

странство-время [8, с. 298]. Здесь, речь идет об особом трансцендентальном контакте, о коллективном взаимодействии на уровне космического сверхсознания. Сверхсознание – это своего рода Логос, Божественное Начало, Абсолютный Разум, который может существовать сам по себе, однако он, при этом, является следствием взаимодействия коллективных разумных творческих сил.

Согласимся с А. Зиновьевым, который подчеркивал, что, феномен жизни это не просто какие-то кусочки живого вещества, это – сложнейшая живая структура. Это – самое сложное в перспективе эволюции вообще. Это не означает, что она (теория о жизни) уже существует в готовом виде... Феномен жизни не есть всего лишь нагромождение каких-то структур. Это – логически организованное, внутренне дифференцированное, систематизированное построение. Он не вырастает сам по себе. Он может быть создан только искусственно, изобретен усилиями выдающихся творческих умов [2, с. 519]. Таким образом, материальный мир логичен, организован, детерминирован вследствие воздействия на него разумной жизни. То есть таким представляется его именно человек. И именно человек устанавливает правила, которые позволяют ему сосуществовать с другими людьми и окружающими его вещами.

С. Ягодзинский справедливо заметил, что, приобретая опыт соучастия в разных социальных кругах, личность возвращает свою утраченную уникальность, поскольку набор избранных ею кругов является неповторимым [9, с. 35]. Ключевая мысль состоит в том, что духовная жизнь человеческой личности остается неразрешимой дилеммой. Непонятно в полной мере, как именно взаимодействуют духовные механизмы.

Ю.В. Харченко

КЛЮЧОВІ ХАРАКТЕРИСТИКИ ФЕНОМЕНА ВЗАЄМОДІЇ У СОЦІАЛЬНИХ ПРОЦЕСАХ

В статті на основі соціально-філософського аналізу здійснюється концептуалізація феномена взаємодії у соціальних процесах. *Ключові слова:* взаємодія, вплив, зв'язок, відношення, близькодія, далекодія.

Y. Kharchenko

KEY FEATURES OF THE PHENOMENON OF INTERACTION IN SOCIAL PROCESSES

In the article on the basis of socio-philosophical analysis the conceptualization of the phenomenon of interaction in social processes is carried out.

Keywords: interaction, impact, influence, communication, the ratio, close action, long action.

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THE MATHEMATIZATION OF SCIENCE: METHODOLOGICAL ASPECT

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Summary. *The problem of mathematization of scientific knowledge has been discussed. The role of mathematization process as precondition of transformation of science into direct productive force of the industrial society has been proved. The mathematization of scientific knowledge has been shown as a factor of scientific communication complementarity in knowledge society.*

Key words: mathematical structure, mathematization of science, scientific discourse, scientific knowledge methodology, rationality.

Introduction

The development of science was always accompanied by universalization tendency of all its versions. The standards of rationality, verity features,

Выводы

Следовательно, взаимодействие является определяющим фактором жизни на всех системных уровнях бытия. Сама жизнь стала возможной вследствие взаимодействия различных явлений и процессов. В отличие от естественной среды, где материальные объекты, взаимодействуют, влияя друг на друга конструктивно или деструктивно, субъекты воздействуют на объекты или друг на друга осознанно, критически, в зависимости от того, какой моральный выбор они делают.

