal scientific formula for this, describing the fact: “At the moment A in the place P at the time T the subject observed the event B.” Such a formula would eliminate all theories forever. Theories are harmful since they prioritize and separate the essential from the unessential. Such an approach is dangerous: low-performing students can be recognized as irrelevant people.

Therefore, it is not necessary to speak about the principal and the non-principal. All facts constitute equivalent information, as well as all people are equal in society. A low-performing student is the same individual as an excellent student. And let it be so in physics. Here, let there only be a division into physical and mental on the basis of experience. I set up an experiment and described it in a peer-reviewed journal. If someone repeats the experience, the phenomenon can be considered as physical. If I say: “In the first corner of this classroom I can see a blue table today,” other people will verify this statement, perceiving the existence of the table as a physical fact. If I say: “I can see a devil in the corner of this classroom”, other people will verify my statement and consider it to be false, and the devil is recognized not as a physical, but as a mental phenomenon. Physical is what everyone can see under given circumstances; mental is what only one person sees, while others cannot see.

Some people, however, may have similar vision or other senses aberrations. It happened that a lot of people could see a devil during collective rejoicing. And in this case, we need statistics — social accounting. We need to interview a reference group — a thousand people, or even more, and the more, the better. Should a sociologist conducting such surveys think, that is, create some explanatory theories? Not at all. Like any modern columnist, he should forget the word “because”. He is allowed to use only conjunction “and”. He observed different things. As well as other people. He should not explain why they observed it. This will be a “conspiracy theory.”

A. Comte’s social mathematics was even simpler than the one he taught at his preparatory courses. An accountant and a sociologist do not even need to extract square roots — just add, subtract, multiply and divide in the process of calculating

percentages. Following A. Comte, H. Gref offers a business person to be satisfied with this mathematics. And, besides, engineers do not need strength of materials and higher mathematics in the era of technology. Everything difficult will be calculated for them by mathematical extraterrestrial “superhumans”. We do not need a lot of General Staff Academies in economics. We need more sergeant schools that develop skills and abilities.

Is it good or bad to know the concrete? Here D. V. Pivovarov again would certainly quote his beloved Hegel. He would define concreteness as reproduction of a thing in the abundance of abstract definitions. Science first ascends to the heights of abstraction from the immediate specifics of experience and does not stop on its ultimate abstractions at all, but returns to living reality, describing it theoretically from all possible sides.

Let us illustrate this with an example. For instance, there is a village where residents are massively involved in pottery, for example, they mold clay toys for sale. The first potters started with quite concrete clay deposits nearby. The deposits were exhausted, they went to look for new raw materials, and exchanged experiences using different clays. And then there appeared the first expert technologist, who started comparing clays professionally, and devoted his life only to this, since there were high-volume sales of products on the market. After that they were joined by a chemist, who conducted the analyzes and described the formula of clay. Basically, the periodic table is a description of Platonic abstractions — none of its elements is absolutely pure. But science first singled out these ideals, and then it returned to clay from a concrete pit, providing its most detailed formula, that is, giving its detailed description in the abundance of abstract definitions. Otherwise, no one would have given money for this science.

If we describe a Kantian cognizing person in the way a computer is described today, a person would appear as an equipped computer which has not been used yet. I. Kant called software installed on this computer “a priori forms” (Kant, 2016): the experiment data has not yet been entered, but the computer is already ready to work.

At first, two initial programs collect fragmented experiment data into holistic separate objects. We have five senses and their data must be “unified” into one object of the outside world — an apple, for instance. This what “A Priori Representations of Space” program is occupied with. We also have inner feelings, emotions and other chaos of the inner world, from which it is necessary to “mold” our inner “Self”. This is what “A Priori Representations of Time” are occupied with.

Parents and teachers teach us this in the childhood. (Taught before the era of gadgets). They teach by the means of words of an ordinary language that the most radical teachers transform into obscene words and corporal punishment.

A. F. Zotov perfectly explained I. Kant's choice of such "programs" by the fact that he visited his father's workshop who was a saddler, that is, a craftsman who makes harness. The meaning is clear: any craftsman can teach his apprentice to make different objects without any scientific concepts, using only ordinary words, strong expressions and beating. "That is not a bridle. This is a bridle, but not that. Take that for the bridle!" And in modern numerous TV food shows the chef of an advanced restaurant does the same: "Taste the dough. It is not salty! This is not a dough, but trash! Remake it!" In the same way, a craftsman bricklayer teaches how to make the proper masonry mortar, and a potter how to prepare a mixture for making pots. In this case there is no need for any chemical formulas, it is quite possible to develop skills without even knowing how the details of the technological process are called exactly.

