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Электронное учебное пособие
по учебной дисциплине «Философия»
обязательного модуля «Философия»
для студентов I ступени высшего образования всех специальностей
очной и заочной форм получения образования
Электронный учебный материал

ELECTRONIC TEXTBOOK FOR THE EDUCATIONAL DISCIPLINE "PHILOSOPHY" OF THE COMPULSORY MODULE "PHILOSOPHY"

For students at the I st stage of higher education of all specialties
full-time and part-time studies

E-learning material

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The textbook includes materials of a lecture course, guidelines for independent study of the discipline "Philosophy" a list of additional literature for independent, scientific and research work of students.

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Content

Introduction

The manual on philosophy contains the necessary material for preparing for the exam on philosophy. The manual is written on the basis of a typical program in this discipline. The training manual contains recommendations for writing essays, information on the main stages of preparation for the exam, methodological recommendations on the use of additional educational literature, work with primary sources.

The manual on philosophy was developed based on the specifics of socio-economic and engineering specialists. Issues that are in the center of attention of modern philosophy are considered. From the perspective of the methodology, key aspects of innovation are considered. Issues related to the methodology of discipline-oriented science and engineering are presented.

The textbook on philosophy solves the problem of organizing the independent work of students. Philosophy solves the problem of acquainting future specialists with the features of research and innovation and innovation. The completeness of objective knowledge about the world, a person, is a necessary basis for future specialists to realize the value status of the reality with which they will deal. On this basis, the axiological, ecological, humanistic, spiritual culture of a specialist is formed. Co-evolutionism, the sustainable development of society, security, tolerance, modernization, identity and mobility are the key concepts of a methodological approach to activities.

1. Subject of philosophy

Philosophy is the art of thinking. The aim is to train one's judgment through analysis, critique, and self-critique, to pay attention to distinctions and to see underlying patterns, and to see the whole beyond the parts. Philosophy is a systematic reflection on reason and reality; studies in philosophy will provide a good foundation for studying any other discipline, as well as for professions that requires analytical skills and a creative intellect. Branch of the philosophy: metaphysics, anthropology, philosophy of mind, epistemology, philosophe of science, philosophe of history, ethics, aesthetics, logic, philosophe of religion.

Philosophy from Greek φιλοσοφία, philosophia, literally love of wisdom is the study of general and fundamental problems concerning matters such as existence, knowledge, values, reason, mind, and language. The term was probably coined by Pythagoras. Philosophical methods include questioning, critical discussion, rational argument and systematic presentation. Classic philosophical questions include: Is it possible to know anything and to prove it? What is most real? However, philosophers might also pose more practical and concrete questions such as: Is there a best way to live? Is it better to be just or unjust (if one can get away with it)? Do humans have free will?

Historically, philosophy encompassed any body of knowledge. From the time of Ancient Greek philosopher Aristotle to the 19th century, natural philosophy encompassed astronomy, medicine and physics. For example, Newton's 1687 Mathematical Principles of Natural Philosophy later became classified as a book of physics. In the 19th century, the growth of modern research universities led academic philosophy and other disciplines to professionalize and specialize. In the modern era, some investigations that were traditionally part of philosophy became separate academic disciplines, including psychology, sociology, linguistics and economics.

Other investigations closely related to art, science, politics, or other pursuits remained part of philosophy. For example, is beauty objective or subjective? Are there many scientific methods or just one? Is political utopia a hopeful dream or hopeless fantasy? Major sub-fields of academic philosophy include metaphysics concerned with the fundamental nature of reality and being, epistemology about the "nature and grounds of knowledge and its limits and validity, ethics, aesthetics, political philosophy, logic, philosophy of science and the history of Western philosophy. Since the 20th century, professional philosophers contribute to society primarily as professors, researchers and writers. However, many of those who study philosophy in undergraduate or graduate programs contribute in the fields of law, journalism, politics, religion, science, business and various art and entertainment activities.

2. Philosophy as world view

At first glance the term "world-view" suggests a general view of the world—and no more. But the appearance of the word does not reveal the full meaning of this complex intellectual phenomenon. A world-view, as we understand it, is a system of generalised views of the surrounding world and man's place in it, of man's relationship to the world and himself, and also the basic positions that people derive from this general picture of the world, their beliefs, socio-political, moral and aesthetic ideals, the principles by which they know and appraise material and spiritual events.

While it possesses a relatively independent existence in the sphere of social consciousness, the world-view also functions as something individual. A person becomes an individual when he forms a definite world-view. This process of formation indicates the maturity not only of an individual but also of any given social group, social class or its party. The concept of world-view, which was first encountered among the Greek sceptics, is substantially broader in meaning than the concept of philosophy; moreover it has several different meanings.

We speak of the philosophical, the socio-political, the natural-scientific, the artistic, the religious, and even the ordinary man's world-view. And this is quite natural. If we picture the various types of world-view in the geometrical form of circles, the central position should be given to the circle of the philosophical world-view. And this circle will intersect with all the others and form their nu-

cleus. In this way we find that the meaning people and social groups attach to the term "world-view" is extremely diverse. But despite this diversity, every world-view reveals a certain unity in the sense that it embraces a certain range of questions. For example, what is the world that exists outside us? What is the relationship between spirit and matter? What is man? What is his place in the universal interconnection of phenomena? How does man come to know reality? What are good and evil? What is beautiful in life and in art? What laws guide the development of society? The totality of the natural sciences forms a natural-scientific picture of the world, and that of the social sciences yields a socio-historical picture of reality. What is a picture of the world? It is a picture of how matter moves and how in the shape of the human being it feels, thinks and poses goals. The creation of a general picture of the world is the task of all fields of knowledge, including philosophy. In compressed form, general pictures of the world are presented in universal encyclopaedias compiled at various historical stages to reflect the intellectual achievements of mankind.

The world-view is by no means all the views and notions of the surrounding world it is not simply a picture of the world taken in its integral form. Not a single specific science can be identified with a world-view, although each science does contain a world-view principle. For example, Darwin discovered the laws of the origin of species. This caused a revolution in biology and evoked universal interest. Did these laws evoke such interest because they were merely biological laws?

They awakened such interest because they helped us to understand various philosophical questions, the question of purpose in living nature, the origin of man, and so on. The name of Einstein was made immortal by his discovery. But was this discovery purely physical, a solution to some particular scientific problem? No, Einstein's theory provided a key to the philosophical problem of the essence of space and time, their unity with matter. Why did the ideas of Sechenov on cerebral reflexes create such a furore among intellectuals? Not because they were merely physiological ideas, but because they solved certain philosophical problems of the relationship between consciousness and the brain. We know what a broad impact the principles of cybernetics have had. But cybernetics is not just a specific scientific theory. Cybernetics, and also genetics and raise profound philosophical problems.

The world-view contains something more than scientific information. It is a crucial regulative principle of all the vital relationships between man and social groups in their historical development. With its roots in the whole system of the individual and society's spiritual needs and interests, determined by human practice, by all man's accumulated experience, the world-view in its turn exerts a tremendous influence on the life of society and the individual. The world-view, on the other hand, is oriented on the world as a whole, on the "man-universe" system. The world-view may exist on the ordinary, everyday level generated by the empirical conditions of life and experience handed down from generation to

generation. It may also be scientific, integrating the achievements of modern science concerning nature, society and humanity itself.

The world-view is not only the content, but also the mode of thinking about reality, and also the principles of life itself. An important component of the world-view is the ideals, the cherished and decisive aims of life. The character of a person's notion of the world, his world-view, facilitates the posing of certain goals which, when generalised, form a broad plan of life, ideals, notions of wellbeing, good and evil, beauty, and progress, which give the world-view tremendous power to inspire action. Knowledge becomes a world-view when it acquires the character of conviction, of complete and unshakable confidence in the rightness of certain ideas, views, principles, ideals, which take command of a person's soul, subordinate his actions, and rule his conscience or, in other words, form bonds that cannot be escaped without betraying oneself, set free "demons" that a person can conquer only by submitting to them and acting in accordance with their overwhelming power. The world-view influences standards of behaviour, a person's attitude to his work, to other people, the character of his aspirations in life, his everyday existence, tastes and interests. It is a kind of spiritual prism through which everything around us is perceived, felt and transformed.

3. Historical type of the philosophical world-views

No matter from what direction the thinker is preceding along the "philosophical road", he must cross the bridge known as "the basic question of philosophy". As he does so he must, whether he likes it or not, decide on which side of the river of philosophical thought he will remain—the materialist or the idealist side. But he may find himself in mid-stream, in the position of dualism, that is to say, recognition of two equal and independent substances in the universe—material and spiritual. The basic question of philosophy is that of the relationship of thinking to being. It presupposes acknowledgement of the existence of an objective, i.e., independent of human consciousness, reality and a subjective, spiritual reality—representations, thoughts, ideas—and a certain relationship between them. Which comes first—matter or consciousness? Which generates which? Does matter at a certain stage of development generate its finest flower—the reason? Or does the world spirit create the material world? Or perhaps they have coexisted eternally as equal substances in their own right and are in some way interacting?

Such is the first aspect of the basic question of philosophy. Its second aspect comes down to the following. Can man and mankind in general know the objective laws of the world by the power of their own consciousness? Or is the world unknowable? In examining the first aspect implied in the basic question of philosophy the thinker inevitably finds himself in one of two camps, materialism or idealism (or dualism), while in examining the second aspect of the question he takes a stand either in favour of the fundamental possibility of knowing the world or in favour of agnosticism, that is, denial of this possibility.

Why is the question of the relation of thinking to being - a seemingly very abstract question - considered to be the basic philosophical question? Because from the nature of the answer we give, as from the source of a great river, there flow not only directly contrasting interpretations of all other philosophical problems but also the general theoretical, world-view questions posed by any science, moral phenomena, standards of law and responsibility, phenomena of art, political events, problems of education, and so on.

We cannot consider any philosophical question unless we first solve the basic question of philosophy. To illustrate, let us take the example of the concept of causality. Materialism presumes that this concept reflects an objective, i.e., independent of human consciousness, process of generation of some phenomena by others. But Hume, for example, denied the existence of causality in nature. He believed that it was habit that taught people to see certain phenomena as the causes of others, for instance, the blow of an axe and the falling of a tree. We have indeed become accustomed to see the result follow the action that causes it. But this habit is based on the continuous consideration of the objective connection of phenomena and did not arise by itself.

According to the materialist principle, all authentically proved concepts, categories, propositions, inferences, laws and theories have a substantially objective character and do not depend on the whim of man. Idealism, on the other hand, is inclined to regard them merely as mental constructions. For example, the materialist scholar of literature studying the work of Shakespeare begins by sorting out what objective social conditions predetermined the character and inspiration of the dramatist's work. The idealists, on the other hand, are inclined to attribute his work to the depth of the individual spirit of this genius and ignore the social conditions in which he lived and wrote. If one takes the moral sphere, it is immediately obvious how contrasting the solutions to the basic question of philosophy may be.

Are man's moral qualities innate or given by God, or are they formed by life, by upbringing. As applied to history, the basic question of philosophy appears as a relationship between social being and social consciousness. On how this relationship is interpreted the answer to the question: what determines man's destiny, what guides history - ideas, the rational powers of historic individuals, or the material production carried on by the people of a given society and the economic relationships that arise from this process. Consequently, the basic question of philosophy is not simply the question of the relation between thinking and being in general, but more specifically, that of the relation between social consciousness and social being, that is to say, the objective relations between people formed on the basis of their production of material goods. The materialist understanding of the basic question of philosophy as applied to history is expressed fully and simply: social being ultimately determines social consciousness and social consciousness, derivatively, has an active influence on this being.

Consideration of the basic question shows that the real processes of life from their interpretation in various theories, the material driving forces of society from the ideal motivations, the material interests of people, social groups from their reflections in the mind. Materialism teaches our thinking to see in our mental constructions, in our artistic, political and other ideas and images the objective content determined by the external world, by life. Idealism, on the other hand, hypertrophies the spiritual principle, treats it as absolute. In politics, for example, this attitude may have dangerous consequences for the people; idealism sometimes results in political adventurism. This happens when a politician ignores the objective laws of history, the will of the masses, the existing economic relations, and tries by the power of his own volition to impose his own ideas, which run counter to the real, law-governed current of events.

Materialism understands the world as it is in fact, without attributing to it any supernatural qualities and principles. Explanation of the world from the world itself is the methodological principle of materialism. It maintains that the connections between ideas in people's heads reflect and transform the connections between phenomena in the world. To the extent that people in living their lives cannot help considering the fact of the objective existence of the world, so they act as materialists: some spontaneously, others consciously, on a philosophical basis. Certain scientists sometimes dissociate themselves from materialism while spontaneously working on its principles. On the other hand, the supporters of philosophically conscious materialism not only consistently advocate such a solution of the basic question of philosophy but also substantiate and uphold it.

Idealism is in general related to the desire to elevate the spirit to the maximum degree. In speaking with such veneration of the spiritual, of the idea, Hegel assumed that even the criminal thought of the evil-doer was greater and more to be marvelled at than all the wonders of the world. In the ordinary sense idealism is associated with remoteness from earthly interests, constant immersion in pure thought, and dedication to unrealisable dreams. Such "practical idealism" is contrasted to "practical materialism", which its opponents, wishing to belittle it, present as a greedy desire for material goods, avarice, acquisitiveness, and so on.

Idealism is divided into two basic forms: objective and subjective. The objective idealists, beginning from the ancients and ending with those of the present day, recognise the existence of a real world outside man, but believe that the world is based on reason, that it is ruled by certain omnipotent ideas which guide everything. Consciousness is hypertrophied, separated from man, from matter, and converted into a supra-individual, all-embracing reality. Reality is considered to be rational and the reason is interpreted as the substance, the basis of the universe.

All things and processes are thus spiritualised. Such a notion of the superhuman and supernatural spiritual essence, the world reason, the world will, the absolute idea, is essentially a religious notion. For example, in Hegel the "absolute idea" is quite often called simply god, an impersonal, objective, logical pro-

cess, while nature and the history of society are its guided other-being. Reason is the soul of the world. It resides in the universe and it is its immanent essence.

From the standpoint of subjective idealism it is only through inadequate knowledge that we take the world as we see it to be the actually existing world. According to this conception, the world does not exist apart from us, apart from our sense perceptions: to exist is to exist in perception! And what we consider to be different from our sensations and existing apart from them is composed of the diversity of our subjective sensuality: colour, sound, forms and other qualities are only sensations and sets of such sensations form things. This implies that the world is, so to speak, woven out of the same subjective material of which human dreams are composed.

To the subjective idealists it appears that our efforts to reach beyond consciousness are futile and it is therefore impossible to acknowledge the existence of any external world that is independent of consciousness. It is a fact that we know the world only as it is given to man, to the extent to which it is reflected in our consciousness through sensations. But this certainly does not mean that the world when reflected in consciousness somehow dissolves in it like sugar in water. The reader may legitimately ask: have there really been any philosophers who maintain such a strange philosophy as subjective idealism, a philosophy that for so many centuries was subjected not merely to criticism but to sarcastic ridicule? On the ordinary empirical level, surely it is only madmen, and only a few of them, who can deny the independent existence of the world. In practice, the subjective idealists (Berkeley, Fichte and Mach) probably did not behave as if they believed there was no external world. These ideas were strictly reserved for the sphere of theoretical thought.

The objective idealists elevate human thought and its products—concepts, ideas and culture in general—to the status of the absolute. In ancient times people measured their actions according to the unwritten rules of their ancestors that had been retained in the memory and handed down from generation to generation. The individual consciousness grew accustomed to being dominated by certain supra-individual ideas, social standards retained in human memory and in the form of the "social memory", in language. This relative independence of the spiritual life of society was elevated by imagination into something absolutely independent, into Reason divorced not only from living and thinking people but also from society, from matter in general, so that thinking and its products were elevated to a special spiritual realm, the immanent essence of the universe. And this was objective idealism. Its epistemological roots go down deep into history, when the progress of cognitive activity and the penetration of reason into the essence of things triggered the process of formation of abstract concepts.

The problem arose of relating the universal and the particular, the essence and its manifestations. It was not easy for man to understand how the universal reflected in, for example, the concept of beauty was related to the individual form of its existence in a given individual. A beautiful person lives and dies but the idea of beauty survive him and prove to be indestructible. A wise man de-

parts this life but wisdom, as something universal, common to all wise men who ever lived, live or will live in the future, survives in the system of culture as something existing above the individual. This universal, reflected in the concepts (beauty, wisdom, reason, law and so on), came to be identified with the concept itself. The universal features in things and the concept of the universal became merged in the consciousness, forming an objective-idealist alloy, in which the universal was divorced from its individual existence, apart from which it could not exist at all, and acquired the status of an independent essence. Objective idealism begins when the idea of a thing is conceived not as a reflection of the thing but as something eternally existing before the thing, embodied in the thing and determining the thing in its structure, properties and relationships and continuing to exist after the destruction of the thing.

Thus Pythagoras thought of numbers as independent essences ruling the world, and Plato regarded general concepts as a special realm of pure thought and beauty that had engendered the world of visible reality. The idea of a thing created by man precedes the existence of the thing itself. The thing in its given form is derived from the aim, the intention of its creator, let us say, a carpenter. The greater part of the things that surround us are the result of man's creative activity, they are something created by man. The idea of creation has become for man a kind of prism through which he regards the whole world. This idea is so deeply rooted that he does not find it easy to set it aside and think of the world as something not created by anybody and existing eternally.

The idea of the eternity of existence contradicts all the facts of our life, in which nearly everything is created, one might say, before our very eyes. So the eternal, uncreated existence of the world simply did not fit into people's heads and still does not fit in with many people's thinking. The level of science was very low and this gave rise to the assumption that there must be some universal creator and lord of all things. This idea was strengthened also by the fact that so much in the world was strikingly harmonious and purposeful.

Idealism is linked with religion and, directly or indirectly, provides its theoretical expression and substantiation. Over idealism there always hovers the idea of a god. Subjective idealism, compelled to be inconsistent in defending its principles, allows the objective existence of a god. The universal reason of the objective idealists is essentially a philosophical pseudonym for god: the supreme reason conceives itself in its creations. At the same time it would be a vulgarisation to identify idealism with religion. Philosophical idealism is not a religion but the road to religion through one of the forms of the complex process of human knowledge. They are different ways of being aware of the world and forming an attitude to it.

4. Philosophy of the ancient East

Eastern Philosophy refers very broadly to the various philosophies of Asia. Among these are philosophical tradition of the India, philosophical tradition of the China and Arabic philosophy.

The term sometimes also includes Middle Eastern traditions of philosophical thought. In many cases, the philosophical schools are indistinguishable from the various religions which gave rise to them (or vice versa).

F. Schlegel saw the revival of Europe on the basis of Eastern wisdom. These ideas created the phenomenon of the Eastern Renaissance. Oriental studies have a rigorous scientific foundation in the form of linguistics, archeology, history, source studies, ethnography, historical geography, and practical oriental studies. Orientalism has been integrated with the diplomatic activity of European states in the East. There was an increased interest in the Ottoman Empire, Central Asia, and Transcaucasia. At universities in Eastern Europe, much attention was paid to building students' interest in the East. An important role was played by the lectures of Gottfried Ernst Groddek, which he read at the University of Vilnius. He was educated at the University of Gottingen. Since 1804, he worked at the Department of Classical Philology of the University of Vilnius. He taught ancient Greek and Latin languages, ancient literature. In lectures, he advised students to study oriental culture. Position G.E. Groddek was in tune with the pan-European trend in linguistics.

Thus, the discoverer of the sanctuary, W. Jones, considered it important to search for a single source of Indo-European wisdom. F. Schlegel adhered to a similar position, writing about the language and wisdom of the Brahmins. A. Duperron adhered to it. He translated the Upanishads from Persian into Latin.

Comparative Linguistics G.E. Groddek has formed an interest in the eastern culture of a native of Belarus O.I. Senkovsky. He was educated at the Minsk Jesuit College and at the University of Vilna. After moving to St. Petersburg, he became the first Arabist professor in the Russian Empire. In lectures, he used the results of trips to the Middle East. Under the influence of the lectures of the professor were O. Kovalevsky, Y. Kopatsky, A. Mukhlinsky, A. Rafalovich, A. Golynsky, B. Grambchevsky, I. Chersky, M. Vronchenko, E. Pekarsky, I. Tetersky. Among the university students in Vilna was also OM Kovalevsky, exiled to Kazan and assigned to a local university to study Oriental languages. He mastered the Turkic, Mongolian, Manchu, Chinese, Tibetan languages. He explored Tibet, Mongolia and China. He is the founder of the school of Mongolian studies. As a result of his stay in Tibet, he brought to Kazan a large collection of manuscripts. He wrote original scientific works on Buddhist cosmology.

To study the territory of Turkestan, the Russian authorities equipped geographic, military and diplomatic expeditions. Negotiation strategies, combined with a military presence, allowed the integration of the Zhuli of East Turkestan, the khans of Khiva, Bukhara and Kokand into the diplomatic space of the Russian Empire. An important role in creating a dialogue between the Turkic peoples and the authorities of the Russian Empire was played by the participants in the uprisings in Tobolsk and Ishim on the territory of the former Grand Duchy of Lithuania. Among them were natives of Belarus. They studied the nature of Turkestan, the culture of the Kazakhs, provided the local national intelligentsia with information about European culture and its representatives. During the

work of the diplomatic mission of the Russian Empire in the south of Turkestan, the exiled from Belarus A. Yanushkevich and the father of Abai Kunanbaev met. They constantly talked. A. Yanushkevich in the process of communication held in his hands the one-year-old Abay.

A. Yanushkevich was from Central Belarus, from Nesvizh. He represented the region that traditionally supplied applicants to the university in Vilna. Here, students from Belarus met, made friends, were engaged in literary creation, philosophy. Since they adhered to the idea of restoring the Grand Duchy of Lithuania, they combined their studies with participation in organizations and became participants in the uprisings. A. Yanushkevich appreciated the friendship with A. Mickiewicz. He told Abay Kunanbayev's father about this poet, as well as about other European poets.

European orientalist was A. Khodzko-Boreyko. He was born on August 30, 1804 in the estate of Krivichi (now Myadel district of the Minsk region) in the family of a prominent public figure and writer Jan Khodzko in Lithuania and Belarus. A. Khodzko received good home education, studied several foreign languages, and since 1816 he studied in Vilna, in a gymnasium, under the guidance of teacher Tomasz Zan. After graduating from high school in 1820, A. Khodzko entered the faculty of verbal sciences and free (or fine) arts of Vilnius University. The lectures of I. Lelevel, G. Grodek, I. Danilovich had a great influence on him.

A. Khodzko was introduced into the circle of close associates of T. Zahn in semi-legal societies and took an active part in their activities. He became secretary of the Blue (Philological) Union of Filarets. Forty-two Societies were defeated by Russian authorities. A. Khodzko, like their other members (including his friend Adam Mitskevich), was under investigation in custody, but was acquitted. April 16, 1825 he graduated from the university.

A. Khodzko showed interest in the culture of the peoples of the East. He gained fame as a poet who propagated ideals and romanticism among literary youth, which was reflected in his attraction to oriental motives. The poets of the romantic school were also interested in folk art.

In order to study the culture of the East more deeply, A. Khodzko decided to move to Petersburg, where the best oriental forces of Russia were concentrated. January 7, 1827 Khodzko entered the Education Department of Living Languages at the Asian Department of the Ministry of Foreign Affairs in St. Petersburg. The department trained translators of oriental languages for Russian missions in Iran and Turkey. His teacher was Mirza Jafar Topchibashev.

In 1829, a collection of poems and translations by A. Khodzko was published in Polish. The collection showed a poet's interest in the East. Along with translations of the poems by A. S. Pushkin and V. A. Zhukovsky and songs from the collection "Guzla" by P. Merime, the anthology included new Greek, Persian, Bashkir, Azerbaijani songs. The book ended with the poem by A. Khodzko "Derar" for Arabic motives. The book was also reflected in the well-known A. Khodzko by his ethnic environment in his native places, Belarusian and Lithua-

nian folklore. Several songs are based on the plots of Belarusian and Lithuanian folk art.

The collection was reprinted in Poznan in 1833. Literary Newspaper, published by A. A. Delvig with the active participation of A. Pushkin, responded to the publication of the collection in 1829. The poem "Derar" was translated into Russian and published in 1839. In 1830, Khodzko was identified as a translator for the Russian mission in Iran. He arrived at his destination, having traveled from Petersburg through Astrakhan and Baku.

Six travel essays by Khodzko were published in the St. Petersburg newspaper Tygodnik Petersburski in 1830-1831 and 1833. and in the Literary Newspaper of 1830–1831. A. Khodzko held the position of translator at the Russian consulate in Tabriz from March 26, 1832, as well as the consul in Rasht, which was the administrative center of the province of Gilyan. Continuing the folklore and ethnographic traditions that distinguished Vilnius societies, the researcher studied the country, its history, way of life, languages, and the culture of its inhabitants. April 29, 1841 A. Khodzko went on vacation for treatment to Europe and spent it in Greece and Italy.

In 1842, he quit his diplomatic service and settled in Paris. Here A. Khodzko renewed his friendship with A. Mickiewicz and helped him in 1849 to publish the newspaper “La Tribune des Peuples”, around which emigrants from various countries united. A. Khodzko did not lose ties with Iran. In 1857, the Iranian government, on the recommendation of the politician Farrukhan Amin al-Daul, under whom A. Khodzko was a consultant during a visit to France by Farrukh Khan in 1857, instructed A. Khodzko to control 42 Iranian youths studying in Paris. The orientalist carried out this observation until 1868. He published his works in English and French.

In 1857, A. Khodzko tried in vain to take a vacant place as a teacher of the Persian language at the Paris School of Oriental Languages, but received only a professor at the Slavic languages and literature course at the College de France University. A. Khodzko’s interests included problems of philology, folklore, ethnography, religion, and theater of the peoples of the Caspian regions. A. Khodzko widely used the method of field observations when describing the life of the peoples of the Caspian coast, which was reflected in the article “Persian music” and in the preface to the book “Samples of Persian folk poetry in the adventures and improvisations of Ker-oglu ...”. The collection of materials was facilitated by official and scientific trips of the researcher in the regions of Iran. The materials were published in German and translated by J. Sand in French. He visited A. Khodzko, distant from the provincial capital, Mazanderan (1836) and Khorasan (1833, 1834).