Список литературы

1. Башляр Г. Достижение автосинхронной референции внутри самого себя (модуляция поэтического творчества). Эссе // Синдром гения. Сборник произведений по «философии гениальности»: [пер. с фр. Б. Скуратова] / Г. Башляр. – М.: Алгоритм, 2009. – 288 с.
2. Зиновьев А.А. Фактор понимания / А.А. Зиновьев. – М.: Алгоритм, Эксмо, 2006. – 528 с.
3. Психология. Словарь / Под общ. ред. А.В. Петровского, М.Г. Ярошевского. – 2-е изд., испр. и доп. – М.: Политиздат, 1990. – 494 с.
4. Сартр Ж-П. Бытие и ничто. Опыт Феноменологической онтологии: [пер. с фр.] / Жан-Поль Сартр. – М.: АСТ: АСТ МОСКВА, 2009. – 925, [3] с.
5. Современная западная социология: Словарь. – М.: Политиздат, 1990. – 432 с.
6. Философский словарь. – Под редакцией М.М. Розенталя и П.Ф. Юдина. – М.: Политиздат, 1063. – 544 с.
7. Хайдеггер М. Бытие и время: [пер. с нем. В.В. Бибихина] / Мартин Хайдеггер. – Харьков: «Фолио», 2003. – 503, [9] с.
8. Юнг К.Г. Синхрония: акаузальный объединяющий принцип: [сб. ст.; пер. англ. и нем.] Карл Густав Юнг. – М.: АСТ: АСТ МОСКВА, 2010. – 347, [5] с.
9. Ягодзінський С.М. Конвергенція інформаційних мереж як стратегічна соціокультурна інновація / С.М. Ягодзінський // Вісник Національного авіаційного університету. Серія: Філософія. Культурологія: Збірник наукових праць. – Вип. I (23). – К.: НАУ, 2016. – С. 34-38.

norms, principles, traditions, moral imperatives regulate and legitimate scientists' activity anyway. The mathematization of scientific knowledge, the beginning of which coincided with the first successful usage of

science as productive force of society, can be one of the perfect examples of it. That's why it isn't a great surprise that classical science produced a firm belief in "inconceivable mathematic efficiency" language of which is a priori considered as the most successful and simple way to represent research results. It is commonly known that many research articles, monographs, conferences, roundtable discussions and symposiums are focused extensively on this problem. So, it should seem like all the problems have been solved and all the questions have been settled.

Problem statement

Regardless of this, we return to the philosophical thought of the sense of mathematics and its place in the modern science structure over and over again, ignoring the absence of its "another" theoretical crisis. But now former pathos is replaced by skepticism, criticism and doubts. The ideas that mathematics and cognitive functions of its language are losing the efficiency appear in publications about scientific knowledge methodology more frequently.

In our opinion, it can be explained by such factors: the study of complex, unbalanced dynamical systems, which often causes the elaboration of contradictory mathematical models; the development of humanities and social sciences methodology, where mathematics is used only for quantity determination; changing status of science in modern society and adding to it ethical and value dimension; mainstreaming of humanities research and its influence on scientific and research developments and technologies; aggravation of opposition between "humanities" and "natural sciences"; aggravation of scientific knowledge differentiation, therefore it's losing its former entirety, systematicity and unity.

Researches' and publications' analysis

Perhaps, because of these, and certainly of many other factors, leading philosophers and methodologists (V. Stepin, S. Krymskyi, L. Mikeshina, V. Lectorskyi, L. Drotianko, V. Lukianets at al.) [1; 5] pointed at fundamental changes of modern scientists' methodological knowledge many times. We found an indirect confirmation of these tendencies in discussion of the necessity of replacement of the term "gnoseology" (theory of perception) by the term "epistemology" (theory of knowledge). The arguments of opponents come to the following result. On the one hand, epistemology, considering science according to its value potential, is able to remove opposition "subject-object", facilitating in such a way the agreement of natural and exact science, and also with anthropology, hermeneutics, personalism, trivial and unscientific knowledge. On the other hand, gnoseology has more stringent scientific, rational and verifying criteria, therefore the illusion of saving and protection of the classical science organization scheme and scientific infrastructure from deconstructive influence of post-modernity culture appears.

Mathematics as universal scientific language

Trying to solve this dissidence, recently, a term "discourse" is brought methodologically into philosophy and science, the discussion of its content and volume is up to now. Without engage in controversy about this

question, we emphasize that the most common explanation of this phenomenon come to the following: discourse is a communicative activity, during which the context of the text and context changes; and also it can be an activity, the major part of which consists of language usage principles and instructions. Anyway, despite the dissidence of definitions, the relation between discourse and language, speech, text and communication process is quite clear.