The necessity to use scientific concepts and categories of thinking appears only on the second "floor", where I. Kant placed the program "Reason". This program is also given to a person from above, or rather, from no one knows where — it is pre-installed in a person as in a live computer. It is based on the use of scientific categories as forms of thinking. A person creates sciences by using exactly this program. There is nothing physical, chemical and biological in nature. A person determines all this at his/her choice.

For example, it is possible to ask someone: "There is a program installed on your on-board live computer that gives an opportunity to define one thing as a part, and another thing as a whole. What do you choose as a part, and what do you choose as the whole?" And the first respondent answers: "I love everything tiny. For me a quark is a part, and an elementary particle is the whole." He created the physics of the microworld. Another respondent says that elementary particles are too small for him, and therefore for him a part is an atom, and the whole is a molecule. He created chemistry on the same basis. The third respondent wants to see a molecule as a part, and a cell as the whole. He created microbiology. Someone chooses a cell as a part, and a body as the whole. He created biology in its traditional sense. Someone will study flocks and packs as a whole consisting of parts — organisms. He will form K. Lorenz's type of ethology. And so on. There are no "objects of science" and "subjects of science" in nature. Each person can be studied both physically, chemically and biologically, the only thing that is important is how we use the "Reason" program.

It is the use of this "second computer program" — the reason — that just creates science and makes a person a scientist. A person can easily disable this program. Any girl will turn her back on a young man, if he, wishing to get acquainted with her in a

dairy store, asks: “Is kefir a part or the whole? Is it a cause or a consequence?” But if he asks the same questions to a laboratory assistant at any institute of the dairy industry, she will briskly answer that we use this composition as a starter, that is, as the cause of kefir, and this is already a consequence of its use. And then she will add something about fractions in test tubes — as parts of the former whole.

There is, however, a third program that someone has *embedded* into us. It makes us constantly think about the world as a whole (that is, the Universe which is not divided into “the world of physics”, “the world of chemistry”, “the world of biology”, etc.), about God, about soul (consciousness) and about freedom. This program, which Kant called “Reason”, constantly “freezes”, since eventually after its use the same reasonable, but mutually exclusive answers are obtained. We cannot scientifically prove that God exists, but we also cannot prove that He does not exist. As a result of “Reason” program application theology, philosophy (metaphysics), and psychology appear. But the world does not form a single whole even among representatives of various sciences who try to find interdisciplinary connections.

From this I. Kant made a conclusion close to the one which is made today by Russian “natural” scientists. Since mankind cannot give an unambiguous answer to the question about the world as a whole, about God, about soul and about freedom for two and a half millennia, there is simply no point in dealing with these issues in science. Science is powerless here, and the “Reason” program is imperfect and limited. A scientist should be limited only using “A Priori Forms” and “Understanding” programs. He/she should not use the “Reason” program in science.

Empiricism, both old and ancient ones, vainly tries to disable this program. This proves that the problem is not so simple. Even I. Kant himself recognized that person’s “upper” philosophical “program” cannot not be disabled fundamentally. Moreover, completely ignorant in science people give the best answers to questions about the world as a whole, God, soul, and freedom. They have not only the philosophy of life, but also the theology of life, as well as the psychology of life. The most illiterate person who are multitude and multitude and multitude, will happily answer you that the dome of the sky is punched by rockets, what is the cause of space problems in nature, that the soul leaves home only on the fortieth day and not in all cases. Everyone has their own idea about God, or about what kind of God does not exist. And the issue of how much freedom should be given to your husband or child, not to mention your wife, can be developed by every fellow traveler on a train.

In the early 20th century Russian “subject scientists” were hidden Kantians. They did not recognize philosophy as a science but, as well as I. Kant, they believed that a person, for some reason, needs it for life. For instance, to ensure emotional balance. For some reason, a person needs to know how the cosmos is structured, to know if he/she can count on God’s help, to know what the possibilities of his/her consciousness are and what are the boundaries of freedom. All this knowledge was generally referred to as “worldview”. (A more accurate term “life-vision” was offered, but it was not established).

The academic world believed that if it is impossible to stop people talking about God, the world as a whole, soul and freedom in vain, then let it be led by educated and intellectual people, rather than by simpletons from the street. It is better to have a science-like philosophy than a non-science-like one.