The manuscripts collected by A. Khodzko and the records he made locally formed the basis of most of his later scientific publications, among which the most interesting are works on linguistics, folklore, ethnography, theater, religion, as well as complex descriptions of individual territories. A. Khodzko was the first to draw the attention of researchers to the languages of the Iranian group

that had not been studied before: Talysh, Gilan, Mazanderan, and the Suleymani dialect of the Kurdish language. A special place was occupied by the central region of Persia.

The Grammar of the Persian Language, compiled by an orientalist, has survived two editions - in 1852 and 1883. The collection A. Specimens of the Popular Poetry of Persia (L., 1842) received great fame. It consists of the following sections:

1. Foreword.
2. Introduction to the “Koroglu”.
3. Adventures and improvisations of Koroglu.
4. Folk songs of the Astrakhan Tatars.
5. Three songs of Kalmyks.
6. Turkmen songs.
7. Songs of Persian Turks.
8. Persian songs.
9. Songs of Gilyans.
10. The same Rudbar Highlanders.
11. The same Talysh.
12. The same ma
13. Samples of texts.
14. Nine Persian songs.

The songs placed in the 14th section (“Koroglu”, “Azerbaijan Air") are accompanied by notes. In the collection, A. Khodzko published his notes on the folk art of Azerbaijanis, Turkmens, Nogais, Talysh, Iranians, Gilyans, Mazanderans and Kalmyks. Koroglu is a Turkmen singer from the Teke family, a hero of the legends of more than a dozen Turkic-speaking peoples of Asia. Orientalists studied mainly court written literature. A. Khodzko was one of the first orientalists to introduce the folklore of the above-mentioned peoples into the circle of scientific research.

The knowledge of A. Khodzko of the Turkic and Iranian languages, close communication with the inhabitants of Iran contributed to the researcher making adequate translations of Turkmen, Azerbaijani, Persian and other types of poetry into European languages. Most of the folklore texts in the London collection have been republished in other languages. “The Adventures and Improvisations of Keroglu” were twice translated into French by Georges Sand and Adolphe Breliè. They came out as a separate edition in German, translated by O. Wolf, and also in the Russian translation by S. Penn.

All this contributed to the popularization of oral works of the peoples of the Caspian coast in Europe. A significant part of the London collection of A. Khodzko was composed by him in the Adventures and Improvisations of Koroglu recorded by him in Iranian Azerbaijan. A. Khodzko’s romantic interests were manifested both in his love of folk songs, which he translated, and in their subject. In the image of Koroglu, the researcher saw the embodiment of the struggle for the rights of the people against the oppressors. The fact that folk legends per-

sisted about Koroglu, A. Khodzko found extra evidence of the aspirations of the peoples of the East to social justice.

Less well-known in the literature are records of texts of Turkmen songs and poems made by A. Khodzko in Nardin (North Khorasan) in 1833. The first two texts, "Victory of the Turkmen Teke" and "Song of the Emir-Guna-khan after the defeat near Moyun," are devoted to the defeat of the Kurds by the Turkmens in 1782. The following three texts belong to the poet Karajaoglan. The sixth text contains a song about the campaign of the Iranian shah Aga-Mohammed Khan in 1796 against the leader of the Kurds Memish Khan. The following three texts A. Khodzko entitled "Three songs of the Turkmen Makhtumkuli" ("Makhtumkuli - to his mother", "Wise opinions" and "Winte memories"). They are followed by the "Serjam Song", "Tips of Kemine" and "Song of Adyna Daragazi".

A. Khodzko attached particular importance to the creativity of the classic of Turkmen poetry of the 18th century Makhtumkuli. The researcher called him the most popular poet not only in Turkmenistan, but also in Khorasan. A. Khodzko gave a short biography of Makhtum-kuli and emphasized that the poet devoted most of his time to philosophy and poetry.

The value of this publication lies in the fact that it appeared twelve years after the first publication of the poet's legacy in the European language in general and twenty years earlier than the first known publication of Makhtumkuli's poems in Russian translation by F. Bakulin. Thanks to the work of A. Khodzko, not only Western European, but also Russian readers could familiarize themselves with the poetic heritage of the great Turkmen poet long before it was customary to consider.

A. Khodzko's translations drew attention to Turkmen poetry even when Turkmenistan was separated from Russia and other European countries by territories not sufficiently involved in the orbit of wide cultural exchange between Europe and Asia. When information about the rich spiritual potential of the Turkmen people often came from hostile circles and contained incorrect information about him. Peru A. Khodzko also owns a detailed historical and geographical description of the province of Gilan, on the southern coast of the Caspian Sea, published in French and translated into Russian. This work is distinguished by an integrated approach to the study of Gilan.

Among the materials collected by A. Khodzko were manuscripts covering certain aspects of the religious life of the Iranian population. In 1839, the researcher handed I. Blaramberg a rare manuscript translated from the Persian language into French, "Kulsun - nene, or How Persian women interpret the Koran." In 1848, A. Khodzko published the Persian text (with French translation and commentary) of the note by the Iranian ambassador to France Mirza Mohammed Ali Khan, "Monotheism [sects] of the Wahhabis, explained by them themselves". Four years later, the researcher published the article "Desatir, the religious code of the [sect] of the Mahabadis", and then the article "Hassan Sebbah and his supporters - Iranian Legitimists".

One of the first researchers A. Khodzko drew attention to the Persian theatrical performances “Theasie” and published five texts of these plays. Most of the works of A. Khodzko are rich in primary material collected by the researcher at the places of his long stay as a result of his constant contacts with the local population. This is the main value of the work of an orientalist.

A. Khodzko is characterized by an interest in the life, customs and everyday life of the Caspian peoples. The rudiments of an ethnographic approach to the study of these peoples were manifested in his works. Long communication with them allowed the researcher to leave, in particular, an impressive picture of the life of the Gilyans. Among his observations, there are interesting ethnographic sketches that help to recreate the life image of the peoples of the Caspian coast in the first half of the 19th century. A. Khodzko’s works on the Caspian region contain a lot of information that has not lost its cognitive significance. The researcher draws attention to changes in the spiritual and material life of the peoples of this region under the influence of objective living conditions. He gives examples of the constant interaction of cultures in the process of coexistence of different peoples.

Understanding that humanity is one, A. Khodzko showed respect for the culture of individual peoples, drew attention to socio-historical factors that restrained progress. The activities of A. Khodzko contributed to the formation of contemporares humane ideas about the peoples of the Middle East. His work contributed to the development of folklore and ethnography of the peoples of the Caspian region. He became a popularizer of the work of the outstanding Azerbaijani writer Mirza Fatali Akhundov.

A.O. Mukhlinsky is from the Belarusian Tatars. His research interests included the history of Islam within the former Grand Duchy of Lithuania . A.O. Mukhlinsky is the founder of scientific Turkology at St. Petersburg University. He was the founder of a specialized department of Turkish, later Turkish-Tatar, literature (literature of the Volga and Crimean Tatars). I taught students courses in Arabic and Turkish languages, as well as the history and geography of the East, and the history of the Ottoman Empire.

From 1832 to 1836 he was sent to the Ottoman Empire; interned in Ottoman Egypt, at the famous university at the Cairo mosque al-Azhar, founded in 972, from where he took out several manuscripts, including the work of the Persian mathematician and astronomer Ahmad al-Katib. A.O. Mukhlinsky actively published in the "Library for Reading" by an Arabist, writer and publicist O.I. Senkovsky, in the "Encyclopedic Dictionary" of 1861

A researcher of the Middle East within the framework of the spiritual precepts of the Vatican was a native of Grodno province M. Rylo. After the closure of the Jesuit Academy in Polotsk and the ban on the activities of the Jesuit Order, he went to the Vatican, where he was delegated the authority to represent the Catholic Church in the regions of the Middle East and North Africa. M. Rylo was among the first Europeans to visit and describe Babylon. He opened schools for Christians in the Middle East. His subsequent spiritual activities took place

in Sudan. K. Kossovich came from Polotsk, who became a famous Sanskritologist, Iranianist, and Semitologist. He was fluent in Greek, Arabic and Hebrew. In the years 1845-1847 was a teacher at the Lazarev Institute of Oriental Languages. His brother, I. Kossovich, studied the Avestan language and translated the Avesta into Latin. He worked at the University of St. Petersburg. The subject of his interests included Greek and Roman literature.

A.O. Makovelsky is from the Belarusian city of Grodno. At the beginning of the twentieth century, he was sent by the University of Kazan to Berlin to study sources on ancient philosophy. The subject of his scientific research was pre-Socratics. In Berlin, he spoke with representatives of German philosophy. At the beginning of World War I, he returned to Russia. After the establishment of Soviet power on the territory of the Russian Empire in 1920, he accepted the proposal to move to Baku, where he contributed to the formation of Orientalism of the twentieth century. The subject of his research was Hellenic philosophy, taking into account its combination with the philosophical traditions of Transcaucasia and Persia. On this basis, he conducted research on Azerbaijani culture and philosophy. Thus, researchers from Belarus made a significant contribution to the development of European Orientalism. They explored the vast territories of Asia, the culture of local peoples, languages, and philosophy.

Orientalism as an object field in the XIV-XIX centuries had eastern cultures, including the vast territories of the Moscow state and the Russian Empire. In the XVII century, the war between the Commonwealth and the Moscow state took place on the territory of Belarus. Part of the Belarusian Orthodox population, fearing the Counter-Reformation, came under the jurisdiction of the Moscow state. The other part - the Catholic religion - was in military service in the army of the Commonwealth. Captivity meant for them a link to the remote eastern regions of the Moscow state. They monitored the life of the local Siberian peoples, as well as the features of their interaction with the Russian population. One of the first among Belarusian researchers in the culture of Ugra is Adam Kaminsky-Dluzhik.

In 1660, during the war of the Polish-Lithuanian Commonwealth and the Moscow State, A. Kamensky-Dluzhik was captured in the area of the city of Mogilev and was sent to Moscow. From there he was sent to Yakutia. The road took a lot of time. She ran through different regions, including through Ugra. Travel time A. Kaminsky-Dluzhik devoted observations of the cultural characteristics of cities, local people.

Mansi is characterized by him as hunters and fishers. They have their own faith, the infrastructure of which they carefully guard. They have a language. The researcher made one of the first attempts to compare it with European languages. It was an attempt to discover a common linguistic group of peoples. But since in the XVII century this topic did not have a strictly scientific study, the researcher limited himself when comparing the Zyryan language with the languages of the peoples inhabiting the Commonwealth.

The researcher noted that Mansi's spiritual faith focuses on dialogue with local nature. He described in detail the peculiarities of hunting zyryans for a bear. They consisted in the fact that the hunter accompanied the extraction of the bear with a special ceremonial of communication with his clan. This dialogue was conducted through the skull of an animal. A. Kaminsky-Dluzhik was limited in time, so his information about Yugra did not have a detailed description. He presented his observations about the local peoples of Siberia in a special essay, which became the subject of analysis of modern ethnographers. The essay described Mansi.

In the XVIII century as a result of captivity in Western Siberia was Ludwik Senitsky. The book he wrote contains a description of the Khanty. Since, like A. Kamensky-Dluzhik, he was transported to Yakutia, the description of Ugra does not take up much space in his memoirs. His impressions of the Khanty and Mansi were formed upon his stay in Perm, Solikamsk, Verkhoturye, Tobolsk, Surgut and Narym. In cities, the indigenous population was a minority. Therefore, the main source of information about the indigenous peoples of Ugra L. Senitsky was given travels through the taiga.

E. Felinskaya presented more extensive information about the spiritual culture of the Khanty and Mansi in her memoirs. It comes from the German Wendorff family. Her ancestors settled within Belarus. She received the surname "Felinskaya" upon her marriage. The family did not form because of the imminent death of her husband. The love of S. Konarsky was followed by participation in democratic organizations. The arrest was developed in the form of exile in the Tobolsk province. The main city of location was Berezov.

E. Felinskaya devoted most of her time to the study of the ethnographic characteristics of local peoples. The information was provided by the convenient location of the city. Representatives of the main local peoples visited him on business. In this intercultural dialogue, processes were born that determined their joint economic evolution. Reindeer husbandry has become a factor in economic integration and cooperation of the peoples of Ugra. He was perfectly owned by the Nenets. This was a progressive activity, as it provided the population with food, goods, and necessary resources.

In "Memories of a Journey to Siberia and Stay in Berezovo," E. Felinskaya described the features of the material life of the Nenets and Khanty who lived in the neighborhood. The common basis of their life was reindeer herding. Important processes of the formation of large herd of reindeer herding were completed. The bearers of this culture were the tundra Nenets. They led a mobile territorial lifestyle, which involved active contacts on an intercultural basis. In the XVII century, on the basis of the Khanty, the Tundra Nenets formed genera, which began to play an important role in the spread of their influence.

The tundra Nenets found economic forms of interaction in the lower reaches of Pechora with the Komi people. At the same time, the tundra Nenets and Khanty retained their linguistic features, since they represented different linguistic families. Intermediary functions were performed by the Russian language. E.

Felinskaya recorded the differences between tundra reindeer husbandry and economic activity in forest areas.

Southern Khanty and Mansi during the studies of E. Felinsky, lived on the banks of the Irtysh. They were in an active intercultural dialogue with the Russians and Tatars. Taiga in the south bordered the steppe. The Khanty, who came from the south to the lower reaches of the Ob, called themselves "the people of the Ob." They were engaged in fishing, hunting, reindeer husbandry. The spiritual life of these tribes was based on the traditions of shamanism, and with the adoption of Christianity - on Orthodoxy. E. Felinskaya reflected in her memoirs the details of clothes, hairstyles of men and women of the Khanty people. What was common in hairstyles was that people braided their hair in braids. They wore beads around their necks. The Khanty dressed in long shirts made of deer skins called "Maltsa". Wool twisted inside. A “park” with a hood was worn over the shirt. The hood had the shape of a deer head. The set of clothes included mittens. In cold weather, the third layer of clothing formed the “goose”. Legs insulated stockings made of deer skin called "siskins". Thermal comfort was complemented by boots - “pima”. They were tied to the belt with straps. On holidays, the Khanty wore elegant shirts with a black collar. They were embroidered with multi-colored beads and plaques. Boots made of colored cloth. Women wore skirts and caftans. A shawl covered their faces, because his father-in-law and husband's elder brother could not see him. Tattoos were applied to the bodies. E. Felinskaya paid special attention to the Khanty dwellings and set forth her observations in detail in her memoirs.

In the summer, the Khanty lived in the plague. Deer skins lay on the floor. In winter, the Khanty lived in wooden houses dug in the ground. A wooden roof was insulated from above by earth. A chimney came out through the roof. Lighting at home was provided by half-open doors. Mosquitoes drove away the smoke of the outbreak. The interior walls of the house housed sun loungers and seats. These were hewn logs covered in skins. Boxes were used to store the belongings. Household functions were performed by birch bark buckets, scoops, cups, and spoons. Window frames were drawn in transparent fish skin. It had lower thermal conductivity compared to glass. Khanty moved on reindeer harnessed to sledges, as well as dog sledding.

The religious culture of the Khanty religiously combined Orthodoxy and local beliefs. The Orthodox Church baptized the indigenous population. But the same population retained local beliefs. Copper crosses were used to decorate clothes. E. Felinskaya described the spiritual culture of the Khanty and in terms of their wedding ceremonies. There was a custom of ransom for the bride. He was paid to her family by the groom. This showed respect for the bride and her parents. In return, the bride’s parents gave her daughter deer and furs in the form of a dowry. From the observations of E. Felinskaya regarding religion, it follows that in the beliefs the Khanty preferred the traditional institution of shamanism, the cult of the bear. She described in detail the bear hunt and the cult associated with it. According to this description, the Khanty went to the bear with one

knife. The beast was hunted in equal fight. The hunter asked for forgiveness from the killed bear.

He placed the paws of the slain beast in the house next to the attributes of the local gods. Group Por, considered a bear as their ancestor. Felinskaya studied the features of the folk art of the Khanty people. She recorded two tales. She asked for a dance for her. He gives a pantomime image of the hunt. The researcher drew attention to the features of the inner world of the Khanty and Mansi associated with honesty. Local peoples were not prone to deception. They regularly paid taxes in the form of taxes and fur tribute. They were honest in trading with Russian merchants. Debts were returned if at least one member of the family survived. The criterion of justice was the basis of the movement of local peoples led by Vauli. An analysis of the reasons for this uprising, E. Felinskaya devoted a lot of space in her memoirs.

After long troubles, E. Felinskaya received permission to return to the former Polish-Lithuanian Commonwealth. She published the collected materials in the Athenaeum magazine and in separate books. The screen translated them into English. In London, the diaries stood three editions. A translation was also made into Danish. In the second half of the 19th century, the function of studying Siberia was introduced into the responsibility of the highest Siberian administration with the aim of integrating the region into the Russian economy. Military threats were also taken into account. Before the opening of the Tomsk Imperial University in 1878, Kazan University solved the main research problems in the eastern part of the Russian Empire. A school of historical and comparative linguistics functioned here. Natives of Belarus took an active part in its work.

The main interests of the school were concentrated on the eastern periphery of the Russian Empire, bordering China, Mongolia, Tibet, Dzungaria, Central Asia. An important role was played by overseas Orthodox missions, which collected unique material about the culture of China. One of these missions was attended by a native of Belarus, the Orthodox priest A.I. Goshkevich. In a short time mastered Chinese and Japanese. He played an important role in establishing diplomatic relations between the Russian Empire and Japan.

Against the background of Asian studies, the regions of Siberia and the Far East that became part of the Russian Empire remained little studied. Research on geography, geodesy, geology, demography, archeology, linguistics, and biology of the region came to the fore. Inaccessible territories became the subject of study of a native of Belarus Ivan Chersky. They mainly focused on mountain ranges. One of them is named after the scientist. Western Siberia, bordering the Urals, had no mountains, but was even more impassable due to swamps, rivers, and sparsely populated taiga.

A native of the Slonim district of the Grodno province of Belarus A.A. became a researcher of the peoples and nature of the impassable territories of Western Siberia. Dunin-Gorkavich. He was born in 1854. He received his education in Grodno in the classical gymnasium and school, after graduating from which he was awarded the qualification of a forestry technician and the title of

forest conductor. Practical work with the forest followed. He served in the Tsarskoye Selo forestry, in the forests of the Samara and Nizhny Novgorod provinces, and the Ryazan. Work was interrupted by participation in the Russian-Turkish war, where he proved himself, for which he was awarded.

A.A. Dunin-Gorkavich became the first highly educated Belarusian who connected his life with Siberia of his own free will, without any coercion. Like every Belarusian, he loved the forest, and he sought to realize this love in new opportunities. Such opportunities were created by the proposal to head the Samara forestry of the Tobolsk province. The appointment was given by A.A. Dunin-Gorkavic. His interests included linguistic topics and folklore of the indigenous population of Ugra, since contacts with the local population required an analysis of the differences and similarities in the linguistic communication of the population. He formulated many problems of forestry.

A.A. Dunin-Gorkavich became a famous local historian. He traveled fifty thousand kilometers. Under his leadership, a detailed map of a huge region with the features of nature and culture of the local population was compiled. Geographic maps of the region have become a unique source of information about settlements, fishing grounds, reindeer husbandry and waterways. They were highly appreciated by the Imperial Russian Geographical Society, which awarded AA Dunin-Gorkavich Small Gold Medal.

The research results were presented by A.A. Dunin-Gorkavich in the fundamental scientific work "Tobolsk North." It consists of three volumes. One of the central places in it is occupied by a description of the ethnographic features of the peoples of Ugra. The information basis for the analysis of ethnographic material was the census. A.A. Dunin-Gorkavich was one of the active participants in the census in the Surgut district. As a result of this great work, he was awarded the Bronze Medal "For the Works of the First General Census of the Population in 1897".

A.A. Dunin-Gorkavich collected unique ethnographic material on the culture of the Ostyaks (Khanty), Voguls (Mansi), Samoyeds (Nenets), Zyryans (Komi). He knew the languages of the Khanty and Nenets. This allowed him to carry out a unique publication in 1910 of the “Russian-Ostyak-Samoyed Dictionary”. A.A. Dunin-Gorkavich wrote about seventy scientific works on the history, geography, economics, and ethnography of North-Western Siberia. They are accompanied by cartographic materials, sets of photographs, drawings and drawings. They are stored in the Tobolsk State Historical and Architectural Museum-Reserve.

Scientific works did not go unnoticed by the Imperial Russian Geographical Society. Their author was awarded the Big Silver Medal named after N.M. Przhevalsky, awarded with diplomas and certificates of honor of the All-Russian agricultural, commercial and industrial and artisan exhibitions. The Presidium of the USSR Academy of Sciences enrolled A.A. Dunin-Gorkavich in the category of scientists of national importance and established a lifetime personal pension. Died A.A. Dunin-Gorkavich in Tobolsk in 1927

The reasonableness and fundamental nature of the main scientific work of A.A. Dunin-Gorkavich "Tobolsk North: a general overview of the country, its natural wealth and industrial activities of the population." When describing the Ugric-Finnish peoples, the Khanty, Mansi, Komi, the scientist uses statistical and geographical data on the population according to the criteria of general characteristics, living conditions, activity, separation of horse and reindeer, language, religious beliefs, superstitions, rituals. Part III of the work is devoted to the ethnographic composition and life of the population of the Tobolsk North.

The third part of the scientific work is fragmented into chapters. The second chapter, dedicated to the Ostyaks, describes in detail the demographic and ethnographic characteristics of the people. In economic activity, the criterion of dividing the Khanty into equine and reindeer is particularly emphasized. The classification of Ostyak groups is given. One of the criteria is the Khanty language. It is represented by the dialects Irtysh, Surgut, Berez and Nizhneob.

The spiritual culture of the Khanty is described in detail. Particularly highlighted are the views on the bear. It is shown that this forest beast plays an important role even in justice. Khanty will not dare to lie before the image of a bear in the form of his head or paw. Hunting for a bear involves a special spiritual contact with him. The same contact occurs with the carcass of a bear or a dipper. The essence of the measures is not to bring consequences to the hunter and those who eat the carcass of the beast. As a result, the ritual before fishing occupies one of the central places in the spiritual life of the Khanty.

Important Khanty rites include the burial of the deceased and sacrifice. As a result of these rites, the Khanty appear as idolaters. Officially, they are considered Orthodox. In fact, they are only listed as such. These characteristics are Khanty A.A. Dunin-Gorkavich recorded on the border of the XIX-XX centuries.

In the special chapters of scientific work, the Mansi and Komi peoples were subjected to Dunin-Gorkavich. Tobolsk North is considered as a single geographical territorial complex, therefore a special chapter is devoted to intercultural influences of Russian and foreign cultures.

In the fourth part of the scientific work when considering the crafts A.A. Dunin-Gorkavich returns to ethnographic descriptions of the clothing of the peoples of the region, the peculiarities of their life and economic activity. He devotes much attention to the ecosocial methodology, which forms the features of the daily life of the Khanty, Mansi, and Komi. The ecosocial space of local peoples is formed by rivers, taiga, climatic zones, and animal migration. The researcher pays much attention to the adaptation features of local peoples. He draws attention to their physical condition, especially the treatment. It shows the important role of places of trade in intercultural exchange, and also draws the reader's attention to the features of language communication of the Khanty, Mansi, Komi, Nenets and Russians. The key factors are language borrowing, multilingualism.

Research A.A. Dunin-Gorkavich in the Tobolsk region of the North turned out to be relevant in the conditions of industrialization of Western Siberia. Sovi-

et engineers had to master new forms of environmental engineering, based on the features of industrial activity in the conditions of permafrost, reindeer migrations and herd of reindeer herding. With the influx of the population, the risks of pollution of the taiga, tundra, and the spread of viruses grew. Not only people who found themselves in the extreme conditions of the North, but also the indigenous peoples of the region, as well as populations of wild animals and herd of reindeer, suffered. These factors have led to increased interest in local cultures and their ecological potential.

Thus, over the course of several centuries, the tradition of the participation of researchers from Belarus in the study of the peculiarities of the peoples of Siberia was formed. These studies formed the practical basis for deciding on the creation of the Khanty-Mansiysk Autonomous Okrug as part of the Russian Federation. Natives of Belarus described the original spiritual culture of the Khanty and Mansi. The research results were presented to the European public in the languages available to it.

As a result of this theoretical transformer- originated synthesis of Eurasian ideology and philosophy of law. Concludes Existence in the philosophy of law and the provisions of the conclusions that are relevant to modern legal philosophy, they deal with issues of universal and relativity of different legal cultures in the history and modernity. In this regard, of particular interest is the question of the specificity of Russian philosophy of law in the context of the Eurasian paradigm.

It will be attended by heads of diplomatic missions of the CIS countries and a number of other states, employees of state administration, specialists in the humanities, representing the National academy of sciences of Belarus and higher educational institutions of the country. Among the speakers – ambassadors and embassy staff from Kazakhstan, Russia, China, the Commissioner for Religious and Ethnic Affairs of the Republic of Belarus, prominent domestic and foreign scholars.

The participants of the conference are expected to develop a coordinated approach to promote the ideas of ethnic harmony and tolerance in Eurasia in the interests of peaceful coexistence, socio-economic development and integration. The special importance of these ideas is emphasized by the entry into force of the Eurasian Economic Union from 1 January 2015.

Particular attention will be paid to the problems of organizing national dialogue during the transition period, the role of state leaders in this process. Participants will raise issues of economic, scientific, educational, humanitarian and cultural cooperation in the post-Soviet space, as well as the role the Assembly of Peoples of Kazakhstan, the prospects for economic, social and cultural integration within the EAEU.

5. Philosophical tradition of the India

Indian Philosophy (or, in Sankrit, Darshanas), refers to any of several traditions of philosophical thought that originated in the Indian subcontinent, includ-

ing Hindu philosophy, Buddhist philosophy, and Jain philosophy (see below for brief introductions to these schools). It is considered by Indian thinkers to be a practical discipline, and its goal should always be to improve human life.