As for the question of scientific discourse particularity, at this point, in our opinion, it's perfect to start with such a complex ontological question that was asked by G. Gadamer in his time: does the universal and obligatory for everybody scientific languages exist at all? Answering it, he wrote that mathematics wasn't a special language, but it was a component part of a great range of linguistic means which is accessible for scientist to demonstrate his or her ideas. Indeed, if we recall the history of non-classical science, we'll certainly see a lot of distinctive metaphors, cognitive potentials which were repeatedly used by famous scientists for explanation of their scientific and philosophical standpoint. It is commonly known that L. Wittgenstein continued this idea in his work "philosophical investigations", in which he successfully proved that an ordinary language is richer than artificial one, either according to communicative or cognitive aspects. During the language game, the basis of which is everyday language and principles of its usage, happens the discussion of topical matters, solving of controversial problems, conflict of controversial stands, showing of different interpretations. However, the discourse is defined as being generalized, integral system of principles, norms, limitations and criteria, and it is these that regulate activity of all scientific community members and also provide formation and transformation of methodological knowledge of scientific thinking.

On the contrary, science can't develop without some conceptual and categorical matrix, which take on the role of basis for scientific activity, providing intersubjectivity, accuracy and strictness to scientific theories and conceptions. A person, who didn't get the main principles of scientific language organization and functioning, would hardly become equal member of scientific society. Besides, the designing of special terminology is one of the basic tasks of scientific activity. As a result, the replacement of scientific language by everyday language, even with certain limitations, is not possible and not reasonable. But despite of rationality and clearness of such standpoint, the absolutization of it can lead to the methodological collapse of real cognitive process, because full formalization of scientific language will surely cause gradual separation between scientists and society. And, taking into consideration lasting scientific knowledge differentiation, which is often demonstrated as integration, it's possible to predict understanding gap between researches themselves.

The philosophy of mathematics

In recent decades, the ambiguousness of problems, described above, caused the rapid development of such branch of philosophy of science as philosophy of mathematics. Do we have a clear idea of the subject of

this part of philosophy, can we completely determinate the relation of philosophy and mathematics with other exact, natural and human sciences, and to discover the principles of their relation and other components of their interaction? According to shallow analysis, we can say that this question is quite problem-plagued. In other words, such notions as “philosophy of mathematics”, “philosophy of physics”, “philosophy of genetics” are nothing else but philosophical constructs, philosophical concepts, and in these frame thinkers try to solve a broad range of problems, that are connected with certain field. Consequently, reciprocal influence of mathematics and philosophy, and, moreover, the solving of the problem of determining the object field of the philosophy of mathematics require balanced, deliberated, impersonal and comprehensive solution. This solution should take into consideration both philosophers’ worldviews and scientists’ standpoint. But in this case the philosophy of mathematics can be perceived in scientific society as an essential part of mathematical Universe, that extends its boundaries.

The understanding of your own field “gives a birth” to the requirement and possibility of philosophical comprehension and philosophical reflection of certain science. He who got that idea perceives his subject not according to formulas, patterns, limitations and deductive consequences but according to principles and relation with other fields. As a result, the philosophy of mathematics is the part of philosophy, that is intended to help narrowly focused specialist in such situations, when in mathematics former inviolable formulas lose their force and the doubts about foundation veracity appear.

The history of science has a lot of examples of such controversy. For instance, there wasn’t a lot of news from A. Einstein during the last years of his career, as noticed by his colleagues- physicists. His theory of general relativity, unbelief in quantum nature of reality, and tendency to find simple theory for all, were not understood by the scientific society of those days. Later on, the methodologists of science, noticed the unstudied part of genius’s manuscript, found out a source of philosophical generalizations, impersonal, unattached to the formulas views on space, time, substance, movement, gravitation. The relation between phenomena and characteristics, that earlier seemed to be clear but separated, became known. An outstanding scholar moved from physics and mathematics to metaphysics and philosophy.

This example enable us to show the mistake, which is made while determining the place of philosophy in science, methodology and subject matter of certain science. In my opinion, the problem is that we misapply the principle of complementarity, which was introduced by N. Bohr into quantum-mechanics. If we recall the history of this important methodological principle, we would see that it had specific connection frames and mechanisms of classical, non-classical physics with the theory of general relativity. This principle soon was extended to the whole field both exact and humanities science. It became interpreted as general methodological technique, that made it possible to think that contradictory theories cover the disadvantages and limitations of each other.