At the same time, however, natural scientists followed A. Comte (Comte, 2003), who taught that each person passes the entire path of human development and consistently passes through three stages of mind development. Nowadays, it is more accustomed to call these stages “religious”, “philosophical” and “scientific” (A. Comte called them theological, metaphysical and positive). The difference between these stages lies only in how a person’s experience is ordered. In the beginning everything is explained by the presence of spirits and gods that determine the world and human capabilities in it. At the second stage gods are substituted by entities, that is, anonymous gods without a visual representation, that is, purely noumenal, but they are attributed with a typical human life — they contradict each other, fight with each other, reproduce each other, etc. At the third stage observation, which sums up by statistical calculations and for the sake of clarity is depicted in the form of graphs and diagrams, take the place of anthropomorphic fantasies. Put it simply, A. Comte requires not to build theories, but to immediately draw a graph — a kind of Gaussian that describes statistical distributions. And to come up with some funny inscriptions and pictures, just to revive the presentation.

Let us go back to the question we started from: “Should we do mathematics of numbers today, or is mathematics of digits enough?” Even A. Comte’s mentor Duke de Saint-Simon, which was regarded as insane in France, described P.-J. de Béranger in his poems and offered to end to all conflicts once and for all, turning the whole world into a single factory.

A. Comte in his work “A General View of Positivism” (Comte, 2003), written in 1830–1842 offered the same way out. (All 6 volumes have not been translated into

Russian yet). He wrote this work only to save the French from future revolutions once and for all (for the same purpose the old center of Paris with narrow streets, where it was possible to build barricades, was demolished and the streets were replaced with wide boulevards). A. Comte explained this in the following way: two parties collide during a revolution, the one, represented by the king (today's implication: "authorities in general") is inspired by religious ideas. Another party is revolutionaries (today's implication: "the opposition in general") is inspired by the philosophy that is spread around the world by infernal attorneys (to this we can add "from Robespierre, Kerensky and Lenin to modern human rights activists").

As soon as all mankind moves to the third scientific stage, liquidate all the myths and all theories as hidden myths about entities in general, there will be "on *earth peace, good will toward men.*" Individual countries will become separate workshops of a single great factory. And each individual, guided solely by his/her experience and the experience of other people, which will be reflected on the Internet, will be able to freely choose a proper workshop. A single accounting department which will be happy only with "digital" mathematics will work at the factory: it will not at all "bother" itself with "numerical" mathematics. Nobody there will solve problems about the quadrature of a circle or prove unprovable theorems.

Nowadays, liberals of the whole world are fighting for this idea of insane Saint-Simon, following the appeal of de Béranger: "Gentlemen! If the world will not be able to find a way to the holy truth, honor to a madman who will bring a golden dream to humanity" (Béranger, 1966). Béranger's work, however, was translated by a Social Revolutionary named Kurochkin, who, like all Social Revolutionaries, was prone to use high soaring style. In the original version the meaning of the verse was the following: "If the reason which the revolution was striving to led people to a dead end, let us just listen to a madman."

And what will happen to "numerical" mathematics? Today, it is persistently preserved by physical and mathematical schools that teach how to solve non-standard problems, that is, the ones that machines will never be able to solve. Today the mathematics of meanings is also being eradicated in ordinary schools. Problem solving there is replaced by the ability to organize presentations.

Traditionally, a teacher spent his first months of teaching mathematics just to wean the class off presentation thinking. He set the task: "A pedestrian started moving from point A to point B. Another pedestrian started moving towards him from point B. The speed of each pedestrian is 5 km/h. The distance between points is 10 km.

How much time will it take them to meet?” At the very first lesson children were keenly interested in what these points were, what they looked like, asked to show the images of pedestrians and wanted to know their names. It took a lot of effort to wean them off thinking “pictures”. To do this, pedestrians were replaced by cars, road rollers and planes to bring children to the initial mathematical thought: no matter what happened, no matter where they started moving from, all specific details do not matter, and all moving objects can be represented as approaching points. But that was not all. The result was achieved only when the children were given the task about two pipes. “Water from two pipes flows into a pool. The volume of the pool is 10 cubic meters. Each pipe delivers 5 cubic meters of water per hour. How long does it take to fill up the pool?” As soon as you understand that this is one and the same task, which does not depend on material embodiment in pedestrians, swimming pools, planes, etc., your soul, even during your lifetime, will finally separate from this world of vanity and its accounting, and soar into the world of pure thought. You will become a mathematician. But as taught by D.V. Pivovarov, everything happens in the same way both in religion and philosophy.