The main Hindu orthodox (astika) schools of Indian philosophy are those codified during the medieval period of Brahmanic-Sanskritic scholasticism, and they take the ancient Vedas (the oldest sacred texts of Hinduism) as their source and scriptural authority:

Samkhya is the oldest of the orthodox philosophical systems, and it postulates that everything in reality stems from purusha (self or soul or mind) and prakriti (matter, creative agency and energy). It is a dualist philosophy, although between the self and matter rather than between mind and body as in the Western dualist tradition, and liberation occurs with the realization that the soul and the dispositions of matter (steadiness, activity and dullness) are different.

The Yoga school, as expounded by Patanjali in his 2nd Century B.C. Yoga Sutras, accepts the Samkhya psychology and metaphysics, but is more theistic, with the addition of a divine entity to Samkhya's twenty-five elements of reality. The relatively brief Yoga Sutras are divided into eight ashtanga (limbs), reminiscent of Buddhism's Noble Eightfold Path, the goal being to quiet one's mind and achieve kaivalya (solitariness or detachment).

The Nyaya is based on the Nyaya Sutras, written by Aksapada Gautama in the 2nd Century B.C. Its methodology is based on a system of logic that has subsequently been adopted by the majority of the Indian schools, in much the same way as Aristotelian logic has influenced Western philosophy. Its followers believe that obtaining valid knowledge (the four sources of which are perception, inference, comparison and testimony) is the only way to gain release from suffering. Nyaya developed several criteria by which the knowledge thus obtained was to be considered valid or invalid (equivalent in some ways to Western analytic philosophy).

The Vaisheshika was founded by Kanada in the 6th Century B.C., and it is atomist and pluralist in nature. The basis of the school's philosophy is that all objects in the physical universe are reducible to a finite number of atoms, and Brahman is regarded as the fundamental force that causes consciousness in these atoms. The Vaisheshika and Nyaya schools eventually merged because of their closely related metaphysical theories (although Vaisheshika only accepted perception and inference as sources of valid knowledge).

The main objective of the Purva Mimamsa is to interpret and establish the authority of the Vedas. It requires unquestionable faith in the Vedas and the regular performance of the Vedic fire-sacrifices to sustain all the activity of the universe. Although in general the Mimamsa accept the logical and philosophical teachings of the other schools, they insist that salvation can only be attained by acting in accordance with the prescriptions of the Vedas. The school later shifted its views and began to teach the doctrines of Brahman and freedom, allowing for the release or escape of the soul from its constraints through enlightened activity.

The Vedanta, or Uttara Mimamsa, school concentrates on the philosophical teachings of the Upanishads (mystic or spiritual contemplations within the Vedas), rather than the Brahmanas (instructions for ritual and sacrifice). Due to the rather cryptic and poetic nature of the Vedanta sutras, the school separated into six sub-schools, each interpreting the texts in its own way and producing its own series of sub-commentaries: Advaita (the best-known, which holds that the soul and Brahman are one and the same), Visishtadvaita (which teaches that the Supreme Being has a definite form, name - Vishnu - and attributes), Dvaita (which espouses a belief in three separate realities: Vishnu, and eternal soul and matter), Dvaitadvaita(which holds that Brahman exists independently, while soul and matter are dependent), Shuddhadvaita (which believes that Krishna is the absolute form of Brahman) and Acintya Bheda Abheda (which combines monism and dualism by stating that the soul is both distinct and non-distinct from Krishna, or God).

The main heterodox (nastika) schools, which do not accept the authority of the Vedas, include: Also known as Lokayata, Carvaka is a materialistic, sceptical and atheistic school of thought. Its founder was Carvaka, author of the Barhaspatya Sutras in the final centuries B.C., although the original texts have been lost and our understanding of them is based largely on criticism of the ideas by other schools. As early as the 5th Century, Saddanitiand Buddhaghosa connected the Lokayatas with the Vitandas (or Sophists), and the term Carvaka was first recorded in the 7th Century by the philosopher Purandara, and in the 8th Century by Kamalasila and Haribhadra. As a vital philosophical school, Carvara appears to have died out some time in the 15th Century.

Buddhism is a non-theistic system of beliefs based on the teachings of Siddhartha Gautama, an Indian prince later known as the Buddha, in the 5th Century B.C. The question of God is largely irrelevant in Buddhism, and it is mainly founded on the rejection of certain orthodox Hindu philosophical concepts (althought it does share some philosophical views with Hinduism, such as belief in karma). Buddhism advocates a Noble Eightfold Path to end suffering, and its philosophical principles are known as the Four Noble Truths (the Nature of Suffering, the Origin of Suffering, the Cessation of Suffering, and the Path Leading to the Cessation of Suffering). Buddhist philosophy deals extensively with problems in metaphysics, phenomenology, ethics and epistemology.

The central tenets of Jain philosophy were established by Mahavira in the 6th Century B.C., although Jainism as a religion is much older. A basic principle is anekantavada, the idea that reality is perceived differently from different points of view, and that no single point of view is completely true (similar to the Western philosophical doctrine of Subjectivism). According to Jainism, only Kevalis, those who have infinite knowledge, can know the true answer, and that all others would only know a part of the answer. It stresses spiritual independence and the equality of all life, with particular emphasis on non-violence, and posits self-control as vital for attaining the realization of the soul's true nature.

The Arthashastra, attributed to the Mauryan minister Chanakya in the 4th Century B.C., is one of the earliest Indian texts devoted to political philosophy, and it discusses ideas of statecraft and economic policy. During the Indian struggle for independence in the early 20th Century, Mahatma Gandhi popularized the philosophies of ahimsa (non-violence) and satyagraha (non-violent resistance), which were influenced by the teachings of the Hindu Bhagavad Gita, as well as Jesus, Tolstoy, Thoreau and Ruskin.

6. Philosophical tradition of the China

Chinese Philosophy refers to any of several schools of philosophical thought in the Chinese tradition, including Confucianism, Taoism, Legalism, Buddhism and Mohism (see below for brief introductions to these schools). It has a long history of several thousand years.

In about 500 B.C., the classic period of Chinese philosophy (known as the Contention of a Hundred Schools of Thought) flourished, and the four most influential schools (Confucianism, Taoism, Mohism and Legalism) were established. During the Qin Dynasty (also know as the Imperial Era), after the unification of China in 221 B.C., Legalism became ascendant at the expense of the Mohist and Confucianist schools, although the Han Dynasty (206 B.C. - A.D. 220) adopted Taoism and later Confucianism as official doctrine. Along with the gradual parallel introduction of Buddhism, these two schools have remained the determining forces of Chinese thought up until the 20th Century.

Neo-Confucianism (a variant of Confucianism, incorporating elements of Buddhism, Taoism and Legalism) was introduced during the Song Dynasty (A.D. 960 - 1279) and popularized during the Ming Dynasty (1368 - 1644).

During the Industrial and Modern Ages, Chinese philosophy also began to integrate concepts of Western philosophy. Sun Yat-Sen (1866 - 1925) attempted to incorporate elements of democracy, republicanism and industrialism at the beginning of the 20th century, while Mao Zedong (1893 - 1976) later added Marxism and oth.The main schools of Chinese philosophy are.

Confucianism: was developed from the teachings of the sage Confucius (551 - 479 B.C.), and collected in the Analects of Confucius. It is a system of moral, social, political, and quasi-religious thought, whose influence also spread to Korea and Japan. The major Confucian concepts include ren (humanity or humaneness), zhengming (similar to the concept of the Mandate of Heaven), zhong (loyalty), xiao (filial piety), and li (ritual). It introduced the Golden Rule (essentially, treat others as you would like to be treated), the concept of Yin and Yang (two opposing forces that are permanently in conflict with each other, leading to perpetual contradiction and change), the idea of meritocracy, and of reconciling opposites in order to arrive at some middle ground combining the best of both. Confucianism is not necessarily regarded as a religion, allowing one to be a Taoist, Christian, Muslim, Shintoist or Buddhist and still profess

Confucianist beliefs. Arguably the most famous Confucian after Confucius himself was Meng Tzu (or Mencius) (372 – 289 B.C.)

Sometimes also written Daoism, Taoism is a philosophy which later also developed into a religion. Tao literally means "path" or "way", athough it more often used as a meta-physical term that describes the flow of the universe, or the force behind the natural order. The Three Jewels of the Tao are compassion, moderation, and humility. Taoist thought focuses on wu wei ("non-action"), spontaneity, humanism, relativism, emptiness and the strength of softness (or flexibility). Nature and ancestor spirits are common in popular Taoism, although typically there is also a pantheon of gods, often headed by the Jade Emperor. The most influential Taoist text is the "Tao Te Ching" (or "Daodejing") written around the 6th Century B.C. by Lao Tzu (or Laozi), and a secondary text is the 4th Century B.C. "Zhuangzi", named after its author. The Yin and Yang symbol is important in Taoist symbology (as in Confucianism), as are the Eight Trigrams, and a zigzag with seven stars which represents the Big Dipper star constellation. Legalism is a pragmatic political philosophy, whose main motto is "set clear strict laws, or deliver harsh punishment", and its essential principle is one of jurisprudence. According to Legalism, a ruler should govern his subjects accordoing to Fa (law or principle), Shu (method, tactic, art, or statecraft) and Shi (legitimacy, power, or charisma). Under Li Si in the 3rd century B.C., a form of Legalism essentially became a totalitarian ideology in China, which in part led to its subsequent decline.

Buddhism is a religion, a practical philosophy and arguably a psychology, focusing on the teachings of Buddha (Siddhartha Gautama), who lived in India from the mid-6th to the early 5th Century B.C. It was introduced to China from India, probably some time during the 1st Century B.C. Chinese tradition focuses on ethics rather than metaphysics, and it developed several schools distinct from the originating Indian schools, and in the process integrated the ideas of Confucianism, Taoism and other indigenous philosophical systems into itself. The most prominent Chinese Buddhist schools are Sanlun, Tiantai, Huayan and Chán (known as Zen in Japan).

Mohism was founded by Mozi (c. 470 - 390 B.C.) It promotes universal love with the aim of mutual benefit such that everyone must love each other equally and impartially to avoid conflict and war. Mozi was strongly against Confucian ritual, instead emphasizing pragmatic survival through farming, fortification and statecraft. In some ways, his philosophy parallels Western utilitarianism. Although popular during the latter part of the Zhou Dynasty, many Mohist texts were destroyed during the succeeding Qin Dynasty, and it was finally supplanted completely by Confucianism during the Han Dynasty.

7. Ancient philosophy

Thales of Miletus, regarded by Aristotle as the first philosopher, held that all things arise from water. He gave a naturalistic explanation of the cosmos and

supported it with reasons. According to tradition, Thales was able to predict an eclipse and taught the Egyptians how to measure the height of the pyramids.

Thales inspired the Milesian school of philosophy and was followed by Anaximander, who argued that the substratum or archecould not be water or any of the classical elements but was instead something "unlimited" or "indefinite" (in Greek, the apeiron). He began from the observation that the world seems to consist of opposites (e.g., hot and cold), yet a thing can become its opposite .Therefore, they cannot truly be opposites but rather must both be manifestations of some underlying unity that is neither. This underlying unity (substratum, arche) could not be any of the classical elements, since they were one extreme or another. For example, water is wet, the opposite of dry, while fire is dry. Anaximenes in turn held that the arche was air, although John Burnet argues that by this he meant that it was a transparent mist, the aether.

Xenophanes was born in Ionia, where the Milesian school was at its most powerful, and may have picked up some of the Milesians' cosmological theories as a result W]hat is known is that he argued that each of the phenomena had a natural rather than divine explanation in a manner reminiscent of Anaximander's theories and that there was only one god, the world as a whole, and that he ridiculed the anthropomorphism of the Greek religion by claiming that cattle would claim that the gods looked like cattle, horses like horses, and lions like lions, just as the Ethiopians claimed that the gods were snubnosed and black and the Thracians claimed they were pale and red-haired.

Burnet says that Xenophanes was not, however, a scientific man, with many of his "naturalistic" explanations having no further support than that they render the Homeric gods superfluous or foolish. He has been claimed as an influence on Eleatic philosophy, although that is disputed, and a precursor to Epicurus, a representative of a total break between science and religion.

Pythagoras lived at roughly the same time that Xenophanes did and, in contrast to the latter, the school that he founded sought to reconcile religious belief and reason. Little is known about his life with any reliability, however, and no writings of his survive, so it is possible that he was simply a mystic whose successors introduced rationalism into Pythagoreanism, that he was simply a rationalist whose successors are responsible for the mysticism in Pythagoreanism, or that he was actually the author of the doctrine; there is no way to know for certain. Pythagoras is said to have been a disciple of Anaximandar and to have imbibed the cosmological concerns of the Ionians, including the idea that the cosmos is constructed of spheres, the importance of the infinite, and that air or aether is the archeof everything. Pythagoreanism also incorporated ascetic ideals, emphasizing purgation, metempsychosis, and consequently a respect for all animal life; much was made of the correspondence between mathematics and the cosmos in a musical harmony.

Heraclitus must have lived after Xenophanes and Pythagoras, as he condemns them along with Homer as proving that much learning cannot teach a man to think; since Parmenides refers to him in the past tense, this would place

him in the 5th century BCE. Contrary to the Milesian school, who would have one stable element at the root of all, Heraclitus taught that "everything flows" or "everything is in flux," the closest element to this flux being fire; he also extended the teaching that seeming opposites in fact are manifestations of a common substrate to good and evil itself.

Parmenides of Elea cast his philosophy against those who held "it is and is not the same, and all things travel in opposite directions,"—presumably referring to Heraclitus and those who followed him. Whereas the doctrines of the Milesian school, in suggesting that the substratum could appear in a variety of different guises, implied that everything that exists is corpuscular,

Parmenides argued that the first principle of being was One, indivisible, and unchanging[1] Being, he argued, by definition implies eternality, while only that which is can be thought; a thing which is, moreover, cannot be more or less, and so the rarefaction and condensation of the Milesians is impossible regarding Being; lastly, as movement requires that something exist apart from the thing moving (viz. the space into which it moves), the One or Being cannot move, since this would require that "space" both exist and not exist. While this doctrine is at odds with ordinary sensory experience, where things do indeed change and move, the Eleatic school followed Parmenides in denying that sense phenomena revealed the world as it actually was; instead, the only thing with Being was thought, or the question of whether something exists or not is one of whether it can be thought.

In support of this, Parmenides' pupil Zeno of Elea attempted to prove that the concept of motion was absurd and as such motion did not exist. He also attacked the subsequent development of pluralism, arguing that it was incompatible with being. His arguments are known as Zeno's paradoxes.

The power of Parmenides' logic was such that some subsequent philosophers abandoned the monism of the Milesians, Xenophanes, Heraclitus, and Parmenides, where one thing was the arche, and adopted pluralism, such as Empedocles and Anaxagoras. There were, they said, multiple elements which were not reducible to one another and these were set in motion by love and strife (as in Empedocles) or by Mind (as in Anaxagoras).

Agreeing with Parmenides that there is no coming into being or passing away, genesis or decay, they said that things appear to come into being and pass away because the elements out of which they are composed assemble or disassemble while themselves being unchanging. Leucippus also proposed an ontological pluralism with a cosmogony based on two main elements: the vacuum and atoms. These, by means of their inherent movement, are crossing the void and creating the real material bodies. His theories were not well known by the time of Plato, however, and they were ultimately incorporated into the work of his student, Democritus.

Sophistry arose from the juxtaposition of physis (nature) and nomos (law). John Burnet posits its origin in the scientific progress of the previous centuries which suggested that Being was radically different from what was experienced

by the senses and, if comprehensible at all, was not comprehensible in terms of order; the world in which men lived, on the other hand, was one of law and order, albeit of humankind's own making. At the same time, nature was constant, while what was by law differed from one place to another and could be changed.

The first man to call himself a sophist, according to Plato, was Protagoras, whom he presents as teaching that all virtue is conventional. It was Protagoras who claimed that "man is the measure of all things, of the things that are, that they are, and of the things that are not, that they are not," which Plato interprets as a radical perspectivism, where some things seem to be one way for one person (and so actually are that way) and another way for another person (and so actually are that way as well); the conclusion being that one cannot look to nature for guidance regarding how to live one's life.

Protagoras and subsequent sophists tended to teach rhetoric as their primary vocation. Prodicus, Gorgias, Hippias, and Thrasymachus appear in various dialogues, sometimes explicitly teaching that while nature provides no ethical guidance, the guidance that the laws provide is worthless, or that nature favors those who act against the laws.

Socrates, born in Athens in the 5th century BCE, marks a watershed in ancient Greek philosophy. Athens was a center of learning, with sophists and philosophers traveling from across Greece to teach rhetoric, astronomy, cosmology, geometry, and the like. The great statesman Pericles was closely associated with this new learning and a friend of Anaxagoras, however, and his political opponents struck at him by taking advantage of a conservative reaction against the philosophers; it became a crime to investigate the things above the heavens or below the earth, subjects considered impious. Anaxagoras is said to have been charged and to have fled into exile when Socrates was about twenty years of age. There is a story that Protagoras, too, was forced to flee and that the Athenians burned his books. Socrates, however, is the only subject recorded as charged under this law, convicted, and sentenced to death in 399 BCE (see Trial of Socrates).

In the version of his defense speech presented by Plato, he claims that it is the envy he arouses on account of his being a philosopher that will convict him. While philosophy was an established pursuit prior to Socrates, Cicero credits him as "the first who brought philosophy down from the heavens, placed it in cities, introduced it into families, and obliged it to examine into life and morals, and good and evil." By this account he would be considered the founder of political philosophy. The reasons for this turn toward political and ethical subjects remain the object of much study.

The fact that many conversations involving Socrates (as recounted by Plato and Xenophon) end without having reached a firm conclusion, or aporetically, has stimulated debate over the meaning of the Socratic methods. Socrates is said to have pursued this probing question-and-answer style of examination on a number of topics, usually attempting to arrive at a defensible and attractive definition of a virtue.

While Socrates' recorded conversations rarely provide a definite answer to the question under examination, several maxims or paradoxes for which he has become known recur. Socrates taught that no one desires what is bad, and so if anyone does something that truly is bad, it must be unwillingly or out of ignorance; consequently, all virtue is knowledge. He frequently remarks on his own ignorance (claiming that he does not know what courage is, for example). Plato presents him as distinguishing himself from the common run of mankind by the fact that, while they know nothing noble and good, they do not know that they do not know, whereas Socrates knows and acknowledges that he knows nothing noble and good.

Plato was an Athenian of the generation after Socrates. Ancient tradition ascribes thirty-six dialogues and thirteen letters to him, although of these only twenty-four of the dialogues are now universally recognized as authentic; most modern scholars believe that at least twenty-eight dialogues and two of the letters were in fact written by Plato, although all of the thirty-six dialogues have some defenders. A further nine dialogues are ascribed to Plato but were considered spurious even in antiquity.

Plato's dialogues feature Socrates, although not always as the leader of the conversation. (One dialogue, the Laws, instead contains an "Athenian Stranger.") Along with Xenophon, Plato is the primary source of information about Socrates' life and beliefs and it is not always easy to distinguish between the two. While the Socrates presented in the dialogues is often taken to be Plato's mouthpiece, Socrates' reputation for irony, his caginess regarding his own opinions in the dialogues, and his occasional absence from or minor role in the conversation serve to conceal Plato's doctrines. Much of what is said about his doctrines is derived from what Aristotle reports about them.

The political doctrine ascribed to Plato is derived from the Republic, the Laws, and the Statesman. The first of these contains the suggestion that there will not be justice in cities unless they are ruled by philosopher kings; those responsible for enforcing the laws are compelled to hold their women, children, and property in common; and the individual is taught to pursue the common good through noble lies; the Republic says that such a city is likely impossible, however, generally assuming that philosophers would refuse to rule and the people would refuse to compel them to do so.

Whereas the Republic is premised on a distinction between the sort of knowledge possessed by the philosopher and that possessed by the king or political man, Socrates explores only the character of the philosopher; in the Statesman, on the other hand, a participant referred to as the Eleatic Stranger discusses the sort of knowledge possessed by the political man, while Socrates listens quietly. Although rule by a wise man would be preferable to rule by law, the wise cannot help but be judged by the unwise, and so in practice, rule by law is deemed necessary.

Both the Republic and the Statesman reveal the limitations of politics, raising the question of what political order would be best given those constraints;

that question is addressed in the Laws, a dialogue that does not take place in Athens and from which Socrates is absent. The character of the society described there is eminently conservative, a corrected or liberalized timocracy on the Spartan or Cretan model or that of pre-democratic Athens.

Plato's dialogues also have metaphysical themes, the most famous of which is his theory of forms. It holds that non-material abstract (but substantial) forms (or ideas), and not the material world of change known to us through our physical senses, possess the highest and most fundamental kind of reality.

Aristotle moved to Athens from his native Stageira in 367 BCE and began to study philosophy (perhaps even rhetoric, under Isocrates), eventually enrolling at Plato's Academy. He left Athens approximately twenty years later to study botany and zoology, became a tutor of Alexander the Great, and ultimately returned to Athens a decade later to establish his own school: the Lyceum. At least twenty-nine of his treatises have survived, known as the corpus Aristotelicum, and address a variety of subjects including logic, physics, optics, metaphysics, ethics, rhetoric, politics, poetry, botany, and zoology.

Aristotle is often portrayed as disagreeing with his teacher Plato. He criticizes the regimes described in Plato's Republic and Laws, and refers to the theory of forms as "empty words and poetic metaphors."He is generally presented as giving greater weight to empirical observation and practical concerns.

Aristotle's fame was not great during the Hellenistic period, when Stoic logic was in vogue, but later peripatetic commentators popularized his work, which eventually contributed heavily to Islamic, Jewish, and medieval Christian philosophy. His influence was such that Avicenna referred to him simply as "the Master"; Maimonides, Alfarabi, Averroes, and Aquinas as "the Philosopher."

During the Hellenistic and Roman periods, many different schools of thought developed in the Hellenistic world and then the Greco-Roman world. There were Greeks, Romans, Egyptians, Syrians and Arabs who contributed to the development of Hellenistic philosophy. Elements of Persian philosophy and Indian philosophy also had an influence. The most notable schools of Hellenistic philosophy were:

- Neoplatonism: Plotinus (Egyptian), Ammonius Saccas, Porphyry (Syrian), Zethos (Arab), Iamblichus (Syrian), Proclus
- Academic Skepticism: Arcesilaus, Carneades, Cicero (Roman)
- Pyrrhonian Skepticism: Pyrrho, Sextus Empiricus
- Cynicism: Antisthenes, Diogenes of Sinope, Crates of Thebes (taught Zeno of Citium, founder of Stoicism)
- Stoicism: Zeno of Citium, Cleanthes, Chrysippus, Crates of Mallus (brought Stoicism to Rome c. 170 BCE), Panaetius, Posidonius, Seneca (Roman), Epictetus (Greek/Roman), Marcus Aurelius (Roman)
- Epicureanism: Epicurus (Greek) and Lucretius (Roman)
- Eclecticism: Cicero (Roman)

8. Philosophy of the Middle age

Early Christian thought, in particular in the patristic period, tends to be intuitional and mystical, and is less reliant on reason and logical argument. It also places more emphasis on the sometimes-mystical doctrines of Plato, and less upon the systematic thinking of Aristotle. Much of the work of Aristotle was unknown in the West in this period. Scholars relied on translations by Boethius into Latin of Aristotle's Categories, the logical work On Interpretation, and his Latin translation of Porphyry's Isagoge, a commentary on Aristotle's Categories.

Two Roman philosophers had a great influence on the development of medieval philosophy: Augustine and Boethius. Augustine is regarded as the greatest of the Church Fathers. He is primarily a theologian and a devotional writer, but much of his writing is philosophical. His themes are truth, God, the human soul, the meaning of history, the state, sin, and salvation. For over a thousand years, there was hardly a Latin work of theology or philosophy that did not quote his writing, or invoke his authority. Some of his writing had an influence on the development of early modern philosophy.

Anicius Manlius Severinus Boethius (480 c.–524) was a Christian philosopher born in Rome to an ancient and influential family. He became consul in 510 in the kingdom of the Ostrogoths. His influence on the early medieval period was also marked (so much so that it is sometimes called the Boethian period). He intended to translate all the works of Aristotle and Plato from the original Greek into Latin, and translated many of Aristotle’s logical works, such as On Interpretation, and the Categories. He wrote commentaries on these works, and on the Isagoge by Porphyry (a commentary on the Categories). This introduced the problem of universals to the medieval world.

The first significant renewal of learning in the West came when Charlemagne, advised by Peter of Pisa and Alcuin of York, attracted the scholars of England and Ireland, and by imperial decree in 787 AD established schools in every abbey in his empire. These schools, from which the name Scholasticism is derived, became centres of medieval learning.

Johannes Scotus Eriugena (c. 815 - 877), successor of Alcuin of York as head of the Palace School, was an Irish theologian and Neoplatonic philosopher. He is notable for having translated and made commentaries upon the work of Pseudo-Dionysius, initially thought to be from the apostolic age. Around this period several doctrinal controversies emerged, such as the question of whether God had predestined some for salvation and some for damnation. Eriugena was called in to settle this dispute. At the same time, Paschasius Radbertus raised an important question about the real presence of Christ at the Eucharist. Is the host the same as Christ's historical body? How can it be present at many places and many times? Radbertus argued that Christ's real body is present, veiled by the appearance of bread and wine, and is present at all places and all times, by means of God's incomprehensible power.

This period also witnessed a revival of scholarship. At Fleury, Theodulphus, bishop of Orléans, established a school for young noblemen recommended there by Charlemagne. By the mid-ninth century, its library was one of the most comprehensive ever assembled in the West, and scholars such as Lupus of Ferrières (d. 862) traveled there to consult its texts. Later, under St. Abbo of Fleury (abbot 988-1004), head of the reformed abbey school, Fleury enjoyed a second golden age. Remigius of Auxerre, at the beginning of the tenth century, produced glosses or commentaries on the classical texts of Donatus, Priscian, Boethius, and Martianus Capella.

The Carolingian period was followed by a small dark age that was followed by a lasting revival of learning in the eleventh century, which owed much to the rediscovery of Greek thought from Arabic translations and Muslim contributions such as Avicenna's on the soul.

The period from the middle of the eleventh century to the middle of the fourteenth century is known as the 'High medieval' or 'scholastic' period. It is generally agreed to begin with Saint Anselm of Canterbury (1033–1109) an Italian philosopher, theologian, and church official who is famous as the originator of the ontological argument for the existence of God.