Despite high heuristic value of this statement, it can’t be used entirely and be generalized without taking into consideration special features of certain subject field. Besides, in my opinion, the correlation between mathematics and philosophy couldn’t be explained according to the principle of complementarity. Mathematics doesn’t complete philosophy, as well as philosophy doesn’t complete mathematics. Both of them are quite independent field of human knowledge, representing a special type of reality perception and socialization. And this statement can hardly be rejected.

I can say certainly that the correlation between mathematics and philosophy always had utilitarian characteristics. Neither G. Leibniz, I. Kant nor G. Hegel, using the history of the development of mathematics and its gnosiological peculiarities as illustrative material, have not stopped at this point. Mathematics, as any other field of perception and culture at all, was nothing more than stage of particular philosophical systems development. It’s also veridical that the introduction of philosophical knowledge into exactly scientific always happened very carefully. Philosophy should not break the strictness, deductive principles, conclusiveness and axiomatic nature of mathematics.

Today it’s certainly possible and it’s worth saying and making a lot for harmonization of mathematics and philosophy, and also to study their correlation. But let’s be honest: are we really sure that a philosopher can add something new to the modern, sophisticated mathematics? In fact, there is no agreement in principle between mathematicians themselves even about entirety and unity of mathematics. That’s why, in my opinion, the philosophy of mathematics should come down to the analysis of object field of mathematics and couldn’t solve fractional tasks, even if they are very interesting. At the same time, it should search for problem parts of mathematics and tasks, which haven’t been solved yet by scientific principles and couldn’t be demonstrated in symbols. And there is no doubt that such problems really exist.

The philosophy of mathematics doesn’t retell or translate the mathematical theories into philosophical language. The object field of the philosophy of mathematics starts where mathematical facts are not enough for discussion and their interpretation into general principles and the overrun of fractional knowledge are required. This enables us to define briefly the field of the philosophy of mathematics: general study of the nature and structure of mathematics, analysis of the problem of unity and boundaries of mathematical perception of the world; correlation of mathematics with other sciences and principles of their complementation.

K. Gödel’s theory is an example of incorrect extension of mathematical knowledge to the field of humanities. Let us remember that his theories are connected only with formalized, quantitative-separated systems and can’t be extrapolated to other sets and relations. Nevertheless, such theories have mystical function in philosophy, moreover, their sense and meaning are extended up to distortion of their initial content.

Summing up I'd like to point that, in my opinion, the object field determination of the philosophy of mathematics should correspond with famous G. Hegel's formula, that the philosophy is a mentally generalized epoch. Recently, the statement of a representative of classical philosophy is quite strongly criticized. Indeed, the function of philosophy in modern society is not only summing-up the previous, drawing conclusions and principles. In the rapidly changing world the philosophy must be able to predict future, to be ahead of ideology, politics, and to give people a robust tool of mentality. But as for philosophy of mathematics this principle works pretty well. It warns against hasty conclusions, and doesn't disorient philosopher according to his place in the development of mathematics, enables to understand it as long-standing entirety and a part of the culture of knowledge, where it has leading worldview function.

The mathematization of science as productive force of society

An acknowledged specialist in philosophy of mathematics M. Kline, thinking about the phenomena of this science, shows that in the time of A. Makedonskyi, it was interpreted as "an ideal version of the components of the real world, which is known for us" [3, p. 52]. This statement confirmed one of the key traditions of classical science concerning rationality of physical reality and opportunities to understand it only in mathematical way, that consequently is unified. It's clear that such certainty in mathematics should have some reasons, because the mathematization of certain subject cardinally reviews and transforms its methods, approaches, definitions, and the methods of getting and representing the results. According to O. Kedrovskyi and V. Tsykin mathematization doesn't come only to the extension of mathematical methods to other sciences; it's correlation dialectical combination of two object fields [2, p. 12-13].

But in such case, mathematics must become a kind of ideal style of scientific thinking.

Such characteristics of mathematics were caused by such features: the introduction of the main terms, the meaning of which remain constant; abstraction; idealization; usage of deductive methods and methods of formal logic; the usage of special marks [3, p. 55-60].