Conclusion

What does D.V. Pivovarov’s “symphonica” do? (Pivovarov, Ryl’tsev, 2008). It explains to everyone in the language of fundamental ontology, comprehensible to any religion, that tasks about Mohammed, Christ, Buddha and Moses are also one and the same task, but its meaning is not in amalgamation of Allah with Jehovah, but in teaching everyone to soar in the infinity of thought, considering the specifics of the world only as a cause for such flights. Symphonism implies the difference of instruments — it is impossible to play a symphony using only violins or bassoons. Harmony presupposes a difference of sounds, which are just combined in chord-agreement, since agreement is only possible between different ones, otherwise, it will not be harmony, but monotony.

Philosophy, as seen by D.V. Pivovarov is a field in which one religion can be explained by another one without causing conflicts between them and, at the same time, open a choice of faiths to a person which he/she cannot be forced to.

References

- Bacon, F. (1978). *Novyi organon* [*Novum Organon*], 2 (2). Moscow, 575 p.
- Béranger, P.-J. (1966). *Stopenesen* [*One Hundred Songs*]. Moscow, Hkudozhstvennaia literatura, 262–264.

Guardini, R. (2015). *Gel'derlin. Kartina mira i bogovdohnovlennost'* [Hölderlin. *World View and Piety*]. Saint-Petersburg, Nauka, 498 p.

Husserl, E. (2011). *Logicheskie issledovaniia* [Logical Investigations]. Moscow, Akademicheskii proekt, 253 p.

Kant, I. (2016). *Kritika chistogo razuma* [The Critique of Pure Reason]. Moscow, Eksmo, 736 p.

Comte, A. (2003). *Dukh pozitivnoi filosofii* [A General View of Positivism]. Rostov-na-Donu, Feniks, 256 p.

Nietzsche, F. (2014). *Veselaia nauka* [The Gay Science], 13 (3). Moscow, Kul'turnaia revoliutsiia, 313–596.

Pivovarov, D. (1998). Dialektiko-logicheskii algoritm [Dialectic and Logical Algorithm]. In: *Sovremennyi filosofskii slovar'* [Modern Philosophical Dictionary], London, Frankfurt-am-Main, Paris, Moscow, Minsk, Panprint, 242–244.

Pivovarov, D. (2009). *Ontologiia religii* [Ontology of Religion]. Saint-Petersburg, Vladimir Dal', 506 p.

Pivovarov, D., Ryl'tsev, E. (2008). *Simfonika: iskhodnye printsipy i poniatiia* [Symphonica: Basic Principles and Concepts]. Available at: http://mirznanii.com/info/pivovarov-daniil-valentinovich-ryltsev-evgeniy-valentinovich-simfonika-iskhodnye-principy-i-ponyati_287058 (accessed 8 November 2018).

Pushkin, A.S. (1977). *Eugene Onegin*. Moscow, Khudozhestvennaia literatura, 27–200.

Russell, B. (2009). *Istoriia zapadnoi filosofii* [A History of Western Philosophy]. Saint-Petersburg, Akademicheskii proekt, 1008 p.

Актуальность цифрового и числового (пролегомены к «симфонике» Д.В. Пивоварова)

А.В. Перцев, Е.В. Мельникова, И.Я. Соковнина
Уральский федеральный университет
им. первого Президента России Б.Н. Ельцина
Россия, 620083, Екатеринбург, пр. Ленина, 51

В статье рассматриваются основания новой методологии толерантного спора, предложенной профессором Д.В. Пивоваровым (1943–2016). Цель исследования состоит в прояснении сущности концепции «симфоники», предлагаемой Д.В. Пивоваровым в качестве медиума в диалоге светских и религиозных ученых. Проводится различение

«цифровой» и «числовой» математик с использованием учений Пифагора, О. Конта, И. Канта, Э. Гуссерля. Доказывается, что позитивистское понимание математики не предполагает смысла, заключенного в цифрах, тогда как «числовая» математика только и открывает доступ к «надвременному царству смыслов», которое исследует феноменология. «Симфоника» Д.В. Пивоварова понимается в статье как форма «интерфеноменологии», которая обеспечивает равнодоступность предельных феноменологических оснований религий, философских систем и научных теорий.

Ключевые слова: Д.В. Пивоваров, «симфоника», религия, философия религии, «цифровая» математика, «числовая» математика, Пифагор, О. Конт, И. Кант, Э. Гуссерль.

Научная специальность: 09.00.00 — философские науки.