The 13th and early 14th centuries are generally regarded as the high period of scholasticism. The early 13th century witnessed the culmination of the recovery of Greek philosophy. Schools of translation grew up in Italy and Sicily, and eventually in the rest of Europe. Scholars such as Adelard of Bath travelled to Sicily and the Arab world, translating works on astronomy and mathematics, including the first complete translation of Euclid’s Elements. Powerful Norman kings gathered men of knowledge from Italy and other areas into their courts as a sign of their prestige. William of Moerbeke's translations and editions of Greek philosophical texts in the middle half of the thirteenth century helped in forming a clearer picture of Greek philosophy, and in particular of Aristotle, than was given by the Arabic versions they had previously relied on, which had distorted or obscured the relation between Platonic and Aristotelian systems of philosophy. His work formed the basis of the major commentaries that followed.

The universities developed in the large cities of Europe during this period, and rival clerical orders within the Church began to battle for political and intellectual control over these centers of educational life. The two main orders founded in this period were the Franciscans and the Dominicans. The Franciscans were founded by Francis of Assisi in 1209. Their leader in the middle of the century was Bonaventure, a traditionalist who defended the theology of Augustine and the philosophy of Plato, incorporating only a little of Aristotle in with the more neoplatonist elements. Following Anselm, Bonaventure supposed that reason can discover truth only when philosophy is illuminated by religious faith. Other important Franciscan writers were Duns Scotus, Peter Auriol, and William of Ockham.

By contrast, the Dominican order, founded by St Dominic in 1215 placed more emphasis on the use of reason and made extensive use of the new Aristote-

lian sources derived from the East, and Moorish Spain. The great representatives of Dominican thinking in this period were Albertus Magnus and (especially) Thomas Aquinas, whose artful synthesis of Greek rationalism and Christian doctrine eventually came to define Catholic philosophy. Aquinas placed more emphasis on reason and argumentation, and was one of the first to use the new translation of Aristotle's metaphysical and epistemological writing. This was a significant departure from the Neoplatonic and Augustinian thinking that had dominated much of early Scholasticism. Aquinas showed how it was possible to incorporate much of the philosophy of Aristotle without falling into the "errors" of the Commentator Averroes.

9. Philosophy of Renaissance

The Renaissance, that is, the period that extends roughly from the middle of the fourteenth century to the beginning of the seventeen century, was a time of intense, all-encompassing, and, in many ways, distinctive philosophical activity. A fundamental assumption of the Renaissance movement was that the remains of classical antiquity constituted an invaluable source of excellence to which debased and decadent modern times could turn in order to repair the damage brought about since the fall of the Roman Empire. It was often assumed that God had given a single unified truth to humanity and that the works of ancient philosophers had preserved part of this original deposit of divine wisdom.

This idea not only laid the foundation for a scholarly culture that was centered on ancient texts and their interpretation, but also fostered an approach to textual interpretation that strove to harmonize and reconcile divergent philosophical accounts. Stimulated by newly available texts, one of the most important hallmarks of Renaissance philosophy is the increased interest in primary sources of Greek and Roman thought, which were previously unknown or little read. The renewed study of Neoplatonism, Stoicism, Epicureanism, and Skepticism eroded faith in the universal truth of Aristotelian philosophy and widened the philosophical horizon, providing a rich seedbed from which modern science and modern philosophy gradually emerged.

Improved access to a great deal of previously unknown literature from ancient Greece and Rome was an important aspect of Renaissance philosophy. The renewed study of Aristotle, however, was not so much because of the rediscovery of unknown texts, but because of a renewed interest in texts long translated into Latin but little studied, such as the Poetics, and especially because of novel approaches to well-known texts. From the early fifteenth century onwards, humanists devoted considerable time and energy to making Aristotelian texts clearer and more precise. In order to rediscover the meaning of Aristotle’s thought, they updated the Scholastic translations of his works, read them in the original Greek, and analyzed them with philological techniques.

The availability of these new interpretative tools had a great impact on the philosophical debate. Moreover, in the four decades after 1490, the Aristotelian

interpretations of Alexander of Aphrodisias, Themistius, Ammonius, Philoponus, Simplicius, and other Greek commentators were added to the views of Arabic and medieval commentators, stimulating new solutions to Aristotelian problems and leading to a wide variety of interpretations of Aristotle in the Renaissance period.

The most powerful tradition, at least in Italy, was that which took Averroes's works as the best key for determining the true mind of Aristotle. Averroes's name was primarily associated with the doctrine of the unity of the intellect. Among the defenders of his theory that there is only one intellect for all human beings, we find Paul of Venice (d. 1429), who is regarded as the founding figure of Renaissance Averroism, and Alessandro Achillini (1463–1512), as well as the Jewish philosopher Elijah del Medigo (1458–1493).

Two other Renaissance Aristotelians who expended much of their philosophical energies on explicating the texts of Averroes are Nicoletto Vernia (d. 1499) and Agostino Nifo (c. 1469–1538). They are noteworthy characters in the Renaissance controversy about the immortality of the soul mainly because of the remarkable shift that can be discerned in their thought. Initially they were defenders of Averroes's theory of the unity of the intellect, but from loyal followers of Averroes as a guide to Aristotle, they became careful students of the Greek commentators, and in their late thought both Vernia and Nifo attacked Averroes as a misleading interpreter of Aristotle, believing that personal immortality could be philosophically demonstrated.

Many Renaissance Aristotelians read Aristotle for scientific or secular reasons, with no direct interest in religious or theological questions. Pietro Pomponazzi (1462–1525), one of the most important and influential Aristotelian philosophers of the Renaissance, developed his views entirely within the framework of natural philosophy. In De immortalitate animae (Treatise on the Immortality of the Soul, 1516), arguing from the Aristotelian text, Pomponazzi maintained that proof of the intellect's ability to survive the death of the body must be found in an activity of the intellect that functions without any dependence on the body. In his view, no such activity can be found because the highest activity of the intellect, the attainment of universals in cognition, is always mediated by sense impression. Therefore, based solely on philosophical premises and Aristotelian principles, the conclusion is that the entire soul dies with the body.

Pomponazzi's treatise aroused violent opposition and led to a spate of books being written against him. In 1520, he completed De naturalium effectuum causis sive de incantationibus (On the Causes of Natural Effects or On Incantations), whose main target was the popular belief that miracles are produced by angels and demons. He excluded supernatural explanations from the domain of nature by establishing that it is possible to explain those extraordinary events commonly regarded as miracles in terms of a concatenation of natural causes. Another substantial work is De fato, de libero arbitrio et de praedestinatione (Five Books on Fate, Free Will and Predestination), which is regarded as

one of the most important works on the problems of freedom and determinism in the Renaissance. Pomponazzi considers whether the human will can be free, and he considers the conflicting points of view of philosophical determinism and Christian theology.

Another philosopher who tried to keep Aristotle's authority independent of theology and subject to rational criticism is Jacopo Zabarella (1533–1589), who produced an extensive body of work on the nature of logic and scientific method. His goal was the retrieval of the genuine Aristotelian concepts of science and scientific method, which he understood as the indisputable demonstration of the nature and constitutive principles of natural beings. He developed the method of regressus,a combination of the deductive procedures of composition and the inductive procedures of resolution that came to be regarded as the proper method for obtaining knowledge in the theoretical sciences. Among his main works are the collected logical works Opera logica (1578), which are mainly devoted to the theory of demonstration, and his major work on natural philosophy, De rebus naturalibus (1590). Zabarella's work was instrumental in a renewal of natural philosophy, methodology, and theory of knowledge.

There were also forms of Aristotelian philosophy with strong confessional ties, such as the branch of Scholasticism that developed on the Iberian Peninsula during the sixteenth century. This current of Hispanic Scholastic philosophy began with the Dominican School founded in Salamanca by Francisco de Vitoria (1492–1546) and continued with the philosophy of the newly founded Society of Jesus, among whose defining authorities were Pedro da Fonseca (1528–1599), Francisco de Toledo (1533–1596), and Francisco Suárez (1548–1617). Their most important writings were in the areas of metaphysics and philosophy of law.

They played a key role in the elaboration of the law of nations (jus gentium) and the theory of just war, a debate that began with Vitoria's Relectio de iure belli (A Re-lecture of the Right of War, 1539) and continued with the writings of Domingo de Soto (1494–1560), Suárez, and many others. In the field of metaphysics, the most important work is Suárez' Disputationes metaphysicae (Metaphysical Disputations, 1597), a systematic presentation of philosophy—against the background of Christian principles—that set the standard for philosophical and theological teaching for almost two centuries.

The humanist movement did not eliminate older approaches to philosophy, but contributed to change them in important ways, providing new information and new methods to the field. Humanists called for a radical change of philosophy and uncovered older texts that multiplied and hardened current philosophical discord. Some of the most salient features of humanist reform are the accurate study of texts in the original languages, the preference for ancient authors and commentators over medieval ones, and the avoidance of technical language in the interest of moral suasion and accessibility. Humanists stressed moral philosophy as the branch of philosophical studies that best met their needs. They addressed a general audience in an accessible manner and aimed to bring about an increase in public and private virtue. Regarding philosophy as a discipline al-

lied to history, rhetoric, and philology, they expressed little interest in metaphysical or epistemological questions. Logic was subordinated to rhetoric and reshaped to serve the purposes of persuasion.

One of the seminal figures of the humanist movement was Francesco Petrarca (1304–1374). On His Own Ignorance and That of Many Others, he elaborated what was to become the standard critique of Scholastic philosophy. One of his main objections to Scholastic Aristotelianism is that it is useless and ineffective in achieving the good life. Moreover, to cling to a single authority when all authorities are unreliable is simply foolish. He especially attacked, as opponents of Christianity, Aristotle's commentator Averroes and contemporary Aristotelians that agreed with him. Petrarca returned to a conception of philosophy rooted in the classical tradition, and from his time onward, when professional humanists took interest in philosophy, they nearly always concerned themselves with ethical questions. Among those he influenced were Coluccio Salutati (1331–1406), Leonardo Bruni (c.1370–1444) and Poggio Bracciolini (1380–1459), all of whom promoted humanistic learning in distinctive ways.

One of the most original and important humanists of the Quattrocento was Lorenzo Valla (1406–1457). His most influential writing was Elegantiae linguae Latinae (Elegances of the Latin Language), a handbook of Latin language and style. He is also famous for having demonstrated, on the basis of linguistic and historical evidence, that the so-called Donation of Constantine, on which the secular rule of the papacy was based, was an early medieval forgery. His main philosophical work is Reploughing of Dialectic and Philosophy, an attack on major tenets of Aristotelian philosophy. The first book deals with the criticism of fundamental notions of metaphysics, ethics, and natural philosophy, while the remaining two books are devoted to dialectics.

Throughout the fifteenth and early sixteenth century, humanists were unanimous in their condemnation of university education and their contempt for Scholastic logic. Humanists such as Valla and Rudolph Agricola (1443–1485), whose main work is De inventione dialectica (On Dialectical Invention, 1479), set about to replace the Scholastic curriculum, based on syllogism and disputation, with a treatment of logic oriented toward the use of persuasion and topics, a technique of verbal association aiming at the invention and organization of material for arguments. According to Valla and Agricola, language is primarily a vehicle for communication and debate, and consequently arguments should be evaluated in terms of how effective and useful they are rather than in terms of formal validity. Accordingly, they subsumed the study of the Aristotelian theory of inference under a broader range of forms of argumentation. This approach was taken up and developed in various directions by later humanists, such as Mario Nizolio (1488–1567), Juan Luis Vives (1493–1540), and Petrus Ramus (1515–1572).

Vives was a Spanish-born humanist who spent the greater part of his life in the Low Countries. He aspired to replace the Scholastic tradition in all fields of learning with a humanist curriculum inspired by education in the classics. In

1519, he published In Pseudodialecticos (Against the Pseudodialecticians), a satirical diatribe against Scholastic logic in which he voices his opposition on several counts. A detailed criticism can be found in De disciplinis (On the Disciplines, 1531), an encyclopedic work divided into three parts: De causis corruptarum artium (On the Causes of the Corruption of the Arts), a collection of seven books devoted to a thorough critique of the foundations of contemporary education; De tradendis disciplinis (On Handing Down the Disciplines), five books where Vives's educational reform is outlined; and De artibus (On the Arts), five shorter treatises that deal mainly with logic and metaphysics. Another area in which Vives enjoyed considerable success was psychology. His reflections on the human soul are mainly concentrated in De anima et vita (On the Soul and Life, 1538), a study of the soul and its interaction with the body, which also contains a penetrating analysis of the emotions.

Ramus was another humanist who criticized the shortcomings of contemporary teaching and advocated a humanist reform of the arts curriculum. His textbooks were the best sellers of their day and were very influential in Protestant universities. In 1543, he published Dialecticae partitiones (The Structure of Dialectic), which in its second edition was called Dialecticae institutiones (Training in Dialectic), and Aristotelicae animadversions (Remarks on Aristotle). These works gained him a reputation as a virulent opponent of Aristotelian philosophy. He considered his own dialectics, consisting of invention and judgment, to be applicable to all areas of knowledge, and he emphasised the need for learning to be comprehensible and useful, with a particular stress on the practical aspects of mathematics. His own reformed system of logic reached its definitive form with the publication of the third edition of Dialectique (1555).

Humanism also supported Christian reform. The most important Christian humanist was the Dutch scholar Desiderius Erasmus. He was hostile to Scholasticism, which he did not consider a proper basis for Christian life, and put his erudition at the service of religion by promoting learned piety (docta pietas). In 1503, he published Enchiridion militis christiani (Handbook of the Christian Soldier), a guide to the Christian life addressed to laymen in need of spiritual guidance, in which he developed the concept of a philosophia Christi.

His most famous work is Moriae encomium (The Praise of Folly), a satirical monologue first published in 1511 that touches upon a variety of social, political, intellectual, and religious issues. In 1524, he published De libero arbitrio (On Free Will), an open attack a one central doctrine of Martin Luther's theology: that the human will is enslaved by sin. Erasmus's analysis hinges on the interpretation of relevant biblical and patristic passages and reaches the conclusion that the human will is extremely weak, but able, with the help of divine grace, to choose the path of salvation.

Humanism also had an impact of overwhelming importance on the development of political thought. With Institutio principis christiani (The Education of a Christian Prince, 1516), Erasmus contributed to the popular genre of humanist advice books for princes. These manuals dealt with the proper ends of

government and how best to attain them. Among humanists of the fourteenth century, the most usual proposal was that a strong monarchy should be the best form of government. Petrarca, in his account of princely government that was written in 1373 and took the form of a letter to Francesco da Carrara, argued that cities ought to be governed by princes who accept their office reluctantly and who pursue glory through virtuous actions. His views were repeated in quite a few of the numerous "mirror for princes" (speculum principis) composed during the course of the fifteenth century, such as Giovanni Pontano's De principe (On the Prince, 1468) and Bartolomeo Sacchi's De principe (On the Prince, 1471).

Several authors exploited the tensions within the genre of "mirror for princes" in order to defend popular regimes. In Laudatio florentinae Urbis (Panegyric of the City of Florence), Bruni maintained that justice can only be assured by a republican constitution. In his view, cities must be governed according to justice if they are to become glorious, and justice is impossible without liberty.

The most important text to challenge the assumptions of princely humanism, however, was The Prince, written by the Florentine Niccolò Machiavelli (1469–1527) in 1513, but not published until 1532. A fundamental belief among the humanists was that a ruler needs to cultivate a number of qualities, such as justice and other moral values, in order to acquire honour, glory, and fame. Machiavelli deviated from this view claiming that justice has no decisive place in politics. It is the ruler's prerogative to decide when to dispense violence and practice deception, no matter how wicked or immoral, as long as the peace of the city is maintained and his share of glory maximized. Machiavelli did not hold that princely regimes were superior to all others. In his less famous, but equally influential, Discorsi sopra la prima deca di Tito Livio (Discourses on the First Ten Books of Titus Livy, 1531), he offers a defense of popular liberty and republican government that takes the ancient republic of Rome as its model.

During the Renaissance, it gradually became possible to take a broader view of philosophy than the traditional Peripatetic framework permitted. No ancient revival had more impact on the history of philosophy than the recovery of Platonism. The rich doctrinal content and formal elegance of Platonism made it a plausible competitor of the Peripatetic tradition. Renaissance Platonism was a product of humanism and marked a sharper break with medieval philosophy. Many Christians found Platonic philosophy safer and more attractive than Aristotelianism. The Neoplatonic conception of philosophy as a way toward union with God supplied many Renaissance Platonists with some of their richest inspiration. The Platonic dialogues were not seen as profane texts to be understood literally, but as sacred mysteries to be deciphered.

Platonism was brought to Italy by the Byzantine scholar George Gemistos Plethon (c.1360–1454), who, during the Council of Florence in 1439, gave a series of lectures that he later reshaped as De differentiis Aristotelis et Platonis (The Differences between Aristotle and Plato). This work, which compared the doctrines of the two philosophers to Aristotle's great disadvantage, initiated a controversy regarding the relative superiority of Plato and Aristotle. In the

treatise In calumniatorem Platonis (Against the Calumniator of Plato), Cardinal Bessarion (1403–1472) defended Plethon against the charge levelled against his philosophy by the Aristotelian George of Trebizond (1396–1472), who in Comparatio philosophorum Aristotelis et Platonis (A Comparison of the Philosophers Aristotle and Plato) had maintained that Platonism was unchristian and actually a new religion.

The most important Renaissance Platonist was Marsilio Ficino (1433–1499), who translated Plato's works into Latin and wrote commentaries on several of them. He also translated and commented on Plotinus's Enneads and translated treatises and commentaries by Porphyry, Iamblichus, Proclus, Synesius, and other Neoplatonists. He considered Plato as part of a long tradition of ancient theology (prisca theologia) that was inaugurated by Hermes and Zoroaster, culminated with Plato, and continued with Plotinus and the other Neoplatonists. Like the ancient Neoplatonists, Ficino assimilated Aristotelian physics and metaphysics and adapted them to Platonic purposes. In his main philosophical treatise, Theologia Platonica de immortalitate animorum (Platonic Theology on the Immortality of Souls, 1482), he put forward his synthesis of Platonism and Christianity as a new theology and metaphysics, which, unlike that of many Scholastics, was explicitly opposed to Averroist secularism. Another work that became very popular was De vita libri tres (Three Books on Life, 1489) by Ficino; it deals with the health of professional scholars and presents a philosophical theory of natural magic.

One of Ficino's most distinguished associates was Giovanni Pico della Mirandola (1463–1494). He is best known as the author of the celebrated Oratio de hominis dignitate (Oration on the Dignity of Man), which is often regarded as the manifesto of the new Renaissance thinking, but he also wrote several other prominent works. They include Disputationes adversus astrologiam divinatricem (Disputations against Divinatory Astrology), an influential diatribe against astrology; De ente et uno (On Being and the One), a short treatise attempting to reconcile Platonic and Aristotelian metaphysical views; as well as Heptaplus (Seven Days of Creation), a mystical interpretation of the Genesis creation myth. He was not a devout Neoplatonist like Ficino, but rather an Aristotelian by training and in many ways an eclectic by conviction. He wanted to combine Greek, Hebrew, Muslim, and Christian thought into a great synthesis, which he spelled out in nine hundred theses published as Conclusiones in 1486. He planned to defend them publicly in Rome, but three were found heretical and ten others suspect. He defended them in Apologia which provoked the condemnation of the whole work by Pope Innocent VIII. Pico's consistent aim in his writings was to exalt the powers of human nature. To this end he defended the use of magic, which he described as the noblest part of natural science, and Kabbalah, a Jewish form of mysticism that was probably of Neoplatonic origin.

Platonic themes were also central to the thought of Nicholas of Cusa (1401–1464), who linked his philosophical activity to the Neoplatonic tradition and authors such as Proclus and Pseudo-Dionysius. The main problem that runs

through his works is how humans, as finite created beings, can think about the infinite and transcendent God. His best-known work is De docta ignorantia(On Learned Ignorance, 1440), which gives expression to his view that the human mind needs to realize its own necessary ignorance of what God is like, an ignorance that results from the ontological and cognitive disproportion between God and the finite human knower.

Correlated to the doctrine of learned ignorance is that of the coincidence of opposites in God. All things coincide in God in the sense that God, as undifferentiated being, is beyond all opposition. Two other works that are closely connected to De docta ignorantia are De coniecturis (On Conjectures), in which he denies the possibility of exact knowledge, maintaining that all human knowledge is conjectural, and Apologia docta ignorantiae (A Defense of Learned Ignorance, 1449). In the latter, he makes clear that the doctrine of learned ignorance is not intended to deny knowledge of the existence of God, but only to deny all knowledge of God's nature.

One of the most serious obstacles to the reception and adoption of Platonism in the early fifteenth century was the theory of Platonic love. Many scholars were simply unable to accept Plato's explicit treatment of homosexuality. Yet by the middle of the sixteenth century this doctrine had become one of the most popular elements of Platonic philosophy. The transformation of Platonic love from an immoral and offensive liability into a valuable asset represents an important episode in the history of Plato's re-emergence during the Renaissance as a major influence on Western thought. Bessarion and Ficino did not deny that Platonic love was essentially homosexual in outlook, but they insisted that it was entirely honourable and chaste.

To reinforce this point, they associated Platonic discussions of love with those found in the Bible. Another way in which Ficino made Platonic love more palatable to his contemporaries was to emphasise its place within an elaborate system of Neoplatonic metaphysics. But Ficino's efforts to accommodate the theory to the values of a fifteenth-century audience did not include concealing or denying that Platonic love was homoerotic. Ficino completely accepted the idea that Platonic love involved a chaste relationship between men and endorsed the belief that the soul's spiritual ascent to ultimate beauty was fuelled by love between men.

In Gli Asolani (1505), the humanist Pietro Bembo (1470–1547) appropriated the language of Platonic love to describe some aspects of the romance between a man and a woman. In this work, love was presented as unequivocally heterosexual. Most of the ideas set out by Ficino are echoed by Bembo. However, Ficino had separated physical love, which had women as its object, from spiritual love, which was shared between men. Bembo's version of Platonic love, on the other hand, dealt with the relationship between a man and a woman which gradually progresses from a sexual to a spiritual level. The view of Platonic love formulated by Bembo reached its largest audience with the humanist Baldesar Castiglione's (1478–1529) Il libro del cortegiano (The Courtier, 1528).

Castiglione carried on the trend, initiated by Bessarion, of giving Platonic love a strongly religious coloring, and most of the philosophical content is taken from Ficino. One of the most popular Renaissance treatises on love Dialogues of Love, (1535), was written by the Jewish philosopher Judah ben Isaac Abravanel, also known as Leone Ebreo (c.1460/5–c.1520/5). The work consists of three conversations on love, which he conceives of as the animating principle of the universe and the cause of all existence, divine as well as material. The first dialogue discusses the relation between love and desire; the second the universality of love; and the third, which provides the longest and most sustained philosophical discussion, the origin of love. He draws upon Platonic and Neoplatonic sources, as well as on the cosmology and metaphysics of Jewish and Arabic thinkers, which are combined with Aristotelian sources in order to produce a synthesis of Aristotelian and Platonic views.

Stoicism, Epicureanism, and Skepticism underwent a revival over the course of the fifteenth and sixteenth centuries as part of the ongoing recovery of ancient literature and thought. The revival of Stoicism began with Petrarca, whose renewal of Stoicism moved along two paths. The first one was inspired by Seneca and consisted in the presentation, in works such as De vita solitaria (The Life of Solitude) and De otio religioso (On Religious Leisure), of a way of life in which the cultivation of the scholarly work and ethical perfection are one. The second was his elaboration of Stoic therapy against emotional distress in De secreto conflictu curarum mearum (On the Secret Conflict of My Worries), an inner dialogue of the sort prescribed by Cicero and Seneca, and in De remediis utriusque fortunae (Remedies for Good and Bad Fortune, 1366), a huge compendium based on a short apocryphal tract attributed at the time to Seneca.

While many humanists shared Petrarca's esteem for Stoic moral philosophy, others called its stern prescriptions into question. They accused the Stoics of suppressing all emotions and criticized their view for its inhuman rigidity. In contrast to the extreme ethical stance of the Stoics, they preferred the more moderate Peripatetic position, arguing that it provides a more realistic basis for morality, since it places the acquisition of virtue within the reach of normal human capacities. Another Stoic doctrine that was often criticized on religious grounds was the conviction that the wise man is entirely responsible for his own happiness and has no need of divine assistance.

The most important exponent of Stoicism during the Renaissance was the Flemish humanist Justus Lipsius (1547–1606), who worked hard to brighten the appeal of Stoicism to Christians. His first Neostoic work was De constantia (On Constancy, 1584), in which he promoted Stoic moral philosophy as a refuge from the horrors of the civil and religious wars that ravaged the continent at the time. His main accounts of Stoicism were Physiologia Stoicorum (Physical Theory of the Stoics) and Manuductio ad stoicam philosophiam (Guide to Stoic Philosophy), both published in 1604. Together they constituted the most learned account of Stoic philosophy produced since antiquity.

During the middle Ages, Epicureanism was associated with contemptible atheism and hedonist dissipation. In 1417, Bracciolini found Lucretius's poem De rerum natura, the most informative source on Epicurean teaching, which, together with Ambrogio Traversari's translation of Diogenes Laertius's Life of Epicurus into Latin, contributed to a more discriminating appraisal of Epicurean doctrine and a repudiation of the traditional prejudice against the person of Epicurus himself. In a letter written in 1428, Francesco Filelfo (1398–1481) insisted that, contrary to popular opinion, Epicurus was not "addicted to pleasure, lewd and lascivious," but rather "sober, learned and venerable." In the epistolary treatise Defensio Epicuri contra Stoicos, Academicos et Peripateticos (Defense of Epicurus against Stoics, Academics and Peripatetics), Cosma Raimondi (d. 1436) vigorously defended Epicurus and the view that the supreme good consists in pleasure both of the mind and the body.

He argued that pleasure, according to Epicurus, is not opposed to virtue, but both guided and produced by it. Some humanists tried to harmonize Epicurean with Christian doctrine. In his dialogue De voluptate (On Pleasure, 1431), which was two years later reworked as De vero falsoque bono (On the True and False Good), Valla examined Stoic, Epicurean, and Christian conceptions of the true good. To the ultimate good of the Stoics, that is, virtue practiced for its own sake, Valla opposed that of the Epicureans, represented by pleasure, on the grounds that pleasure comes closer to Christian happiness, which is superior to either pagan ideal.