The trust in mathematics, that was raised in antiquity, changed a little up to XVIII century. Even in the Middle Ages it has an important role in understanding of Bible and proving the existence of God. In one of his manuscripts, M. Kline wrote that the assurance of the scholars of classical science was based on belief in the existence of God, his intelligence and rationality. Even I. Newton "considered scientific activity as hard and boring work, but continued declaring for it, because science enabled him to find new confirmations that the world was created by God" [3, p. 240]. So, at the beginning the belief in verity of mathematical statements was grounded at metaphysical thoughts. It undoubtedly had a positive influence both on the developing of science, contributed to the extension and improvement of education, and provided different subjects with unified approach to studying and describing of natural phenomena. It's not unusual that up to the end of XVIII

the science became a strong disciplinary organized system with its own methodological and methodical techniques, ideals and criteria.

Despite the fact, that A. Whitehead, taking into consideration the appearance of such new disciplines as geology, zoology, biology, evolution theory wrote about gradual drop of mathematics' influence, that started in the middle of XIX century [6, p. 88-89], defending the point of view, that later its influence just increased. Moreover, the representatives of listed disciplines themselves contributed to the effective and rapid mathematization, because it not only gave a chance to enter the scientific society but also offered opportunities of integration and unification of knowledge, its implementation and acceleration of scientific-and-technological advance. Most probably, that A. Whitehead, pointing out the drop of interest to mathematics, understands mathematics as independent science, which in those times was already branched, difficult for understanding and separated from the reality of knowledge field.

Even some methodologists admit that a broad range of mathematical dialects add quite specific problems of misunderstanding, when the same results, represented, for example, in the language of the theories of chances and differential measurement have absolutely not congruent form, that's why it's hard to compare them. «Wide usage of mathematics in modern science, – wrote V. Nalimov, only aggravates Babylonish troubles" [4, p. 172]. Therefore, it's necessary to phase out strictly unique mathematical language, involving the instruments of modern nonlinear, meaningful and variable logics. We, however, speaking about the mathematization, first of all consider mathematics as meta language, which even today is successfully used both in natural and humanities disciplines.

Conclusion

The mathematization of scientific knowledge once and forever connected science with manufacturing, so it contributed to the establishment of the scheme science-manufacturing-society, that is a key moment for the analysis of modern scientific discourse. So, we came back again to the knowledge triangle, proposed by M. Fucco, adding to the methodological aspect of the development of science sociocultural one. In such context, scientific discourse solves the opposition between science (as a field of getting theoretical knowledge), manufacturing (implementation of knowledge without taking into consideration its value potential) and society (aims, values, ideals, moral and religious standards which become from now a component of scientific discourse).

Following up, science, having been separated artificially from social requirements at the beginning of its development, is gradually turning into productive force, which connects all the available resources and regulates their usage. In addition, the mathematization of science plays an important role in such transformation.

References

1. Drotianko L.H. Spetsyfika metodolohichnykh zasobiv nauky v protsesi yii informatyzatsii / L.H. Drotianko // Visnyk

Natsionalnogo aviatsiinogo universytetu. Seriya: Filosofiia. Kulturolohiia. – 2016. – № 1. – S. 11-15.

2. Kedrovskiy O.I., Tsyikin V.A. Matematizatsiya nauchnogo znaniya – ob'ektivnaya zakonomernost nauchno-tehnicheskoy revolyutsii / O.I. Kedrovskiy, V.A. Tsyikin. – K.: Znanie, 1981. – 48 s.

3. Klayn M. Matematika. Poisk istiny / M. Klayn: Per. s angl. – M.: Mir, 1988. – 295 s.

4. Nalimov V.V. Veroyatnostnaya model yazyika. O sootnoshenii estestvennykh i iskusstvennykh yazyikov / V.V. Nalimov. 2-e izd., pererab. i dop. – M.: Nauka, 1979. – 304 s.

5. Chenbai N.A. Fundamentalizatsiia naukovno-tehnichnogo znannia v tekhnichnomu universyteti v informatsiinomu suspilstvi / N.A. Chenbai // Visnyk Natsionalnogo aviatsiinogo universytetu. Seriya: Filosofiia. Kulturolohiia. – 2010. – № 2. – S. 117-120.