The revival of ancient philosophy was particularly dramatic in the case of Skepticism, whose revitalisation grew out of many of the currents of Renaissance thought and contributed to make the problem of knowledge crucial for early modern philosophy. The major ancient texts stating the Skeptical arguments were slightly known in the middle Ages. It was in the fifteenth and sixteenth century that Sextus Empiricus's Outlines of Pyrrhonism and Against the Mathematicians, Cicero's Academica, and Diogenes Laertius's Life of Pyrrho started to receive serious philosophical consideration.

The most significant and influential figure in the development of Renaissance Skepticism is Michel de Montaigne (1533–1592). The most thorough presentation of his Skeptical views occurs in Apologie de Raimond Sebond (Apology for Raymond Sebond), the longest and most philosophical of his essays. In it, he developed in a gradual manner the many kinds of problems that make people doubt the reliability of human reason. He considered in detail the ancient Skeptical arguments about the unreliability of information gained by the senses or by reason, about the inability of human beings to find a satisfactory criterion of knowledge, and about the relativity of moral opinions. He concluded that people should suspend judgment on all matters and follow customs and traditions. He combined these conclusions with fideism.

Many Renaissance appropriators of Academic and Pyrrhonian Skeptical arguments did not see any intrinsic value in Skepticism, but rather used it to attack Aristotelianism and disparage the claims of human science. They chal-

lenged the intellectual foundations of medieval Scholastic learning by raising serious questions about the nature of truth and about the ability of humans to discover it. In Examen vanitatis doctrinae gentium et veritatis Christianae disciplinae (Examination of the Vanity of Pagan Doctrine and of the Truth of Christian Teaching, 1520), Gianfrancesco Pico della Mirandola (1469–1533) set out to prove the futility of pagan doctrine and the truth of Christianity.

He regarded Skepticism as ideally suited to his campaign, since it challenged the possibility of attaining certain knowledge by means of the senses or by reason, but left the scriptures, grounded in divine revelation, untouched. In the first part of the work, he used the Skeptical arguments contained in the works of Sextus Empiricus against the various schools of ancient philosophy; and in the second part he turned Skepticism against Aristotle and the Peripatetic tradition. His aim was not to call everything into doubt, but rather to discredit every source of knowledge except scripture and condemn all attempts to find truth elsewhere as vain.

In a similar way, Agrippa von Nettesheim (1486–1535), whose real name was Heinrich Cornelius, demonstrated in De incertitudine et vanitate scientiarum atque artium (On the Uncertainty and Vanity of the Arts and Sciences, 1530) the contradictions of scientific doctrines. With stylistic brilliance, he described the controversies of the established academic community and dismissed all academic endeavors in view of the finitude of human experience, which in his view comes to rest only in faith.

The fame of the Portuguese philosopher and medical writer Francisco Sanches (1551–1623) rests mainly on Quod nihil scitur (That Nothing Is Known, 1581), one of the best systematic expositions of philosophical Skepticism produced during the sixteenth century. The treatise contains a radical criticism of the Aristotelian notion of science, but beside its critical aim, it had a constructive objective, which posterity has tended to neglect, consisting in Sanches's quest for a new method of philosophical and scientific inquiry that could be universally applied. This method was supposed to be expounded in another book that was either lost, remained unpublished, or was not written at all.

In 1543, Nicolaus Copernicus (1473–1543) published De revolutionibus orbium coelestium (On the Revolutions of the Heavenly Spheres), which proposed a new calculus of planetary motion based on several new hypotheses, such as heliocentrism and the motion of the earth. The first generation of readers underestimated the revolutionary character of the work and regarded the hypotheses of the work only as useful mathematical fictions. The result was that astronomers appreciated and adopted some of Copernicus's mathematical models but rejected his cosmology. Yet, the Aristotelian representation of the universe did not remain unchallenged and new visions of nature, its principles, and its mode of operation started to emerge.

During the sixteenth century, there were many philosophers of nature who felt that Aristotle's system could no longer regulate honest inquiry into nature. Therefore, they stopped trying to adjust the Aristotelian system and turned their

backs on it altogether. It is hard to imagine how early modern philosophers, such as Francis Bacon (1561–1626), Pierre Gassendi (1592–1655,) and René Descartes (1596–1650), could have cleared the ground for the scientific revolution without the work of novatores such as Bernardino Telesio (1509–1588), Francesco Patrizi (1529–1597), Giordano Bruno (1548–1600), and Tommaso Campanella (1568–1639).

Telesio grounded his system on a form of empiricism, which maintained that nature can only be understood through sense perception and empirical research. In 1586, two years before his death, he published the definitive version of his work De rerum natura iuxta propria principia (On the Nature of Things according to their Own Principles). The book is a frontal assault on the foundations of Peripatetic philosophy, accompanied by a proposal for replacing Aristotelianism with a system more faithful to nature and experience. According to Telesio, the only things that must be presupposed are passive matter and the two principles of heat and cold, which are in perpetual struggle to occupy matter and exclude their opposite. These principles were meant to replace the Aristotelian metaphysical principles of matter and form. Some of Telesio's innovations were seen as theologically dangerous and his philosophy became the object of vigorous attacks. De rerum natura iuxta propria princip was included on the Index of Prohibited Books published in Rome in 1596.

Through the reading of Telesio's work, Campanella developed a profound distaste for Aristotelian philosophy and embraced the idea that nature should be explained through its own principles. He rejected the fundamental Aristotelian principle of hylomorphism and adopted instead Telesio's understand of reality in terms of the principles of matter, heat, and cold, which he combined with Neoplatonic ideas derived from Ficino. His first published work was Philosophia sensibus demonstrata (Philosophy as Demonstrated by the Senses, 1591), an anti-Peripatetic polemic in defense of Telesio's system of natural philosophy. Thereafter, he was censured, tortured, and repeatedly imprisoned for his heresies.

During the years of his incarceration, he composed many of his most famous works, such as De sensu rerum et magia (On the Sense of Things and On Magic, 1620), which sets out his vision of the natural world as a living organism and displays his keen interest in natural magic; Ateismus triomphatus (Atheism Conquered), a polemic against both reason of state and Machiavelli's conception of religion as a political invention; and Apologia pro Galileo (Defense of Galileo), a defense of the freedom of thought (libertas philosophandi) of Galileo and of Christian scientists in general. Campanella's most ambitious work is Metaphysica(1638), which constitutes the most comprehensive presentation of his philosophy and whose aim is to produce a new foundation for the entire encyclopedia of knowledge. His most celebrated work is the utopian treatise The City of the Sun, which describes an ideal model of society that, in contrast to the violence and disorder of the real world, is in harmony with nature.

In contrast to Telesio, who was a fervent critic of metaphysics and insisted on a purely empiricist approach in natural philosophy, Patrizi developed a program in which natural philosophy and cosmology were connected with their metaphysical and theological foundations. His Discussiones peripateticae (Peripatetic Discussions) provides a close comparison of the views of Aristotle and Plato on a wide range of philosophical issues, arguing that Plato's views are preferable on all counts. Inspired by such Platonic predecessors as Proclus and Ficino, Patrizi elaborated his own philosophical system in Nova de universalis philosophia (The New Universal Philosophy, 1591), which is divided in four parts: Panaugia, Panarchia, Pampsychia, and Pancosmia.

He saw light as the basic metaphysical principle and interpreted the universe in terms of the diffusion of light. The fourth and last part of the work, in which he expounded his cosmology showing how the physical world derives its existence from God, is by far the most original and important. In it, he replaced the four Aristotelian elements with his own alternatives: space, light, heat, and humidity. Gassendi and Henry More (1614–1687) adopted his concept of space, which indirectly came to influence Newton.

A more radical cosmology was proposed by Bruno, who was an extremely prolific writer. His most significant works include those on the art of memory and the combinatory method of Ramon Llull, as well as the moral dialogues Spaccio de la bestia trionfante (The Expulsion of the Triumphant Beast, 1584), Cabala del cavallo pegaseo (The Kabbalah of the Pegasean Horse, 1585) and De gl'heroici furori (The Heroic Frenzies, 1585). Much of his fame rests on three cosmological dialogues published in 1584: La cena de le ceneri (The Ash Wednesday Supper), De la causa, principio et uno (On the Cause, the Principle and the One) and De l'infinito, universo et mondi (On the Infinite, the Universe and the Worlds). In these, with inspiration from Lucretius, the Neoplatonists, and, above all, Nicholas of Cusa, he elaborates a coherent and strongly articulated ontological monism. Individual beings are conceived as accidents or modes of a unique substance, that is, the universe, which he describes as an animate and infinitely extended unity containing innumerable worlds. Bruno adhered to Copernicus's cosmology but transformed it, postulating an infinite universe. Although an first to locate a heliocentric system in infinite space. In 1600, he was burned at the stake by the Inquisition for his heretical teachings.

In Belarus, within the framework of Christianity, not only Orthodox, Catholics, but also various Protestant communities began to adjoin. One of these communities was created by supporters of M. Luther. It was influenced by the trading communities of German merchants, as well as the fact that Belarusian youth were educated at German universities. In 1544, the University of Koenigsberg began to function. One of the first preachers of Lutheranism in the Grand Duchy of Lithuania was S. Rafalovich. The church was called Augsburg. Her residence was in Riga.

The spread and growth of the influence of Protestant communities in the territory of the Grand Duchy of Lithuania was facilitated by factors of state au-

thority. This circumstance played a role in the spread of Calvinism in Belarus. J. Calvin actively corresponded with the head of the Grand Duchy of Lithuania Sigismund II Augustus. He dedicated his interpretation of Paul to the Jews. M. Luther also dedicated to the head of state his translation of the Bible. The final accents in the choice of the head of state of the Grand Duchy of Lithuania were influenced by N. Radziwill Cherny, who corresponded with J. Calvin. As a result, with his financial support, Calvinist communities were widespread. Prayer houses were built, educational institutions and printing houses opened. Representatives of intellectual culture were involved in community activities.

Among these representatives was S. Budny. At the invitation of N. Radziwill Black, he organized a printing house in Nesvizh, where he began to publish the texts of Biboia in Belarusian and Polish. Supporters of Calvinism were Sapegi, Guts, Khodkevichi and Tishkevichi. Calvinist communities formed in Brest, Zaslavl, Dumpling, Nesvizh and Orsha. Schools were opened in Vilna, Ivye, Kletsk, Nesvizh, Slutsk, Lyubche and Losk. In addition to theology, history, mathematics, rhetoric, and ancient poetry were taught.

In 1557, the Synod of Representatives of the Gospel Church of the Grand Duchy of Lithuania was created. S. Zatsius was elected the head. In 1565, the Calvinists of the Grand Duchy of Lithuania received equal rights with Catholics and Orthodox. In 1573, the right to choose a religion was legislated. The corresponding article was spelled out in the Statute of the Grand Duchy of 1588.

Calvinist initiatives in the field of state law of the Grand Duchy of Lithuania created not only guarantees of equal rights for them, but also went beyond the interests of their community. In Belarus, other Protestant communities began to use the law of tolerance. Polemic discussions arose between representatives of these communities. In the course of these discussions, some of the community members evolved to views that went beyond the boundaries of the identity of these communities. The controversy was conducted peacefully. It did not lead, as in France, to the confrontation of religious communities.

L. Sapega used the right to choose a religion. Throughout his life he was an Orthodox, Calvinist and Catholic. The original intellectual evolution within the framework of the right to choose religion was S. Budny. While studying at the University of Basel, he became acquainted with the teachings of J. Calvin and became his supporter. In Belarus, he enjoyed the support of N. Radziwill Black. He gave him the opportunity to engage in publishing in Nesvizh. Here was published the Catechism.

As the spiritual evolution of S. Budny continued, he was influenced by anti-Trinitarians, the teachings of F. Sotsyn. He was forced to leave Nesvizh and moved to Losk, where there was a printing house and a training center. A work written by S. Budny “On the Most Important Theses of the Christian Faith” created his written polemic with Peter from Gonenz, J. Wisniewski, I. Zanhus, S. Farnovsky, M. Chekhovets, P. Skarga, G. Bulinger, J. Simmler.

S. Budny used actively the European intellectual space for correspondence with representatives of the Protestant communities of Europe. Contacts were fa-

cilitated by his education received at the universities of Krakow and Basel. G. Buhlinger and J. Simmler represented the Protestant community of Zurich, created by the efforts of W. Zwingli. J. Simmler criticized S. Budnyi for allowing free interpretations of the Bible. Since 1532, Geneva became the center of the Protestant movement in Switzerland thanks to the efforts of G. Farel. Here settled J. Calvin. In 1549 a Zurich agreement was reached between the Protestant communities of Zurich and Geneva. On its basis, educational institutions were opened. S. Budny used the educational services of one of them. The references in his publications to Aristotle, Plato, Demosthenes, Cicero, Virgil, Horace, Titus Livius, Pliny the Elder testify to the level of his education,

Through the means of the British merchant S. Budny, in 1574 he handed over a letter to J. Fox. It is stored in the library of the University of Oxford. Library archives became the basis for research by British scientists G. Picardo, E. Henderson, J. Townley. It was they who established the obvious presence in the history of the printing of England of natives of Eastern Europe.

They also carried out a systematic analysis of the publications of Y. Litvin, F. Skorina and S. Budny. The polemic-related polemic initiated by S. Budny continued for several decades within the framework of the Grand Duchy of Lithuania. Its members became well-known polemic authors. S. Ostrovsky and M. Smigletsky joined them.

In the framework of the polemic S. Budny wrote the work "Refutation of Chekhovets, who believes that a Christian should not hold a public position". Yakub from Kalinovka, Peter from Gonenz and Y. Nemaevsky, Pavel from Vizny reacted to his work. In 1581, a verbal discussion took several hours at the Protestant Synod in Losk. The discussion continued in 1582 in Lubche. It took several days. The discussions revealed the talent of many participants for the practical implementation of the ideas expressed about the role of religion in society. Among them was A. Volovich. He converted from Orthodoxy to Protestantism. He served as Chancellor of the ON. He participated in the development of the Statute of the Grand Duchy of 1566. Books of S. Budny and A. Bulinger were published with his money. He identified Calvinism as the distinctive religion of ON.

Therefore, he conducted a decisive polemic with supporters of the Union of Lublin, which implied the close integration of the GDL with Catholic Poland. A similar position was held by J. Abramovich, who held high government posts in the Grand Duchy of Lithuania. Under the influence of his wife, who belonged to the Orthodox Church, he supported tolerance and religious tolerance. He had diverse interests in science and literature. One of his works is entitled "The Thoughts of a Litsvin on the Acquisition of Cheap Grain and its Sale at a Higher Price" (1595). He motivated J. Radwan to write the poem Radziviliada. He supported the publishing activities of S. Sudrovsky.

The head of the city authorities in Minsk, Y. Glebovich, contributed to the development of the city and Protestant communities. On his initiative, the Trinity and Castle suburbs were built. A large community of Calvinists has formed.

A temple was built. The temple was also built for Calvinists in Zaslavl. A printing house was opened, in which books were published by D. Lenchitsky and S. Budny. J. Glebovich contributed to the adoption of the Statute of the Grand Duchy of 1588. Y. Namyslovsky played an important role in the formation of Aryan schools in Ivye, Novogrudok. He supported the activities of S. Budny.

He became famous for the polemic with M. Smigletsky, a prominent representative of the second scholasticism within the GDL. The discussion took place in 1594. Following the discussion, Y. Namyslovsky published the books "Anatomy and Harmony of a Christian Man", "A Textbook for Mastering the Doctrine of Aristotle." They were published in 1596. F. Unius, a theologian from the Netherlands, reacted to these works.

S. Zatsius accepted Calvinism and became one of the participants in discussions with S. Budny. In the printing house of N. Radziwill Black in Brest, he published the texts of the Bible.

After the adoption of Calvinism in 1553, the Italian theologian J. Blandrata participated in discussions with S. Budny. He received university education in Bologna. A high level of polemic with opponents was demonstrated by A. Volan. He was a supporter of Calvinism. He was the secretary of the kings of Sigismund Augustus, S. Batory. His works are devoted to issues of state law. In matters of religion, he led a polemic with a supporter of the second scholasticism P. Skargoy. M. Kavechinsky was educated at the University of Wittenberg. He adopted Calvinism.

Together with S. Budny, L. Kshishkovsky opened a printing house in Nesvizh. He was a member of the publication in the Belarusian language "Catechism". Protestants of Belarus had a tolerant relationship with the Orthodox. There were no conflicts between the Protestant communities and the Orthodox fraternities. Tolerance was fostered by mixed religious marriages.

10. Philosophy 17th- and 18th century

Philosophy in the 17th- and 18th-centuries can be characterized by an increased concern with questions relating to epistemology, human subjectivity, the foundations of natural science, and the Counter-Reformation. Likewise, there arose a tradition in moral and political philosophy that sought to understand human behavior and the origins of states and institutions naturalistically. In short, there was a strong movement in this period to analyze anew a human being's capacity to know and to act ethically and to reconceptualize the physical and the social worlds without appeal to a providential God or to teleology.

Even though these new philosophies of nature anticipated some of the defining features of early modern thought, many of their methodological characteristics appeared to be inadequate in the face of new scientific developments. The methodology of Galileo Galilei (1564–1642) and of the other pioneers of the new science was essentially mathematical. Moreover, the development of the new science took place by means of methodical observations and experiments,

such as Galileo's telescopic discoveries and his experiments on inclined planes. The critique of Aristotle's teaching formulated by natural philosophers such as Telesio, Campanella, Patrizi, and Bruno undoubtedly helped to weaken it, but it was the new philosophy of the early seventeenth century that sealed the fate of the Aristotelian worldview and set the tone for a new age.

The philosophers most responsible for the break from medieval and renaissance traditions of thought are Bacon, Descartes, and Hobbes. Responding to these self-described 'moderns' were the second and third generations of philosophers: Spinoza, Malebranche, Locke and Leibniz, who further developed Baconian and Hobbesian empiricism, the Cartesian 'way of ideas' and Cartesian dualism, and the Hobbesian account of the origin of the state. Their thought in turn acts as the foil for the continued philosophical reflection of Berkeley, Wolff, Hume and Condillac. Finally, in the standard telling of the history of philosophy, Immanuel Kant revolutionized modern philosophy.

The relations between the Protestants and the Vatican, which did not want to put up with the growing influence of Calvinism on Belarus, were more complicated. The Vatican adhered to a rather tough position regarding Orthodox fraternities. When the Vatican's patience was exhausted, he proceeded to implement the Counter-Reformation strategy, which was to create the conditions for the transition of the upper layers of the Belarusian society to Catholicism. It was supposed to subordinate the Orthodox brotherhoods on the territory of Belarus and Ukraine to the Vatican, which was done in 1595 following the conclusion of a church union. But there were Orthodox brotherhoods who did not accept the model of the Greek Catholic Church.

They began to focus on the Moscow Orthodox Patriarchate, which was considered by the authorities of the Kingdom of Poland and the Grand Duchy of Lithuania as an instrument of influence of the Moscow state on the Orthodox population for political purposes. Under these conditions, it was difficult for representatives of the intellectual part of the Bravo Orthodox fraternities to avoid suspicions of espionage and undermining state security of the Confederation of the Kingdom of Poland and the Grand Duchy of Lithuania. It was in a similar situation of suspicion that A. Filippovich found himself. S. Polotsky left the borders of Belarus and continued his intellectual activity in the Moscow state.

As the Counter-Reformation intensified, the boundaries of Belarus were left by representatives of intellectual thought who adhered to Calvinism. After the transition of the influential families of Belarus to the Catholic faith, printing houses ceased to be accessible to these people. They headed to the Netherlands. Among them were K. Semyanovich and I. Kopievich. In the Netherlands, K. Semyanovich became the author of the work entitled "The Great Art of Artillery." In interpreting the results of experimental studies, he referred to the works of Aristotle, Plato, Seneca, Euclid and Archimedes. I. Kopievich opened a printing house in Amsterdam, where, at the request of Peter I, he translated into Russian and published books on maritime affairs and the natural sciences.

The counter-reformation in Belarus was not accompanied by religious wars. It was transformed into the phenomenon of the second scholasticism. The Catholic orders, including the Jesuits, adhered to the strategy of creating authority in civil society not by violence, but by forming educational and cultural environments in the competitive Calvinist communities and Orthodox brotherhoods in Belarus. The infrastructure of this environment included collegiums, school theaters, which formed the specifics of the Baroque era in Belarus.

The intellectual tradition of the second scholasticism was formed on the territory of Spain and Portugal at the universities of Coimbra, Salamanca. An important role was played by the Gregorian University (Roman College). This tradition includes Catholic philosophical teachings associated with the first scholasticism, Aristotelianism, Thomism and incorporating elements of systems of late scholasticism and Renaissance humanistic teachings into their structure.

The second scholasticism became the theory of internal reform of Catholicism and the rationale for the Counter-Reformation movement. She gave answers to the religious, social, moral, metaphysical questions posed by the New Time. The second scholasticism remained relevant in the XVI - XVII centuries. The beginning of the second scholasticism in Western Europe is connected with the intellectual activity of the founder of the Salamanca school of the Dominican Francisco de Vitoria (the 30s of the XVI century). The end of the era of the second scholasticism in Western Europe is associated with the death in 1617 of the Jesuit philosopher Francisco Suarez. On the territory of Belarus, Lithuania, Poland, the second gathering maintained its position in the education system until the beginning of the 19th century.

The counter-reformation movement aimed at strengthening the Vatican's position in Europe, not only by intimidating believers through the institution of the Inquisition, but also through the intellectual resources of education. These tasks were formulated at the Council of Trent (1545-1563). The intellectual part of the problems was solved by the philosophers of Spain and Portugal. Their study was completed in the writings of F. Suarez. These works influenced the further development of Catholic theology and philosophy had a significant impact on the Protestant scholasticism of the XVI-XVII centuries.

F. Suarez systematized the problems of Aristotelian philosophy in new historical conditions, gave impetus to the development of metaphysical problems in the structure of the emerging philosophy of the New Age, established the division of philosophy into subject parts, which became traditional for European philosophers, up to I. Kant.

Philosophical rationalism is imbued with the theology of F. Suarez. He implemented a program of philosophical and theological synthesis of the knowledge system, the basis of which is metaphysics. The focus of F. Suarez is a real being. The most important thing for him is a systematic study of the main metaphysical concepts and questions. He analyzes and compares the opinions of Aristotle contained in different books, chapters and fragments, analyzes the opinions of medieval authors. He writes "A Detailed Index to Aristotle's Meta-

physics." Thus, he creates a mechanism of continuity within the framework of the Aristotelian intellectual tradition. In the education system of the second scholasticism this tradition will be represented thanks to the efforts of M. Smigletsky subject area of logic. It is born in Ukraine.

In Rome he entered the Order of the Jesuits. He studied philosophy and theology under the leadership of F. Suarez and R. Bellarmino. Since he was born within the framework of the Grand Duchy of Lithuania, he returned to it and began to teach at the Jesuit Academy in Vilna. Then his theological activities took place in Poland. He led an active polemic with intellectuals of the Protestant communities of Belarus. On the basis of the lectures given by him in Vilna, he wrote a two-volume treatise, Logic. The subject of its consideration was the "Logic" of Aristotle. The book was famous; has become a popular textbook of logic in Western Europe. In England, the book was used until the middle of the XIX century. “Logic” was reprinted three times in Oxford in 1634.163838.1658.

The Jesuits and other Catholic orders, in contrast to the system of educational institutions that existed on the territory of Belarus, created their own system of collegial education. They had strict discipline and at the same time a high level of study of subjects. In addition to theology, mathematics, ancient literature, logic, rhetoric, Latin and Greek, and ethics were studied. The structure of the collegiums included libraries and school theaters. There were 14 school theaters in Belarus. Scripts for the productions were written by teachers of the Jesuit colleges. Teachers were trained by the Jesuit Academy of Vilna. It included theological and law faculties. The Jesuit colleges in Belarus were taught by immigrants from European countries - V. Bergof, A. Mistalt and J. Preusgof. Of the local teachers, A. Alizarovsky, L. Zalussky, M. Karsky, A. Koyalovich, S. Lauksmin, N. Lenchitsky, M. Sarbevsky, V. Tylkovsky gained fame.

The collegiums functioned in almost all the cities of Belarus - in Polotsk (since 1581), Nesvizh (since 1584), Brest, Orsha, Grodno and Pinsk. In total, 20 Jesuit colleges functioned. Public relations collegiums were opened in Schuchin, Voronovo, Zelva, Mogilev, Drogichin and Polotsk. Due to the transition of the main part of the upper classes of Belarus to spoken and written Polish, teaching was conducted not only in Latin, but also in Polish. Printing was carried out in these languages. An important role in the activities of the Jesuits was played by Polotsk. This was due to its geographical location.

In 1773, the pope dismissed the Jesuit Order. But after the accession of the territory of Belarus to the Russian Empire in 1775, the order received an opportunity for activities within Belarus. Catherine II sought to use the Jesuit Order for political interests. She granted them the right to educational activities. The center of this activity was Polotsk. A similar position was held by Alexander II. He hoped for their support in the war with Napaleon. On January 12, 1812, he signed a decree on giving the Polotsk Jesuit College the status of an academy on a university basis. All Jesuit schools were subordinate to the academy. A faculty of languages was opened at a higher educational institution. Poetry, rhetoric, moral philosophy, logic and metaphysics, general, private and experimental

physics, chemistry, mathematics, pure and applied, civil and military architecture, natural law, private law and Roman civil law were taught at the faculty of free arts - philosophical natural and civil sciences. At the faculty of theology and other sciences, dogmatic theology, moral theology, scripture, canonical law, sacred history were taught. Departments elected deans for a certain time by an academic training meeting. Elections to academic posts were made by majority vote at the full meeting of the Academy and were submitted for approval to the General, and through him to the Minister of Education.

The Academy had its own notary public, which issued certificates for degrees. The opening of the Academy took place in June 1812. Dogmatic theology was taught by professors M. Lesnevsky and F. Dzerozhinsky. M. Lesnevsky, Doctor of Theology and Church Law, Dean of the Faculty of Philosophy, proceeded from the work of the Jesuit Sardagn, "A Treatise on God and His Christ." F. Dzerozhinsky, a professor of theology, also proceeded from the work of Sardagna. Church law was read by the Dean of the Faculty of Languages and Literature, Professor of Theology and Church Law, D. Richardot. Moral theology was taught by the dean of the theological faculty A. Rusnati. The holy letter was taught by Professor of Holy Writ, Church History and Hebrew M. Molinari. The subject of the study was the Bible. He lectured on church history and hierarchical geography.

In the first year, logic, dialectics and metaphysics were studied; ethics, statistics and political economy; geometry and solidometry; zoology. The subject sections of philosophy were taught by the professor of logic, dialectics, metaphysics and mathematics K. Hlasko. He relied on the works of philosophers of antiquity, the middle Ages and modern times.

Ethics was taught by Professor S. Ragosa. He was also a professor of political economy, statistics and zoology. He promoted the views of Cicero. Classes in geometry and solidometry were conducted by K. Hlasko. Zoology was taught by Professor S. Ragosa. He adhered to the classification of fauna C. Linney.

In the second year, general and private physics, chemistry, experimental physics, plane and spherical trigonometry, and mineralogy were studied. Lectures in physics were given by professor of higher mathematics S. Petrovich. Lectures in chemistry were given by professor of chemistry and mineralogy Yu. Tsitovich. The main discipline in the third year of the Academy was applied mathematics. It was taught by professor of mathematics J. Kondrau. He read astronomy. Professor J. Pirling taught classes in civil and military architecture. Lectures on botany read, P. Lange. He used the classification of C. Linney.

In the fourth year, ecclesiastical eloquence, general, private Russian legislation, and general history were studied. The poetry course was taught by professor of eloquence I. Ivitsky. We studied the works of Fedra, Catullus, Tibullius, Properia, Ovid, Horace, Plaut's comedy The Prisoners, some of the tragedies of Sophocles and Euripides, The Iliad and Odyssey of Homer, Aeneid by Virgil, and a collection of oratory speeches by Cicero.

Lectures on civil law and diplomacy were delivered by Professor K. Petrovsky. He focused on Roman law and the law of the Russian Empire. General History was taught by Professor D. Richardardot, Doctor of Theology and Church Law, Dean of the Faculty of Languages.

Hebrew literature was taught by Professor M. Molinari. The Bible and fables of Rabbi Barahiash Nikdan were used. Classes in Arabic and Syriac languages and literature were conducted by Bonaventure Villaum. He taught in a methodology developed by Sylvester de Sac. Professor P. Gavrilovich taught students Greek language and literature. Students translated individual works of Xenophon, Demosthenes, Herodotus, Homer. Professor I. Ivitsky lectured on Latin and Polish literature.

Professor I. Zalesky lectured on Russian literature. Professor D. Richardot taught French literature. He introduced students to the fables of La Fontaine and Gresset, the pastors of Malherb, the dramatic works of Cornell (Zinn and Polievkt), Racine, Moliere (The Mean and the Imaginary Sick). Professor J. Pirling taught students German language and literature. He used the work of Rabener, Gellert, Kleist, Hagedorn and Lessing.

A significant contribution to the activities of the Academy was made by A. Lustig, L.Ya. Rozaven, Y. Yurdan, M. Lesnevsky, K. Petrovsky, M. Molinari, F. Dzerozhinsky, S. Petrovich, K. Balandret, S. Ragosa, Y. Pirling and I. Zalesky. They formed science schools. The research results of these schools were published in the Polotsk Monthly. The scientific journal was founded by Professor V. Buchinsky, and the physics editor was Professor of Physics Yu. The magazine included six departments: literature and free sciences, moral philosophy, physical and mathematical, historical, criticism and literary news. The journal has been published since 1818. Three volumes were published (four issues made up one volume). In 1819 the magazine was not published. In 1820, two issues were published.

The Polotsk Academy trained doctors, masters. For five master's degrees, 123 were awarded to her graduates. 17 people received doctors of theology and canon law; 43 doctors of civil law; 13 masters of theology; 2 masters of free sciences; 5 people were nominated as candidates for theology, 27 as candidates of philosophy, 1 candidats of free sciences, 3 people as candidates of jurisprudence. For the Polotsk Academy of students, educational institutions of Belarusian cities were preparing.

In 1817, 550 students studied at secondary schools of the Jesuit Order in Vitebsk, Orsha, Mogilev and Mstislavl. In 1818, 540 students studied at educational institutions. The first class taught the beginnings of the Latin language, the catechism, the sacred history before the birth of Christ, the geography of the four parts of the world, the four rules of prime and named numbers, the initial foundations of the Russian language. In the second grade, grammar of the Latin language, Christian teaching, the history of the Assyrian monarchy and geography were studied.

Four rules of simple and decimal fractions, as well as Russian, French and German, were studied in arithmetic. In the third grade, the syntax of the Latin language, Christian teaching, the history of the Persian monarchy and geography, as well as Russian, French and German, were subject to study. As the above documents testify, the trend of combining the second and third grades has spread in educational practice. In them, students finished studying the grammar of the Latin language. The students were engaged in translations from the works of Cornelius Nepot, the fables of Fedor, the selected letters of Cicero, the works of Sallust.

In the third grade ovide elegy were translated with an analysis of the basic rules of higher Latin grammar, events from Assyrian and Persian history were covered. We studied basic geographical information about Europe, Asia, Africa and America, accompanied by a map showing the largest cities, seas, islands, peninsulas, rivers. From arithmetic, actions with fractions were explained. In the Laws of God class, the Jesuits spoke of the sacraments, focusing on two of them - repentance, as well as the body and blood of Christ. In the fourth grade, Christian moralizing, Greek history with geography, algebra, Russian, French and German were studied. In the fifth grade, eloquence, Christian moralizing, Roman history with ancient geography, and the history of the Russian state were taught. In mathematics, students studied theoretical and practical geometry, Russian, French and German.

Pupils of the combined fourth and fifth grades translated individual works of Ovid, Catullius and Tibullius, studied the history of the Roman state, from the founding of Rome to the end of the reign of Constantine. In geometry, students received knowledge of the lines of straight, vertical, parallel, inclined, intersecting; about the properties of the line that closes the area; about the circle, its section, the lines that are in it; about corners, their names and properties; fifth, on the names of surface shapes. Students were taught to use a measuring cord, a pair of compasses, reported information about the scale and its application, formed the skills of measuring the distances between two places, among which there was an obstacle, the distance between two objects, of which one or both were inaccessible, accessible or inaccessible heights using a measuring table, geometry or stick.

The educational process of the Polotsk Academy was provided by the Main Library, a library of Polish publications, a student library, a library of the Academy's office, a library of a store, a printing house library, a musical bursa library, a church library. The main and Polish libraries were intended only for professors. The Main Library housed books in European and Oriental languages.

Libraries had approximately the same list of books. V. Bogushevich, J. Kattenbrig, A. Abramsperg, F. Anjiolini and his younger brother Luigi Anjiolini made a great contribution to the work of the libraries. The library of the Slutsk College had 2995 books, Grodno - 2373, Brest - 1732, Novogrudok - 982, Nesvizh House of the third probation - 964, Bobruisk Residence - 363 titles. In the

libraries of the Polotsk Academy, there were 15,926 books; of these 13490 books were in the Main Library and 2436 books in the Polish Library.

Over many years of activity, the Jesuit colleges created at the higher estates of Belarus a need for a wide cultural activity related to the creation of private libraries and theaters. Books from these libraries were donated to educational institutions. So, a member of the Society of Jesus, J. Sadowski, donated his personal library to the Polotsk College. The collection of books on architecture G. Lenkevich transferred to the ownership of the college.

In the libraries were the works of Aristotle, F. Aquinas, theological and philosophical works of the leaders of the order. The Novogrudok Jesuits owned the "Catechism", owned by R. Bellarmini. Slutsk Jesuits owned several works of Martin Luther. Among them were the New Testament and the Psalter. The library catalog contains biographies of Ignatius Loyola, Francis Xavier, Francis Borgia, Balthazar Alvar, Adalbert Mentsinsky and Aloysius Gonzaga. There was a book by Thomas Kempinski "On the imitation of Christ" known in Western Europe since 1418. This book has long enjoyed and is extremely popular among a wide range of intellectuals, including many prominent figures of world culture. She was read by P. Kornel, G.V. Leibniz. The libraries had works by Cicero, Ovid, Virgil, Aesop, Horace, Seneca, Libya, Tacitus, and Demosthenes.

In the library of the Slut Jesuits there was a collection of works of Teretsy in twelve volumes, as well as a separate edition of his "Comedies". The books containing the speeches of the famous Roman orator and politician Cicero, there were several copies of various publications. The work of Virgil was represented by the book "Poems", as well as the works of Juvenal "Satire", Ovid "Fast" and "Metamorphoses", Seneca "Tragedies", Demosthenes "Speech". In the same library were presented books on military affairs: "School of War", "Military Horse and Pedestrian Weapons", "Use of Artillery", "On Military Exercises", "Infantry Exercises". There were also books on military law and military economy. A significant part of the books in the collection of the Slutsk College was published in German and Dutch publishing houses.

The richest collection of books on medicine was in the Slutsk library. There were 51 works, including the world-famous monument of the early Middle Ages - "Salernaya medicine", "Skillful anatomy", "Exercises in anatomy", "Human diseases", "Surgery", "Anatomy" by G. Scott, "History of medicine "P. Borelli," History of Medicine "by V. Pison. There was a three-volume collection of Paracelsus' works. In 1822, the library of the Polotsk Academy passed into the jurisdiction of the higher school of public relations, which the Russian government invited to Polotsk from Vitebsk, instructing them to take up the education of local youth. In 1830 it was abolished.

The Jesuits of the Polotsk College reacted to the development of science in Western Europe. In 1788, G. Gruber opened a physical and mechanical museum. He was the author of the project of the building, its construction and decoration with frescoes. He personally made several mechanisms and tools for him. Among the brothers of the order, G. Gruber prepared several mechanics, who

helped him in equipping the museum. F.K. Schopfer, C. Schmidt, J. Sommerer. F.K. Schopfer hails from the Bavarian city of Mirbach. He entered the order on July 1, 1789 in Polotsk. Subsequently, he became a famous mechanic, skilled craftsman and watchmaker. He built mechanical mills, invented a machine for cutting cloth, which was first successfully used at the Jesuit factory in Polotsk.

A skilled smith was a German by nationality K. Smichdt, who became a Jesuit on July 29, 1781 in Polotsk. He made various cars for the museum. J. Sommerer is a native of the Tyrolean city of Sexten. He was a wonderful carpenter and sculptor. One of the most honorable places is occupied by the Italian Frantisek Rikka, a graduate of Pavian University, who had encyclopedic knowledge in various sciences. The main sources of replenishment of the museum's collections were the manufacture of various machines for providing physical and mechanical training, research work, and donation of exhibits by Jesuits from Western European countries: Italy, Germany and France.

The museum had the richest collections. In the office of natural history, in jars of alcohol, there were freaks of people and animals. There were some stuffed animals and birds. The Cabinet of Natural Sciences had the richest collections of earth metals, precious and other rare stones, and marble. There were samples of electric machines and other physical devices, mechanical, optical, astronomical instruments, in particular, a large telescope. There was a prototype machine with which piles were driven into the ground. Models of buildings of all architectural styles of the era of antiquity and the middle Ages were presented: Doric, Ionic, Corinthian, Romanesque and Gothic, as well as details of individual orders, in particular, Ionic and Corinthian capitals.

The Polotsk collegium had an art gallery. She was in the building of the college, on the walls of the corridors of which, diverging in different directions, hunge paintings depicting saints. The Jesuits were carriers of the Baroque culture.

After the Polotsk Academy was closed in 1820, a significant part of the members of the order ended up in Tarnopol. One of them was Swiss J. Kondrau. In Polotsk, he taught mathematics, mechanics, physics and botany, using museum exhibits. The fate of M. Rylo is indicative. This native of Belarus, after the closure of the Polotsk Academy, went to the Vatican, from where he was sent on a spiritual mission to the Middle East. He accompanied spiritual affairs with scientific research. He was one of the first to describe the ruins of Babylon. He opened an educational institution in Beirut. He spent many years in Sudan.

In Belarus, the Jesuits adhered to theology and at the same time were forced to get acquainted with the works of Voltaire, Montesquieu, Russo and Didro. Higher Jesuit schools functioned in Vitebsk and Mogilev. Secondary schools existed in Mstislavl and Orsha. Many natives of Belarus were educated in Vilnius. Here they became professors. Among them, J. Pochobut-Odlyanitsky was particularly distinguished. He was a member of the academic scientific communities in London and Paris. He achieved the greatest scientific successes in astronomy. The era of the second scholasticism ended in Belarus in the first

half of the nineteenth century. With it ended the tradition of university Western European education within Belarus. The absence of universities limited the presence of Belarus in the intellectual space of Europe. One of the mechanisms for maintaining this presence was migration.

11. German classical philosophy

German thinkers of this period tried to characterize the essence of the person.They have developed a systematic philosophy as "the science of the spirit", defined its main categories and highlighted the industry**.** And as the main method of thinking, most of them recognize the dialectic.

Most historians believe Immanuel Kant founder of a significant phenomenon in the history of the human mind, which is the classical German philosophy.About his work is divided into two periods.The first one is traditionally considered subcritical.There Kant showed himself as a naturalist and even hypothesized about how our solar system originated.Second, a critical period in the works of the philosopher, devoted to the problems of epistemology, dialectics, ethics and aesthetics.First of all, he tried to solve the dilemma that arose between empiricism and rationalism: what is the source of knowledge - reason and experience?He considered that this debate is largely artificial.Feelings give us material for research, but the mind gives it shape.Experience also allows you to balance all of this check.If feelings are ephemeral and impermanent, the forms of reason - birth and a priori.They appeared before the experience.Thanks to them, we can express the facts and phenomena in the surrounding concepts.But to understand the essence of the world and the universe in such a way we can not.This is the "thing in itself", the understanding of which is beyond the experience, it is transcendental.

Kant has put the main problems, which are then solved all subsequent German classical philosophy.Briefly (philosopher Kant very difficult, but try to simplify its circuit) it sounds like.What and how can a man know how to operate, what to expect, and indeed, that he is?To answer the first question, the philosopher considers the stages of thinking and their functions.Feelings operate a priori forms (for example, space and time), reason - categories (quantity, quality).Facts drawn from experience with them converted into ideas.A mind with them builds a priori synthetic judgments.So there is a process of cognition.But the mind contains the idea of unconditional and even - for the unity of the world, the soul, of God.

They represent the ideal pattern, but rationally deduced from their experience or prove impossible.Any attempt to do so generates the insoluble contradictions - antinomy.They point out that there is reason to stop and give way to faith.Criticizing theoretical thinking, Kant proceeds to the practical, that is, to morals.Its foundation is considered a philosopher, a priori categorical imperative - performance of moral duty, not personal desires and inclinations.Kant antici-

pated many features of classical German philosophy.Let us briefly and its other representatives.

Fichte, unlike Kant denied that the surrounding does not depend on our consciousness.He believed that the subject and object - just a different manifestation of the divine "I".In the normal course of business and learning actually takes place reliance.This means that the first "I" conscious of (creating) yourself and then objects.They start work on the subject and become obstacles for him.To overcome them, "I" develops.The highest stage of this process is to understand the identity of subject and object.Then opposites destroyed, and there is an absolute "I".In addition, subject to the understanding of Fichte is theoretical and practical.The first defines the second implements.The absolute "I", in terms of Fichte, exists only in potency.Its prototype is a collective "we" or God.

Fichte Grabbing ideas about the unity of subject and object, the thinker thought both of these categories real.Nature is not material for the realization of the "I".It is an independent entity with a potency unconscious appearance of the subject.Stir in it comes from the opposites and, at the same time represents the development of the world Soul.The subject is born of nature, but he creates his own world, separate from the "I" - the science, art, religion.The logic is present not only in the mind, but also in nature.

But most important will that makes us grow, and the world.In order to perceive the unity of man and nature, the understanding is not enough, we need intellectual intuition.She have a philosophy and the arts.Therefore, the system of thought, according to Schelling, must consist of three parts.This is the philosophy of nature, then epistemology (which studied a priori forms of the mind).But the crowning glory of all is the comprehension of unity of subject and object.This apogee Schelling called philosophy of identity.She believes the presence of the Absolute Mind, in which the spirit and nature of the other polarity match.

Most famous thinker, which is associated with the German classical philosophy - Hegel.Briefly describe the system and its basic principles.Schelling, Hegel accepts the doctrine of the identity and Kant concluded that the matter should not be put out of consciousness, and vice versa.But he believed the basic philosophical principles of unity and struggle of opposites.At the heart of the world is the identity of being and thinking, absolute idea.But it concealed contradictions.When this unity becomes aware of itself, it alienates and creates the world of objects (matter, nature).But this otherness is still developing according to the laws of thought.In "Science of Logic" Hegel regards these rules.He finds that such concepts as they are formed and what characterized the differences between formal and dialectical logic, what are the laws of the latter.These processes are the same for thinking, and for Nature, because the world is logical and reasonable.The main method to Hegel's dialectic became the basic categories and laws which he brought up and secured.

Another two important works of German philosopher is "Philosophy of Nature" and "Phenomenology of Spirit".In them he explores the development of the

absolute otherness ideas and return it to myself, but at a different stage of development.The lowest form of existence in the world - the mechanics, followed by physics, and finally organic.Upon completion of this triad spirit comes out of nature and develops in man and society.At first, he realizes himself.At this stage, it is a subjective spirit.Then he appears in public forms - of morality, law and the state.Human history ends with the emergence of the absolute spirit.He also has three forms of development - is an art, religion and philosophy.

But Hegel's system does not end with the German classical philosophy.Feuerbach (we briefly characterize his teaching below) is considered to be its last representative.He has also been the most ardent critic of Hegel.At last he borrowed the idea of alienation.Almost all his life he has devoted to, to find out what his forms and types.He was trying to create a theory of overcoming the alienation and criticism of religion from the standpoint of materialism.In his work on the history of the Christian religion, he said that this man created God.This was the ideal alienation from the people.And this has led to the fact that his creation man made the subject of worship. Should be sent to the aspirations of people for what they really deserve - to themselves.

We see that all these different philosophers have tried to explore the man, his essence and purpose. Kant believed that the key to people's morality is, Fichte - that active and intelligent, Schelling - that the identity of subject and object, Hegel - logic and Feuerbach - love. In determining the meaning of philosophy, they also occupied different, although often similar positions. Kant focuses the importance of theory of knowledge and ethics, Schelling - natural philosophy, Fichte - political disciplines, Hegel - panlogism. Feuerbach considering all these problems in a complex .As for dialectics, all recognized its importance, but each of them has put forward its own version of the theory of universal communication. These are the main problems, which are considered the German classical philosophy. General characteristics (briefly described above us) of this phenomenon in the history of human thought, according to popular belief, is that it is one of the most significant cultural achievements of Western Europe.

From the moment the Teutonic and Livonian orders arrived until 1945, Belarus directly bordered on Prussia, which played an important role in involving Belarusian cities in the economic space of the civilization of the Medieval West through the activities of Hansa, Magdeburg Law, Reformation, and Haskalu. During the Renaissance and the Reformation, a meeting of M. Luther and F. Skorina took place. The initiator of the Reformation wanted to collaborate with a Belarusian book publisher. Young people from Belarus began to receive education at universities in Prussia. Educational migration especially intensified after the university was opened in Koenigsberg in 1544. The territory of Germany has become a translator of European legal culture to Belarus.

Jewish communities moved from Prussia to Belarus. In their midst, a mechanism for dialogue with brethren in European cities was created. By the 17th century, Jews were drawn into the intellectual space of Europe. This involvement was expressed in the phenomenon of Jewish Enlightenment (Haska-

lu). Berlin became the center of this movement, where the talent of M. Mendelssohn and his supporter D. Friedlander manifested. A movement in tune with the Enlightenment also emerged among the Jewish communities of Belarus. Its representatives were Boruch Schick and Solomon Maimon.

Borukh Shik was born in Shklov in a family of rabbis. His maternal grandfather was one of the most prominent rabbis of the 18th century. Boruch received his primary rabbinical education from his father, a former rabbi of Shklov, for about 20 years. In 1764, he became a rabbi. The pursuit of knowledge prompted him to go to England and become a doctor. Then he came to Berlin, where he met with the founders of the Haskala movement - M. Mendelssohn, D. Friedlander and N. G. Wessel (Wiesel). These people supported his enlightenment publishing, in the framework of which he published manuscripts on medicine, astronomy. However, he remained an Orthodox Jew. In his books, there is a criticism of A. de Rossi for not following exactly the ideas of the Sages of the Talmud about nature. In 1778, B. Schick left Berlin. He returned to his homeland. The reason for leaving was criticism from the participants of the Berlin Haskala. It consisted in the fact that B. Shik did not use material on the cows circulation of W. Harvey in publications, nor did he give a description of the system of N. Copernicus.

B. Shik took advantage of cooperation with the merchant and scientist I. Tseytlin, who created a scientific institution with laboratories in his estate of Ustye near the city of Cherikov. Subsequently, B. Schick devoted himself to the service of the Radziwills in Slutsk. Such a native of Belarus as Solomon Hyman took part in the Haskala movement. He was born and raised in Belarus. His grandfather and father were hereditary tenants of the estate in the Radziwill estates. His father was a rabbi. S. Hyman described his childhood years in an autobiographical work. Maimon he became impressed by the philosophy of Maimonides. S. Maimon began his studies at the age of six with the book of Genesis, the Talmud followed. In addition to religious literature, he secretly studied in Hebrew the writings of Josephus Flavius, the book of David Hans, "Tsemah David." He learned about the existence of mathematics and astronomy.

Under the influence of the book he read, he constructed the armillary sphere. Memories of S. Maimon about the school of this city are not the best. Then there was a study at a Jewish school in the city of Ivenets. The study was successful. By the age of eleven, S. Maimon had a reputation as an outstanding Talmudist. He soon became a married man. He had a family. He was a rabbi. But he wanted to have versatile knowledge. To do this, one should study the languages that provided access to scientific publications. He noted that some books have pagination in both Hebrew and Latin letters. It was a way to learn German.

In parallel, S. Maimon studied Kabbalistic books taken from a neighbor. He read Maimonides' Guide to the Perplexed. As a result, I came to the conclusion that the Kabbalistic descriptions of the Creation of the World do not imply a temporal sequence, but a chain of causes and effects. This gave reason to S.

Maimon to interpret Kabbalah as an expanded Spinozism. Ten Sefirot S. Maimon identified with ten categories of Aristotle.

Within Belarus, S. Maimon found a rabbi, a native of Germany, who had German books. He gave him several books, of which the most important was a book on optics. In 1776, S. Maimon arrived in Koenigsberg. He was recommended to go to Berlin. The trip took five weeks. But he was expelled from Berlin. In 1780 he again arrived in Berlin. He enlisted the support of M. Mendelssohn. But it was not enough because of the conflicting behavior of S. Maimon himself. He leaves Berlin and leaves for the Netherlands. In Amsterdam, his behavior was not the best because of drunkenness. He left the Netherlands and returned to Germany to Hamburg. He studied at a local gymnasium in 1783-1785. After returning to Berlin, he lost the support of M. Mendelssohn. He died in 1786. Kantian Lazarus Bendavid introduced S. Maimon to a local philanthropist. The philosophical position of S. Maimon was formed by Spinozism. The material support of the representatives of Berlin Haskala allowed him to rent an apartment and to study Immanuel Kant's “Critique of Pure Reason”. He wrote a paper on transcendental philosophy.

He accompanied the critical analysis of the book with a letter from Marcus Hertz. I. Kant praised the work of S. Maimon and sent him a letter. Subsequent correspondence did not take place. The philosopher from Koenigsberg did not want to discuss his own work anymore. In 1791, the intellectual community of Germany got the opportunity to get acquainted with a number of works by S. Maimon. In the years 1793-1794 he wrote books: “On progress in philosophy”, “Research on the new logic and theory of thinking”, three comments on the work of Aristotle, Bacon, an annotated translation of Pemberton's book on Newtonian physics.

“An essay on transcendental philosophy with an introduction to symbolic knowledge and notes” is S. Maimon's main philosophical work. It was on the basis of this work that G. Fichte became established. The continuation of this work was "Critical studies of the human spirit or the highest ability of knowledge and will." Criton expounds the thoughts of Kant and Reingold, and Philalet Maimon. An important step was the "Philosophical Dictionary, or the coverage of the most important subjects of philosophy in alphabetical order." It gives precise definitions of philosophical concepts in alphabetical order. The work was written in Berlin in 1791. The controversy with K.L. Reinhold S. Maimon outlined his philosophical position briefly and clearly in his work “Aristotle's Categories, Interpreted in the Notes and Outlined as Propaedeutics to a New Theory of Thinking”. The book was published in Berlin in 1794.

S. Maimon also continued to write in Hebrew. In 1791 he wrote a commentary on Maimonides' Guide to the Perplexed. The book makes an attempt to introduce into the Jewish philosophical tradition the themes of new European philosophy. In this context, the medieval views of Maimonides are considered from the point of view of Newtonian physics and the critical philosophy of Kant, the Copernican system. This is the first Hebrew book on a new philosophy. The

book includes a radical Aristotelian commentary by Moshe Narboni not yet printed. The book was reprinted three times in the 19th century. The book "Desire of Solomon" It was written by S. Maimon in 1778. It consists of five separate parts. A 300-page manuscript is kept in Jerusalem. Three parts include comments on medieval authors: Rabbeinu Nissim, Abraham Ibn Ezra, Bahia ibn Pekuda. The book includes a textbook of algebra and a text on the possibility of combining Kabbalah with the philosophy of Maimonides [40]. Another book, “Secrets of Wisdom,” was written by S. Maimon in 1786. This is a Hebrew treatise on Newtonian physics.

Under the influence of B. Spinoza S. Maimon distanced himself from the practical commandments of the Jewish religion. He refused to support prejudice. S. Maimon was well acquainted with the philosophical works of B. Spinoza, D. Hume and G. Leibniz. He saw his task in creating an integrated philosophical theory based on already created philosophical systems. This integrated theory reflects the position of critical skepticism. It combines the systems of I. Kant and D. Hume. Regarding the thing-in-itself, S. Maimon had the opinion that it does not exist.