6. Uaythed A. Izbrannyye raboty po filosofii / A. Uaythed: Per. s angl. – M.: Progress, 1990. – 390 s.

Ягодзінський С.М.

МАТЕМАТИЗАЦІЯ НАУКИ: МЕТОДОЛОГІЧНИЙ АСПЕКТ

Розглядається проблема математизації наукового пізнання. Обґрунтовується думка про те, що процес математизації став передумовою перетворення науки на безпосередню продуктивну силу індустріального суспільства. Показано, що в суспільстві знань математизація науки є умовою комплементарності наукових комунікацій.

Ключові слова: структура математики, математизація науки, науковий дискурс, методологія наукового пізнання, раціональність.

Ягодзинский С.Н.

МАТЕМАТИЗАЦИЯ НАУКИ: МЕТОДОЛОГИЧЕСКИЙ АСПЕКТ

Рассматривается проблема математизации научного познания. Обосновывается мысль о том, что процесс математизации стал причиной превращения науки в непосредственную производительную силу индустриального общества. Показано, что в обществе знаний математизация науки является условием комплементарности научных коммуникаций.

Ключевые слова: структура математики, математизация науки, научный дискурс, методология научного познания, рациональность.

УДК 316.454 (045)

М.А. Абисова

МЕДИАДИСКУРС: ЛЕКСИКО-СЕМАНТИЧЕСКИЙ АСПЕКТ ЯЗЫКОВОГО ВОЗДЕЙСТВИЯ

Аннотация. В статье рассматриваются основные лексико-семантические механизмы языкового воздействия на общественное сознание в процессе речевой деятельности в сфере массовой коммуникации.

Ключевые слова: лексическая семантика, медиадискурс, языковое воздействие.

Актуальность

Современные социальные процессы в значительной мере обусловлены их освещением средствами массовой информации. Способ подачи информации является одним из решающих факторов ее восприятия аудиторией. Стремительный рост средств массовой коммуникации и новых информационных технологий, динамичное развитие СМИ в начале XXI в. привело к созданию единого информационного пространства, особой виртуальной среды, что сказалось на процессах производства и распространения слова, особенностях речеупотребления и характере языковых изменений. Актуальность темы статьи обусловлена как возросшим масштабом языкового воздействия на общественное сознание и манипулирования массовой аудиторией, с одной стороны, так и недостаточной изученностью манипулятивных возможностей языка медиадискурса, с другой.

Постановка задания заключается в установлении и описании лексико-семантических механизмов языкового воздействия медиадискурса на общественное сознание.

Степень разработанности темы

Теоретической и методологической базой исследования в области теории медиадискурса являются работы М. Маклюэна, Н. Лумана, Д. Грейбера и др. Проблема языкового воздействия на человека исследуется представителями различных отраслей наук: психологии, социологии, философии, филологии и более частных междисциплинарных

направлений: теории коммуникации, рекламоведения, паблик-рилэйшнз и др. (Р. Блакар, Д. Болинджер, Х. Вайнрайх, С. Кара-Мурза, С. Московичи, Дж. Лакофф, Г. Шиллер, Г. Франке, Э. Нозль-Нейман, Г.С. Джоуэтт, В. О'Доннэл, Г. Почепцов, Б. Паршин, Э. Шостром, В. Москвин и другие).

Основная часть

Из множества существующих подходов к определению медиадискурса, подход, предложенный М. Фуко, кажется одним из наиболее продуктивных. По мнению М. Фуко, дискурс представляет собой одновременно особый способ видения и упорядочения действительности, реализуемый в разнообразных дискурсивных практиках, и результат в виде сложившихся правил самого этого дискурса [6, с. 30]. В нашем исследовании мы будем придерживаться определения медиадискурса как совокупности процессов и продуктов речевой деятельности в сфере массовой коммуникации во всем богатстве и сложности их взаимодействия.

Главной функцией медиадискурса большинство исследователей считают информационную. Информация, которую передает медиадискурс, может иметь как всеобъемлющий, так и избирательный характер. Особенностью медиадискурса является то, что получатель массовой информации не сохраняет ее; она, как устная речь, действует только тогда, когда производится и воспринимается адресатом. Все тексты медиадискурса не могут восста-