He proposed a theory according to which the knowable object is in consciousness from the very beginning as an indefinite consciousness, and when cognized, it passes into a certain consciousness. As a result, cognition becomes rational. It has stages similar to the sum of series of infinitesimal quantities. S. Maimon coined the term "differential of a certain consciousness." He used an analogy with the terms of differential calculus. He uses the analogue of the summation of a series, through which one can come to full knowledge infinitely close, as an irrational number. Knowing objects outside of consciousness will always be fundamentally incomplete. Moreover, the difference between full and partial consciousness is not fundamental.

S. Maimon proceeds from the fact that formal logic is connected with metaphysics and objects of the world. Transcendental logic creates knowledge of the subject. S. Maimon calls such thinking activity real thinking. Only in a priori thinking are synthetic judgments possible. In their semiotic space there is a unification of heterogeneous elements into one object of consciousness, when one element can be thought without the other, but not vice versa. A line and a straight line relate to each other in a similar way. Their relation is the relation of definable and definition. As a result of thinking, it is dominated by the principle of certainty.

Space and time are not created by human consciousness. They are given to him a priori. They can only be definable, but not a definition. It was important to reconstruct the processes of applicability of reasonable forms of cognition to data in feelings of objects. S. Maimon formulated an epistemological form of mind-body problem. As part of the solution to this problem, he argues that sensory cognition and intellectual cognition differ only in degree. Despite the quantitative differences, they are characterized by unity.

This illustrates an example of studying a mathematical object. At first, the object is represented in the sensual imagination as a figure bounded by three lines. The mind realizes that three angles follow from this. Turning to the language of theology, S. Maimon uses the interpretation of bible verses by Maimonides. In his opinion, the verse that God stands at the top of Jacob's ladder means that human knowledge seeks infinite knowledge. The similarity of God to man according to Genesis 1:26 mean that human knowledge is similar to Divine, adjusted for finiteness. Reasonable forms, understand themselves. Intelligence, which is the cause of these forms, coincides with knowledge. The operation of knowledge is the knowledge of oneself.

S. Maimon recognized not only the a priori status of space and time, but also their subject status. In this position, he is close to G. Leibniz. S. Maimon used mathematical concepts to illustrate philosophical reflections. I was impressed by reading the works of Leonard Euler. As you progress in the knowledge of a mathematical object, intuition and concepts come closer. Man attains infinite knowledge when synthetic judgments turn into analytical judgments. S. Maimon had a position in the subject area of ethics. The subject of his criticism was the views of I. Kant. In his opinion, the categorical imperative is only a compulsion, but not a moral obligation. Instead of the imperative, he proposed another reliable foundation of morality. This is the universal desire of people for truth, which, in turn, is based on the desire to verify human ideas.

The criterion of the truth of the act is universal agreement. The mind determines how to perform this action. In this context, the death penalty will be morally permissible only if the convict himself agrees with its necessity. The target cause is eudemony, achieved by acquiring true knowledge. S. Maimon devoted a special work "On Symbolic Knowledge and Philosophical Language" to the substantiation of the thesis that philosophy is a science of the structure of language. S. Maimon, despite the complex nature and lack of university education, has become part of the philosophical tradition of Germany and Europe. He was admired by G. Fichte.

The influence of S. Maimon was discovered in the works of Hegel. There was a period when his philosophy was forgotten. Interest revived in her in the XIX century. The merit belongs to I. Erdman, V. Dilthey and K. Fischer. S. Feiminger, E. Cassirer, H. Bergman, G. Cohen, T. Adorno, F. Roszweig, H. Arendt, M. Frank addressed the philosophy of S. Maimon.

In the United Kingdom, his work was studied by Shadworth Hodgson. He wrote about this in the book Philosophy of Reflection. Of the Jewish scholars, Rabbi Yosef Dov Soloveichik quotes S. Maimon's comments about Maimonides, and also mentions S. Maimon and G. Cohen in the notes to his work, "The Man of Halacha". He included his commentary in the list of literature that must be read for students of the course on the "Guide of the Perplexed".

Halaxi became an important phenomenon that integrated Belarus into the intellectual space of Europe and created a stable tradition of the influence of I. Kant's philosophy on the intellectuals of Eastern Europe.

In the distribution of Kantianism through students is I.G. Abicht. He taught in Vilnius from 1814. Before arriving in Vilnius, he had a fairly high status as a researcher and a post of professor at Erlangen University. The Berlin Academy of Sciences praised his work, "The Progress of Metaphysics from Leibniz to Wolf." Under the influence of lectures I.G. Abicht advocated the philosophy of I. Kant became K. Schirm, L. Rozvadovsky, J. Bobrovsky and M. Massonius. Kantianism adhered to Yu.U. Bykhovets, who, while studying at the University of Koenigsberg, listened to I. Kant's lectures.

Under the influence of the philosophy of the German philosopher, the views of the native of Belarus professor of philosophy A. Dovgird were formed. He argued with the German philosopher on the basis of theology and sensualism of Locke, the Scottish school. In the fundamental work, A Treatise on the Rules inherent in Thinking, or Theoretical and Practical Logic, published in Polotsk in 1828, he carried out a thorough analysis of I. Kant's Critique of Pure Reason. The subject of discussion was transcendental analytics, transcendental dialectics and transcendental aesthetics.

12. Philosophy of the Marxism

Marx summarized the materialistic aspect of his theory of history, otherwise known as historical materialism (this term was coined by Engels and popularised by Karl Kautsky and Georgi Plekhanov), in the 1859 preface to «A Contribution to the Critique of Political Economy».

In the social production of their existence, men inevitably enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the general process of social, political and intellectual life. It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness.

In this brief popularization of his ideas, Marx emphasized that social development sprang from the inherent contradictions within material life and the social superstructure. This notion is often understood as a simple historical narrative: primitive communism had developed into slave states. Slave states had developed into feudal societies. Those societies in turn became capitalist states, and those states would be overthrown by the self-conscious portion of their working-class, or proletariat, creating the conditions for socialism and, ultimately, a higher form of communism than that with which the whole process began. Marx illustrated his ideas most prominently by the development of capitalism from feudalism, and by the prediction of the development of socialism from capitalism.

The base-superstructure and stadialist formulations in the 1859 preface took on canonical status in the subsequent development of orthodox Marxism, in particular in dialectical materialism . They also gave way to a vulgar Marxism as plain economic determinism (economism), which has been criticized by various Marxist theorists. The position of positivism with elements of Marxism was adhered to by A.A. Malinovsky. He published books under the pseudonym "Bogdanov." He represented one of the directions of Marxist thought, which sought to supplement the philosophy of Marxism with the provisions of empirio-criticism developed by the Swiss philosopher R. Avenarius and the Austrian physicist E. Mach.

A. Bogdanov was born in the family of a public teacher. He graduated with a gold medal from the classical gymnasium in Tula. In 1892 he entered the natural department of Moscow University. In 1894 he was expelled from the university, for participating in a revolutionary organization. During his deportation to Tula, he conducts classes with Tula workers in the political economy of K. Marx, in the work of Capital. In 1897, he published The Short Course in Economics, reprinted in 1899. In 1899, A. Bogdanov graduated from the medical faculty of Kharkov University. In 1901, his book “Cognition from a Historical Point of View” was published. The author was exiled to Vologda, where N. A. Berdyaev, A. V. Lunacharsky, B. V. Savinkov, B. A. Kistyakovsky were in exile subsequently one of the authors of the collection "Milestones".

In 1904 A. Bogdanov left for Switzerland. In the main philosophical work of A. Bogdanov “Empiriomonism". He was sharply criticized by G. Plekhanov and V. Lenin in the book «Materialism and Empirio-criticism. Critical notes on one reactionary philosophy» A. Bogdanov, despite criticism, sought to update philosophical terminology, taking into account the achievements of modern science and philosophy.

Bogdanov can be considered the forerunner of organizational science, exploring social conditioning, mechanisms and functions of various types of human activity. The theses of this science are also formulated in “Tectology” - “General Organizational Science”, developed on the basis of the philosophy of empiriomonism. The first volume of General Organizational Science (Tectology) was published at the beginning of 1912. In 1922, three parts of Tectology were published in Russian in Berlin in Russian. In 1926 and 1928 two volumes of Tectology are published in German. Tectology A. Bogdanov compared with mathematics.In parallel with Marxism and neo-Kantianism became widespread within Belarus.

"Vulgar Marxism" was seen as little other than a variety of economic determinism, with the alleged determination of the ideological superstructure by the economical infrastructure. However, this positivist reading, which mostly based itself on Engels' latter writings in an attempt to theorize scientific socialism (an expression coined by Engels) has been challenged by Marxist theorists, such as Antonio Gramsci or Althusser.

Some believe that Marx regarded them merely as a shorthand summary of his huge ongoing work-in-progress. These sprawling, voluminous notebooks that Marx put together for his research on political economy, particularly those materials associated with the study of "primitive communism" and pre-capitalist communal production, in fact, show a more radical turning "Hegel on his head" than heretofore acknowledged by most mainstream Marxists and Marxiologists.

In lieu of the Enlightenment belief in historical progress and stages espoused by Hegel, Marx pursues in these research notes a decidedly empirical approach to analyzing historical changes and different modes of production, emphasizing without forcing them into a teleological paradigm the rich varieties of communal productions throughout the world and the critical importance of collective working-class antagonism in the development of capitalism.

Moreover, Marx's rejection of the necessity of bourgeois revolution and appreciation of the obschina, the communal land system, in Russia in his letter to Vera Zasulich; respect for the egalitarian culture of North African Muslim commoners found in his letters from Algeria; and sympathetic and searching investigation of the global commons and indigenous cultures and practices in his notebooks, including the Ethnological Notebooks that he kept during his last years, all point to a historical Marx who was continuously developing his ideas until his deathbed and does not fit into any pre-existing ideological straitjacket.

Some varieties of Marxist philosophy are strongly influenced by Hegel, emphasizing totality and even teleology: for example, the work of Georg Lukács, whose influence extends to contemporary thinkers like Fredric Jameson. Others consider "totality" merely another version of Hegel's "spirit," and thus condemn it as a crippling, secret idealism.

Theodor Adorno, a leading philosopher of the Frankfurt School, who was strongly influenced by Hegel, tried to take a middle path between these extremes: Adorno contradicted Hegel's motto "the true is the whole" with his new version, "the whole is the false," but he wished to preserve critical theory as a negative, oppositional version of the utopia described by Hegel's spirit. Adorno believed in totality and human potential as ends to be striven for, but not as certainties.

13. Neo-classical philosophy end 19 th-century

Existentialism as a philosophical movement is properly a 20 th-century movement, but its major antecedents, Søren Kierkegaard and Friedrich Nietzsche wrote long before the rise of existentialism. In the 1840s, academic philosophy in Europe, following Hegel, was almost completely divorced from the concerns of individual human life, in favour of pursuing abstract metaphysical systems. Kierkegaard sought to reintroduce to philosophy, in the spirit of Socrates: subjectivity, commitment, faith, and passion, all of which are a part of the human condition.

Like Kierkegaard, Nietzsche saw the moral values of 19 th-century Europe disintegrating into nihilism (Kierkegaard called it the leveling process). Nietzsche attempted to undermine traditional moral values by exposing its foundations. To that end, he distinguished between master and slave moralities, and claimed that man must turn from the meekness and humility of Europe's slave-morality. Both philosophers are precursors to existentialism, among other ideas, for their importance on the "great man" against the age. Kierkegaard wrote of 19th-century Europe, "Each age has its own characteristic depravity. Ours is perhaps not pleasure or indulgence or sensuality, but rather a dissolute pantheistic contempt for the individual man."

Auguste Comte, the self-professed founder of modern sociology, put forward the view that the rigorous ordering of confirmable observations alone ought to constitute the realm of human knowledge. He had hoped to order the sciences in increasing degrees of complexity from mathematics, astronomy, physics, chemistry, biology, and a new discipline called "sociology", which is the study of the "dynamics and statics of society".

The American philosophers Charles Sanders Peirce and William James developed the pragmatist philosophy in the late 19th century. The twilight years of the 19th century in Britain saw the rise of British idealism, a revival of interest in the works of Kant and Hegel.

Transcendentalism was rooted in Immanuel Kant's transcendence and German idealism, led by Ralph Waldo Emerson and Henry David Thoreau. The main belief was in an ideal spiritual state that 'transcends' the physical and empirical and is only realized through the individual's intuition, rather than through the doctrines of established religions.

Sigismund Freud; was an Austrian neurologist and the founder of psychoanalysis, a clinical method for treating psychopathology through dialogue between a patient and a psychoanalyst. Freud was born to Galician Jewish parents in the Moravian town of Freiberg, in the Austrian Empire. He qualified as a doctor of medicine in 1881 at the University of Vienna. Upon completing his habilitation in 1885, he was appointed a docent in neuropathology and became an affiliated professor in 1902. Freud lived and worked in Vienna, having set up his clinical practice there in 1886. In 1938 Freud left Austria to escape the Nazis. He died in exile in the United Kingdom in 1939.

In creating psychoanalysis, Freud developed therapeutic techniques such as the use of free association and discovered transference, establishing its central role in the analytic process. Freud's redefinition of sexuality to include its infantile forms led him to formulate the Oedipus complex as the central tenet of psychoanalytical theory. His analysis of dreams as wish-fulfillments provided him with models for the clinical analysis of symptom formation and the underlying mechanisms of repression. On this basis Freud elaborated his theory of the unconscious and went on to develop a model of psychic structure comprising id, ego and super-ego. Freud postulated the existence of libido, an energy with which mental processes and structures are invested and which generates

erotic attachments, and a death drive, the source of compulsive repetition, hate, aggression and neurotic guilt. In his later work Freud developed a wide-ranging interpretation and critique of religion and culture.

As such, it continues to generate extensive and highly contested debate with regard to its therapeutic efficacy, its scientific status, and whether it advances or is detrimental to the feminist cause. Nonetheless, Freud's work has suffused contemporary Western thought and popular culture.

14. Philosophy of the postmodernism

The most influential early postmodern philosophers were Jean Baudrillard, Jean-François Lyotard, and Jacques Derrida. Michel Foucault is also often cited as an early postmodernist although he personally rejected that label. Following Nietzsche, Foucault argued that knowledge is produced through the operations of power, and changes fundamentally in different historical periods.

The writings of Lyotard were largely concerned with the role of narrative in human culture, and particularly how that role has changed as we have left modernity and entered a "postindustrial" or postmodern condition. He argued that modern philosophies legitimized their truth-claims not (as they themselves claimed) on logical or empirical grounds, but rather on the grounds of accepted stories (or "metanarratives") about knowledge and the world—comparing these with Wittgenstein's concept of language-games.

He further argued that in our postmodern condition, these metanarratives no longer work to legitimize truth-claims. He suggested that in the wake of the collapse of modern metanarratives, people are developing a new "language-game"—one that does not make claims to absolute truth but rather celebrates a world of ever-changing relationships (among people and between people and the world).

Derrida, the father of deconstruction, practiced philosophy as a form of textual criticism. He criticized Western philosophy as privileging the concept of presence and logos, as opposed to absence and markings or writings.

In America, the most famous pragmatist and self-proclaimed postmodernist was Richard Rorty. An analytic philosopher, Rorty believed that combining Willard Van Orman Quine's criticism of the analytic-synthetic distinction with Wilfrid Sellars's critique of the "Myth of the Given" allowed for an abandonment of the view of the thought or language as a mirror of a reality or external world.

Further, drawing upon Donald Davidson's criticism of the dualism between conceptual scheme and empirical content, he challenges the sense of questioning whether our particular concepts are related to the world in an appropriate way, whether we can justify our ways of describing the world as compared with other ways. He argued that truth was not about getting it right or representing reality, but was part of a social practice and language was what served our purposes in a

particular time; ancient languages are sometimes untranslatable into modern ones because they possess a different vocabulary and are unuseful today. Donald Davidson is not usually considered a postmodernist, although he and Rorty have both acknowledged that there are few differences between their philosophies.

15. Analytical philosophy

The school of analytic philosophy has dominated academic philosophy in various regions, most notably Great Britain and the United States, since the early twentieth century. It originated around the turn of the twentieth century as G. E. Moore and Bertrand Russell broke away from what was then the dominant school in the British universities, Absolute Idealism. Many would also include Gottlob Frege as a founder of analytic philosophy in the late 19th century, and this controversial issue is discussed in section 2c. When Moore and Russell articulated their alternative to Idealism, they used a linguistic idiom, frequently basing their arguments on the "meanings" of terms and propositions.

Additionally, Russell believed that the grammar of natural language often is philosophically misleading, and that the way to dispel the illusion is to re-express propositions in the ideal formal language of symbolic logic, thereby revealing their true logical form. Because of this emphasis on language, analytic philosophy was widely, though perhaps mistakenly, taken to involve a turn toward language as the subject matter of philosophy, and it was taken to involve an accompanying methodological turn toward linguistic analysis. Thus, on the traditional view, analytic philosophy was born in this linguistic turn. The linguistic conception of philosophy was rightly seen as novel in the history of philosophy. For this reason analytic philosophy is reputed to have originated in a philosophical revolution on the grand scale—not merely in a revolt against British Idealism, but against traditional philosophy on the whole.

Analytic philosophy underwent several internal micro-revolutions that divide its history into five phases. The first phase runs approximately from 1900 to 1910. It is characterized by the quasi-Platonic form of realism initially endorsed by Moore and Russell as an alternative to Idealism. Their realism was expressed and defended in the idiom of "propositions" and "meanings," so it was taken to involve a turn toward language. But its other significant feature is its turn away from the method of doing philosophy by proposing grand systems or broad syntheses and its turn toward the method of offering narrowly focused discussions that probe a specific, isolated issue with precision and attention to detail. By 1910, both Moore and Russell had abandoned their propositional realism - Moore in favor of a realistic philosophy of common sense, Russell in favor of a view he developed with Ludwig Wittgenstein called logical atomism.

The turn to logical atomism and to ideal-language analysis characterizes the second phase of analytic philosophy, approximately 1910-1930. The third phase, approximately 1930-1945, is characterized by the rise of logical positivism, a view developed by the members of the Vienna Circle and popularized by

the British philosopher A. J. Ayer. The fourth phase, approximately 1945-1965, is characterized by the turn to ordinary-language analysis, developed in various ways by the Cambridge philosophers Ludwig Wittgenstein and John Wisdom, and the Oxford philosophers Gilbert Ryle, John Austin, Peter Strawson, and Paul Grice.

During the 1960s, criticism from within and without caused the analytic movement to abandon its linguistic form. Linguistic philosophy gave way to the philosophy of language, the philosophy of language gave way to metaphysics, and this gave way to a variety of philosophical sub-disciplines. Thus the fifth phase, beginning in the mid 1960s and continuing beyond the end of the twentieth century, is characterized by eclecticism or pluralism. This post-linguistic analytic philosophy cannot be defined in terms of a common set of philosophical views or interests, but it can be loosely characterized in terms of its style, which tends to emphasize precision and thoroughness about a narrow topic and to deemphasize the imprecise or cavalier discussion of broad topics.

Even in its earlier phases, analytic philosophy was difficult to define in terms of its intrinsic features or fundamental philosophical commitments. Consequently, it has always relied on contrasts with other approaches to philosophy—especially approaches to which it found itself fundamentally opposed—to help clarify its own nature. Initially, it was opposed to British Idealism, and then to "traditional philosophy" at large. Later, it found itself opposed both to classical Phenomenology (for example, Husserl) and its offspring, such as Existentialism (Sartre, Camus, and so forth) and also "Continental"' or "Postmodern" philosophy (Heidegger, Foucault and Derrida). Though classical Pragmatism bears some similarity to early analytic philosophy, especially in the work of C. S. Peirce and C. I. Lewis, the pragmatists are usually understood as constituting a separate tradition or school.

Nikolai Rozhin taught at the Belarusian State University. He was in the subject area of the history of philosophy. Thanks to his knowledge of history, he was able to see continuity in the intellectual tradition of analytical philosophy. The monograph “The Problem of Objective Reliability of Knowledge in European Philosophy (from R. Descartes to L. Wittgenstein)” became fundamental. The monograph focuses on the fact that human consciousness is determined by cultural practices and that, despite its modern content, analytical philosophy continues the Kantian tradition of constructing knowledge based on a priori categorial structures.

W. Sellers in the 60s of the twentieth century gave rise to the consideration of a very important conflict for analytical philosophy. It lies in the discrepancy between our usual understanding as subjects with an internal dimension, states and desires, and a scientific understanding of the world. It explains everything in terms of causal relationships, discrete processes, and universal mathematical science. Analytical philosophy found itself in the subject field of cognitive sciences, in particular, neurophilosophy. It follows from this science that recent advances show that the emerging intellectual tradition is inadequate and needs a

scientific explanation that will provide a true picture of reality. Philosophers Paul and Patricia Churchland and Thomas Metzinger say that the true reality is neurobiological and that the cognizing subject is the brain that comprehends the world instead of me. The enactivism program partially resolves this contradiction.

Francisco Vareloi, Evan Thompson and Eleanor Roche within this direction, consciousness is explained from the perspective of the subject. Enactivism indicates that consciousness has a bodily character, is included in external interactions and is the product of events beyond its control. As a result, the subject, understood as a reflective self-consciousness with internal space and events, is the result of processes of an immune, somatic and vegetative nature. Catherine Malaba holds the same position despite the fact that she does not consider herself an activist.

K. Malabu offers neurobiological alterglobalism, which is based on an understanding of the brain associated with the connectionist program of neuroscience. She sees the brain not as a command center, but as a network of processes distributed across a network. Such an understanding of neurobiology leads to the fact that we must not become flexible, but plastic, which provides the possibility of emancipation. The brain ceases to be an adaptable object, becoming an actively transforming subject.

Plasticity is integrated with the concept of hardness, implying definiteness of form and imposing very strict restrictions on the ability to deform or change. Plasticity offers a more effective ability to transform in the form of movement from one certainty to another certainty.

16. Philosophy of communication

Philosophy of communication combines two ambiguous disciplines, philosophy and communication. Communication is commonly said to be at the crossroads of many disciplines. Marshall McLuhan is taken for granted by many communication scholars, but he was a professor of English literature. What should one—or a theory—be or do to be said to fall within the communication umbrella? Tackling philosophy is not any easier. Many sociologists, anthropologists, semioticians, and linguists, as well as communication theorists, have been philosophers at some point in their career. For example, Ferdinand de Saussure's contribution to semiotics is no lesser than C. S. Peirce's, and yet the latter is called a philosopher while the first is a linguist.

Should we, in this entry on the philosophy of communication include Peirce and leave aside Saussure? With so many ambiguities regarding communication and philosophy separately, how can one decide, then, what philosophy of communication should be? When reading communication studies articles, philosophical references range from Aristotle and Arendt to Kierkegaard or Levinas, along with some more obviously communication or language thinkers such as Habermas or Wittgenstein. There is therefore an important element of

decision on our part in assessing the contributions of some authors to the study of communication and in deciding whether it is philosophical in nature.

We chose to look at where communication studies literature has drawn the line between what constitutes philosophy or not. Furthermore, there are few journals devoted to philosophy of communication proper, perhaps with the exception of Empedocles: European Journal for the Philosophy of Communication and the International Communication Association's Communication, Culture & Critique. This scarcity makes it harder to identify a well-established set of interests, theories, and methods. That is why this article is divided mainly according to the types of works discussed, rather than attempting to find coherence where there is in fact little.

Philosophy of communication is fragmented among different streams, some focusing on language, others on communication proper, and yet some others on a relatively new effort to formalize a "philosophy of information." Regarding this last trend, Adriaans and van Benthem 2008 acknowledges, much like Floridi 2004, that philosophy of information is still a nascent discipline and that, therefore, the essays collected aim not so much at describing an established field as to establish it performatively, especially by distinguishing it from its immediate neighbors, such as philosophy of language. Arneson 2007, for its part, is a good representation of the work being currently done in philosophy of communication as such.

The word "concise" in the title of the encyclopedia Barber and Stainton 2010 is misleading: its 836 pages cover everything one needs to know in the philosophy of linguistics, from "A Priori Knowledge" to "Verificationism", and includes entries as varied as "Description and Prescription" (G. Nelson), "Presupposition" (P. A. M. Seuren), and "Systematicity" (P. Robbins). Giving a broader perspective, Chang and Butchart 2012 answers an important demand in teaching philosophy of communication: the editors put together some of the most important foundational texts of the field in a single book. As the editors remark in their introduction, some people may feel that the volume's title, Philosophy of Communication, projects a coherence in what is in fact a collection of unrelated texts - how would, for example, Deleuze feel to be included in a communication anthology?

As discussed in the Introduction, choosing what constitutes communication, philosophy, and a fortiori is no easy task. The genius of Chang and Butchart lies in having made the exercise explicit, and the very selection of texts reflects the variety of takes at the issue. Mangion 2011 also offers a compelling review of the major authors of philosophy of communication, and each author's core concepts are explicated within his or her thought (for example, Peirce's existential graphs are well situated within his logic and semiotics).

The Theory of Communicative Action is a two-volume 1981 book by Jürgen Habermas, in which Habermas continues his project of finding a way to ground "the social sciences in a theory of language", which had been set out in On the Logic of the Social Sciences(1967). The two volumes are Reason and

the Rationalization of Society (Handlungsrationalität und gesellschaftliche Rationalisierung), in which Habermas establishes a concept of communicative rationality, and Lifeworld and System: A Critique of Functionalist Reason (Zur Kritik der funktionalistischen Vernunft), in which Habermas creates the two level concept of society and lays out the critical theory for modernity.

After writing «The Theory of Communicative Action», Habermas expanded upon the theory of communicative action by using it as the basis of his theory of morality, democracy, and law. The work has inspired many responses by social theorists and philosophers, and in 1998 was listed by the International Sociological Association as the eighth most important sociological book of the 20th century.

17. Synergetic

New science of complexity, i.e. synergetics, is in the process of becoming widely appreciated now. Synergetics deals with cognition and explanation of complex structures, principles of their self-organization, generation of order from chaos, evolution and co-evolution. Synergetics as an interdisciplinary research field has far going applications to understanding of human being and development of social systems.

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Synergetics as a field of scientific research has existed for over thirty years already. The term «synergetics» was introduced by the German scholar, Prof. H.Haken. It is widely used, but still not generally accepted. Instead, «theory of self-organization» is used as a more traditional term. In the last years two other terms «studies in complexity» and «theory of chaos» became widely circulated. Sometimes they are used as identical with the former two, and sometimes only partly overlap with them.

Synergetics can be considered as a modern stage of development within the traditions of cybernetics (N.Wiener, W.R.Ashby) and system-structural analysis (attempts to elaborate the general theory of systems). However, many elements of the latter have undergone further essential reformation. While cybernetics investigates the functioning of complex systems using an abstract model of «black box», synergetics studies some physical mechanisms of the complex structures formation, i.e. it tries to look into the «black box». While cybernetics elaborates algorithms and methods of control of systems, synergetics investigates the processes of self-controlling and self-organization of complex systems in the world.

The focus of synergetic research program is to reveal some general laws of self-organization and evolution which are common to processes of quite differ-

ent nature: physical, chemical, biological, psychological, social. As such synergetics contains an open trend towards universalization and directly borders on philosophy whose aim is to deal with the ultimate features and laws of reality. General line of synergetic research consists mostly of two elements: from a concrete, but fundamental model of processes to interdisciplinary generalizations and back to concrete subject with its rectified theoretical understanding. Accordingly, synergetics functions as applied synergetics and synergetics proper.

The whole history of development of the theory of self-organization shows that significant theoretical generalizations appeared from rather narrow, but fundamental scientific results. The non-equilibrium thermodynamics and the theory of dissipative structures developed by the Brussels school of the Nobel prize winner (1977) I.Prigogine had its background in investigation of processes in physical chemistry. The development of the theory of cooperative behaviour, made by H.Haken and called synergetics proper, originated from the investigations of the coherent radiation of lasers. Lasers became a paradigmatic example of synergetics. H.Haken is an editor of a Springer series of books on synergetics (already more than 60 volumes) presenting a whole spectrum of synergetic developments in the world.

As one of other examples of natural science stating point of for further generalizations up to a worldview one can mention the investigation of nonlinear auto-waves as early as in the 1930′s by the Russian school of L.I.Mandelshtam and A.Andronov.

Some astonishing results have been obtained recently by the Moscow synergetic school at the Keldysh Institute of Applied Mathematics (Russian Academy of Sciences) led by S.P.Kurdyumov with whom I have been collaborating for more then 10 years. The basic model is here a certain class of nonlinear equations describing evolutionary processes of burning in very fast, so-called blow-up and regimes in dissipative media. The model implies a profound sense. Some general features of the complex systems behaviour are being revealed, namely: mechanisms of localization processes (structures formation) in open dissipative media, spectra of structure-attractors as the most stable formations which evolutionary processes in such media go to; methods of resonant excitation of structure-attractors; way of a complex whole construction from parts (structures) developing with different speeds.

It’s worth mentioning some other trends in the studies of complexity, chaos and self-organization. E.Laszlo, President of the International Society for the Systems Sciences and a Member of the Club of Rome, is involved in finding ways of a transdisciplinary unified theory construction. The American scholar B.Mandelbrot elaborates the so-called theory of deterministic chaos, various scenarios of transition to chaos and back. The Chilian biologists H.Maturana and F.Varela introduced the notion of autopoiesis which, in their opinion, describes a fundamental ability of living beings to permanently maintain their organization and to develop.

F.Varela is working now in Paris and develops the theory of autopoiesis and its application to the human brain activities. The other scholar working in Paris E.Morin, a founder of Association of Complex Thinking (Association de la Pensee Complexe), has undertaken profound analyses of the very language of complexity and chaos. There are many other researchers fruitfully working in the fields. All these trends are coloured in specific tones of the original disciplines, e.g. mathematics, physics, chemistry or biology.

Synergetics reveals the creative role of chaos in the process of origin of complex structures and their evolution. Chaos and fluctuations on micro-level play an essential role in determining actual trends, «aims» of processes at a macro-level. Chaos manifests itself as a mechanism underlying an exit to one of evolutionary structure-attractors. The macro-organization evolves from a disorder, chaos on micro-level. Dissipative processes, which are a macroscopic revelation of micro-chaos, act in the same way as a sculptor's chisel shapes a statue from a block of marble. One of the most essential questions is that of the trends of evolution: where do evolutionary processes go to? How does history flow on?

The future states of complex systems escape our control and prediction. The future is open, not unequivocal. But at the same time, the spectra of «purposes» of development are available in open nonlinear systems. If we choose an arbitrary way of evolution, we have to be aware that the way may be not feasible in a given system. Only a definite set of evolutionary ways, evolutionary structure-attractors can develop. Figuratively speaking, there is «a tacit knowledge» of the system itself. The spectra are determined exclusively by the inner properties of open nonlinear systems. Thus, the future is open in the form of spectra of pre-determined possibilities.

Complexity is closely connected with speed (tempo) of evolution. A complex structure is an integration of structures of «different ages», i.e. structures at different evolutionary stages of development. The principles of integration of such structures of «different ages» into an evolutionary whole structure are being revealed in synergetics. The integration of relatively simple structures into a more complex one occurs through the establishment of a common tempo of development in all unified parts (fragments, simple structures). Structures of «different ages» start to co-exist in one and the same 'tempo-world'. The term 'tempo-world' proposed here signifies 'a world having a certain rate (tempo) of development'. Rate of development is the most important characteristic in the process of assembling of a complex evolutionary whole.

Synergetics goes beyond the framework of strict mathematical models and narrow applications. Scholars are trying now to apply synergetics not only to new fields of natural sciences, but also to the humanities. There are some attempts to use synergetic models in understanding human artistic and scientific creativity, cognition, health, education, communication, humankind development, etc. Although it is very difficult to use synergetic models here in a quantitative way, a general qualitative synergetic view allow us to reveal some unusual features of the human individual and his collective life.

Synergetics is optimistic in its essence. In the modern situation of accelerated and unstable development of the world, synergetics brings us new hopes. It is an optimistic attempt to understand the principles of co-evolution of the complex social systems, to reveal causes of evolutionary crises, instability and chaos and to master the methods of nonlinear management of complex systems in unstable states. How to manage a complex system without harsh management is the major problem. How can we push the system in a favourable (for the subject) evolutionary path with a small resonant influence? How can we provide a self-maintaining and sustainable development? Synergetics can serve as a heuristic instrument in searches of answers to the questions.

The synergetic approach to a human being is a new approach to individual and collective health (socio-therapy). Healing acquires a metaphorical image of «self-opening», «returning to self». It is a kind of «synergetic adventure» of a human being when the latent attitudes (structures-attractors) to a favourable and healthy future are being revealed in the human. It is discovering some self-maintaining paths and inner forces to follow them. From a synergetic point of view it is possible to discuss the following questions: Is it healthy to be chaotic? What are the causes of the efficiency of weak influences such as homeopathic or acupunctural? Is it possible to be psychically healthy and to have simultaneously a somatic disease?

The synergetic approach to education, synergetics of education, can be characterized as a gestalt-education. The procedure of education, a way of connection between a teacher and a pupil, is not a transfer of knowledge from one head to another. It is neither an enlightenment nor rendering of some already discovered truths. This is a nonlinear situation of an open dialogue with an intermediate feedback, a joint educational adventure. This is falling — in course of solving some problems — into one and the same self-concordant tempo-world. The latter means that due to common activity the teacher and the pupil begin to develop with the same rate.

The educational procedure consists simply in awakening of the forces and abilities of a given pupil and in stimulating progress on his or her own paths of development. The gestalt-education is an initiating education, reopening of ourselves, collaboration with ourselves and with other people. It is a way to discover the reality as well as to search paths into the future.

18. Philosophical traditions of the Belarus

The intellectual tradition of Belarus was formed by the logistics factors of the Great Silk Road in the framework of the dialogue between the West and the East. This logistics has created the practice of interaction between the intellectual elite of Belarus and the centers of ancient philosophy located on the territory of the Byzantine Empire. The eastern part of the Roman Empire existed until 1453. Its ideology was formed by the Christianity of the eastern rite. From west to east, she connected Italy and China through trade routes. From north to south

in Constantinople passed the logistics of the trade route from the Baltic Sea region. Part of this logistics was Belarus.

The route from Scandinavia to Constantinople on the territory of Belarus had several transit logistics. Along the Pripyat and Bug rivers, the Dnieper river logistics was connected with the Vistula river logistics with access to the Baltic Sea. This integrated logistics with dragging elements was used to transport amber from the coast of the Baltic Sea towards the Mediterranean. The river logistics along the Pripyat rive with the subsequent exit to the Neman River and the Baltic Sea was subordinated to the tasks of the amber road.

Another trade route ran along the rivers Pripyat, Sluch, Goryn and Dniester. He ensured the delivery of amber to the shores of the Black Sea. The control over the trade routes of the logistics of the Great Silk Road, concentrated in Constantinople, in Belarus was carried out by the Turov and Polotsk principalities. In the capitals of these principalities, on the basis of the influence of the Greek thought of the Romey (Byzantine) empire, the intellectual tradition of Belarus was formed. Intellectual and spiritual borrowing fell on a bright period in the development of Greek thought in the Byzantine Empire, associated with the functioning of the school of the University of Constantinople. The main role in the formation of this school was played by Mikhail Psel and his follower John Ital. The school was represented by Eustratius of Nice, Nikolai Methonsky. Within the framework of the school, a synthesis of Aristotelian logic and Platonic metaphysics was carried out.

Representative communities of Greeks were in the capitals of the Belarusian principalities. There was no exception Turov. Here the formation of K. Turovsky took place. In Polotsk, the intellectual tradition was formed by E. Polotskaya. Their predecessor was K. Smolyatich. While in Kiev at the episcopal service, he had direct contact with representatives of the large diaspora of the Greeks of Byzantine Christian rationalism (humanism).

This direction was formed on the basis of the activities of the Alexandrian and Antioch theological schools thanks to the works of Justin the Philosopher (Martyr), Athenagoras, Tatian, John Chrysostom. The Cappadocians (Basil the Great of Caesarea, Gregory of Nyssa) integrated the ancient intellectual tradition of education into Christian rationalism. The Areopagite used philosophical categories to uncover the essence of divine revelation. In the same context, the works of I. Damaskin wrote. Thanks to the efforts of Gregory Palamas, Christian rationalism was transformed into Christian Orthodox humanism. In this form, it was perceived in the middle Ages in Belarus.

The first philosophical texts of Belarusian thinkers correspond to the genre of theological discourse. This discourse was developed in Alexandria. Here a synthesis of Jewish and Christian traditions with ancient philosophy took place. In Alexandria there was a significant Jewish community, a rich intellectual tradition of translating works into Greek. Since Christianity was based on the authority of texts, the result was the Bible, as well as the understanding that theology

and philosophy should be connected. Christianity was positioned as a religion of an educated society.

Aristotle's philosophy was most consistent with this thesis. Its adoption was preceded by preparatory work related to the synthesis of theological and philosophical discourses. This synthesis occurred within the Roman Empire. In its western part, the Latin language prevailed. Changes in understanding the content of theological discourse were introduced by A. M. S. Boethius. He justified the idea that the knowledge of free sciences contributes to the understanding of scripture. The first group of free sciences includes grammar, rhetoric, dialectics (trivium). The second group of free sciences included arithmetic, geometry, astronomy, music (quadrivium). They were more relevant to the natural sciences.

In the eastern part of the Roman Empire, theological discourse was developed in Greek. An exceptional role was played by the works of D. Areopogit. They were presented in 532 at the Church of Constantinople. They examined the concepts of God, faith, Christ, the Trinity, the One, predetermination, the heavenly hierarchy, the church hierarchy, the divine name, the knowledge of God, emotion. I. Damaskin in the works “Holy Parallels”, “On the Nature of Man”, “Three Words against Denying Icons”, “Source of Knowledge” substantiated the aesthetic theory of visual perception of the Christian cult. Painting, artistic images exist to display the essential side of theological premises.

The high level of literacy of the population of Belarus led to the choice in favor of a model of Christian rationalism. Textual resources were viewed in the broad context of deep meanings that needed to be found through the Bible. For this reason, an important role was given to the interpretation of the texts of the Bible in the genres of allegory, parables, prayers, teachings. Such forms created an opportunity to expand the text space of the Bible. Most clearly K. Smolyatich coped with this task. He became one of the first creators of the theological culture of educated rationalism.

K. Smolyatich was born in Eastern Belarus. He lived at the turn of the XI – XII centuries. He held the post of Metropolitan of Kiev. Several of his works have been preserved. They focus on the text of the Bible. Particular emphasis is placed on the discovery of underlying deep content that is not directly readable. The mystical and theological emphasis is connected with the consideration of the principle of predestination and its role in solving the problem of sinfulness and salvation.

Ethical topics are investigated. She focuses on condemning the abuse of material interests. Wealth should not dominate as the goal of life. Moreover, wealth should not be confused with fame. The believer has the right to it. This reasoning was focused on the educated part of society, which needed to understand the relationship between modesty and social activity.

K. Smolyatich considers it possible, during Christian reflection, to appeal to ancient wisdom, since there one can find content acceptable for Christianity. This justification was promoted by the principle of divine predestination. It followed that everything existing in the world is expedient, including ancient wis-

dom. K. Smolyatich developed the concept of biblical studies, according to which the advantage when working with scripture texts should be given to the figurative and symbolic method. This method allows the use of biblical stories in order to detect the meanings hidden in them. The text must not only be able to read, but also used to enrich your own spiritual world. In such circumstances, the mind gets an opportunity for intellectual work. Ethical aspects of human life are associated with faith, love, patience, mercy. A person should not sacrifice the body. Asceticism should be combined with the physical existence of the individual in the social space.

In his thoughts K. Smolyatich refers to the works of Aristotle and Plato. Preference is given to Aristotle. The key concept of the Epistle to St. Thomas is God, because everything in the world is supported by divine power. God sees everything, wisely leads people, directs them and gives a guarantee of salvation. A believer, as K. Smolyatich shows, can recognize a being of the highest depth of Scripture through metaphorical comparisons, stories.

Mental abilities play a large role in strengthening faith. They need to be developed recognizing the world created by God. Through the results of divine creative works, God himself is known. Feelings are related to faith. Their task is not cognitive. Thanks to the mind that cognizes the world, the essence of man masters the toponymy of being on Earth.

The essence of life is hidden in this place name. It is visible to righteous believers and they adhere to it. It is visible to some, but they are not able to adhere to it. The problem lies in their ability not only to feel the presence of God, but also to use the freedom that God has given them. Christ gave people the opportunity to choose Grace through understanding the life path on Earth. Theological discourse is displayed in the space of anthropological topics. The believer knows why he needs faith.

Simultaneously with the activity of K. Smolyatich, the activity of K. Turovsky (1130-1193) took place. He was born in Turov, which was the center of the principality. There was a developed economy, education, and an extensive infrastructure of monasteries. The city had an intense relationship with Byzantium. Cyril was born into a wealthy family. But he gave preference to spiritual activity. He held high spiritual positions. Numerous of his works have survived to our time. Their source is the Bible. The works are written in the genres of legends, parables, messages, prayers, canons. The works are well preserved due to the fact that they were included in their publications by well-known publishers. At the end of the 19th century, the bishop of Turovsky published a complete collection of the works of K. Turovsky. The thinker is dominated by the concepts of God, the Trinity, Christ, Holy Scripture, and faith.

K. Turovsky wrote works in the genre of a person who had a dialogue with opponents. Based on the views of I. Chrysostom, V. the Great, K. Turovsky gave preference to the mystical components of theology in the understanding of God. He believes that God is not knowable in terms of rational understanding. He is cognizable only through the surrounding world created by him. Thus, ob-

serving the spring awakening of nature means observing the world created by God. The creator of the text can demonstrate the same power of divine design. It should be dominated by the power of the word. The symbolic interpretation of the Bible in the form of a parable makes it possible to reveal the content of faith, body, soul, spirit, knowledge, man. An entity arises as soon as a layman understands the difference between good and evil. He begins to understand the difference between a situation of sin that is not based on knowledge and sinful action.

K. Turovsky gives believers advice on what books to read in order to strengthen their inner spiritual world. He uses the dialectics of the material and the spiritual, bodily and conscious. The body is given to man as a test. If he does not cope with this test, then he falls into the trap of pleasure. Prayers can help in this test, which create an atmosphere of dialogue with God. Parables give believers a picture of the world's smoke, which includes the life of the individual. They are instructive. So, "The Parable of the Human Soul and Body" shows that all the elements of the Universe have synergy according to God's plan. Without it, individually, they demonstrate situations of problematic human behavior with elements of great sin in the form of theft and murder.

The imperfection of human behavior does not mean a lack of hope for believers to attain divine grace. An important role is played by outreach. The sermons of K. Turovsky have the subject of the Easter cycle of Sundays and holidays. Each of them pursues an educational goal. In his opinion, it is impossible to mix everyday and real Christianity, coming from patristics. At the same time, one must be tolerant of authentic Christianity. It synthesizes the folk tradition and the intellectual tradition of the ancient Greeks. Educated people are required to educate those nearby. The main thing is not to fall into the trap of pride. Those who fall into this trap, God deprives intellectual abilities.

K. Turovsky assigned an important role to priests, their education, so that they corresponded to an educated society, because even the rulers, in his words, strive for knowledge. Education requires mastery of the word, accessible writing, clear mind. The main thing is to get rid of the rudeness of the language, the uncertainty of the mind. Dialogue with people is facilitated by modesty and repentance, spiritual work and good deeds arising from a spiritual lifestyle. The main thing is to convince believers to abandon sinful acts and indecent behavior in the form of drunkenness, overeating, adultery, envy, slander, usury. A righteous lifestyle requires restraint, mercy, respect for people, fasting. The content of sin includes slander, insults, condemnation, anger, quarrels, fights, jealousy, enmity, evil designs, binges, theft, robbery, robbery, murders, sorcerers, adultery. An alternative to evil is represented by good morals, care for orphans.

Scholasticism was embodied in Belarus in the activities of E. Polotskaya. She was born in 1101 in Polotsk, came from a princely family. At the age of twelve, she received monastic tonsure. In the monasteries of Polotsk there were many manuscripts in Greek. E. Polotskaya used them as the basis of educational activity. In her practical activity, the great influence of Aristotelianism is felt. She wrote teachings, prayers, made translations. The goal of this activity was

Christian humanism. She wanted believers to have a good heart, to avoid envy, evil passions, so that their goal was good.

Christian humanism was possible only on the basis of education. To this end, E. Polotskaya founded a convent for women and men. They created handwritten books. In church schools, children studied Greek. As subjects were rhetoric, medicine, history and poetics. E. Polotskaya contributed to the heyday of the Polotsk architectural school. With her participation, John built a temple, which became known in her honor. With her organizational participation, L. Bogsha made a cross, which became the national relics of Belarus.

She sought to get to the Holy places. For this, at the end of her life, she went to the Middle East, to Jerusalem. E. Polotskaya became the first woman to be canonized by the Orthodox Church. This event occurred in 1547.

Greek representatives of Christian Orthodoxy were engaged in Greek philosophy in Belarus. After the fall of Constantinople, communication with the Greek world was broken, and the Belarusians had to re-build a dialogue with Europe in the face of the civilization of the medieval West.

After the transfer of the capital of the Grand Duchy of Lithuania, which included the territory of Belarus, to the lands of the Baltic tribes, the question arose of how to integrate them into the civilization space of the medieval West. In this way, in the light of the continued territorial expansion of the Teutonic and Livonian orders, the dynastic marriage of the Prince of the Grand Duchy of Lithuania Jagiello with the Queen of Poland Jadwiga in 1380 became.

The Kingdom of Population was Catholic and had a direct dialogue with the Vatican. One of the conditions of a dynastic marriage was the adoption by the Lithuanian tribes of Christianity in the Western rite, which was done. Dynastic marriage marked the beginning of the formation of the confederation of the Grand Duchy of Lithuania and the Kingdom of Poland.

Efforts have been made to integrate into the intellectual space of Western Europe. This should have been facilitated by the opening of a university in Krakow, in which a special dormitory for Belarusians and representatives of the Baltic tribes functioned. A phenomenon in the Europeanization of the Belarusian intellectual tradition was poetry in Latin. Its spokesman was N. Gusovsky. In the poem “Song of the European Bison”, he presented to Europeans a systemic image of Belarus through its nature, features of public administration, law, and the characterization of civil society. The Italians pushed him to write a poem. He told about the presence of buffalo in the forests of Belarus during his time on the local bullfight. Belarus was part of the diplomatic mission at the Vatican.

In the XV century, the intellectual culture of Belarus was integrated into European processes related to the institutional crisis of the Catholic Church. There was a search for modernization of this church. They were initiated by professors from universities in England, in particular, professor of Cambridge University, J. Wycliffe. At this university, natives of Slavic states, who were under the pressure of the Crusades studied. Among them were natives of the Czech Republic and Belarus. The influence of J. Wycliffe in the Czech Republic was

expressed in the sermons of J. Hus, whose execution laid the foundation for the Hussite wars. His colleague I. Prague visited the territory of Belarus and preached the teachings of the Hussites. The doctrine found support from Vytautas, whom the Hussites elected king. He did not take this opportunity, but in support of the Hussites he sent a five thousandth army, which helped them repel the four crusades. The support was motivated by the fact that the Hussite detachment participated in the battle of Grunwald on the side of Vytautas and contributed to the victory over the Teutonic Order.

Of the natives of Belarus in London, Y. Litvin proved himself. He opened a printing house in 1480, in which he published not only religious texts, but also the works of Aristotle. Among the books published by him are "Reflections on the XII Books of Metaphysics of Aristotle". Coming from Germany, S. Feol showed interest in publishing the Bible books in Cyrillic in Krakow. The publisher was targeted at a significant Orthodox audience, primarily Orthodox students who were educated at the University of Krakow. It is possible that S. Fiol was in close intellectual contact with the German humanist K. Celtis. He was in 1489-1491 lived in Krakow. Polish researchers do not support such a hypothesis, but E. Nemirovsky does not exclude it. As a result, the beginning of the functioning of printing houses with different fonts and literature was laid.

In the XIV-XVI centuries, a model of university education of Belarusian youth was formed. Undergraduate graduated from the University of Cracow. An important source of information on the intellectual migration of the natives of Belarus within the civilization of the medieval West is typography. It has become a meeting place for representatives of European cultures. Belarusians opened printing houses in different cities of Europe. Their publications have become the main documents of their identification. An analysis of the printing activities of the natives of Belarus showed that they published books in close contact with German, Czech, Italian, British masters. An example of such intercultural activity was given by F. Skorin. He was educated at the universities of Krakow and Padua. He worked in many cities in Europe, in particular in Prague. A study of his publishing activities formed in science an independent historiographical direction called «Scoriniana».

The intellectual migration of the natives of Belarus within Europe was promoted by the special status of cities, which had the institutional basis of Magdeburg Law. Canon law gave way to natural law. Based on the ideology of the Renaissance, a return to the legacy of the legal culture of the Roman Empire took place. Continuity was provided by the Latin language. Humanism has become an important foundation of natural law in the categories of Roman jurisprudence. Through these categories, the socio-political teachings of the thinkers of antiquity about society and the state were primarily references were made to Plato, Aristotle, Cicero, Marcus Aurelius.

Magdeburg law came to Eastern Europe with German merchants in the XIII-XIV centuries. It was a city law, which provided guarantees of self-government to large settlements. The place of its formation was Saxony. A sys-

tem of law called the Saxon Mirror was developed here. There were charters at the city level. The charter of the city of Magdeburg gave rise to Magdeburg Law. This right is widespread thanks to the principles of self-organization of local structures formulated in it.

At the same time, the city government, represented by the magistrates, got the opportunity not only to form, but also to realize their own interest groups. These interest groups were created by merchants and guild structures. Cities were guided by the law arising from their special status. They were responsible for the safety of citizens, ensuring order, protecting the interests of the city.

Magdeburg Law provided unique opportunities for urban growth through trade. This opportunity was realized by German cities in the form of a trade union called the Hansa. It included dozens of cities that established trade relations with each other. Among them were Veliky Novgorod, Vitebsk and Polotsk. Trade agreements have become a channel for translating Western European legal practices into Eastern Europe. Universities have become important centers of legal culture. In Eastern Europe, universities were opened in Krakow, Koenigsberg, and Vilna.

Legal practices of collective relations in the economic activity of the population of Eastern Europe were formed by the needs of regulation of issues related to the transfer of ownership of personal items, hunting, fishing, as well as land ownership, and peasants. After the Mongol invasion of the Principality of Eastern Europe, the traditional trade routes to the East were destroyed. Trade, which nourished the Belarusian economy, was concentrated in the Baltic Sea region. She was promoted by the colonization of the coast by German immigrants under the auspices of the Crusades.

Commodity flows from Belarus were directed along the Western Dvina towards Riga. Within the Belorussian cities, trading districts of German merchants with associated infrastructure arose. The community was dominated by Magdeburg Law. Their dominant role was fixed in the form of agreements with the veche and princely authorities of Polotsk, Vitebsk and Smolensk. This written law became the subject of study by E.F. Kara. Based on the analysis of these documents, he concluded that the main phonetic and lexical features of the legal acts of the twelfth century were formed. The presence of a single legal space is one of the important indicators of a single space of the economy, the formation of integrated legal practices of collective relations.

In the temporary boundaries of the traditional society of Eastern Europe, legal practices of popular law, princely power, and city self-government took place. A variety of forms of secular law was supplemented by the canonical law of the Catholic, Protestant and Orthodox Christian denominations. The influence of the Hansa led to the further development of the institution of privileges. Cities, on the basis of the practice of Magdeburg Law, received the status of self-governing territorial entities with certain business opportunities. In the countryside, the norms of the Russian Truth were in effect. With the formation of the infrastructure of the institution of private property in agriculture, the need arose

to introduce it into written law. This was important for the owners of large commodity farms represented by the families of magnates, as well as for the land-poor owners represented by the nobility.

In the XIV-XVI centuries, this issue acquired great importance. Based on the philosophy of natural law, L. Sapega implemented the methodology of a systematic approach in the field of law. Its practical expression was the Statute of the Grand Duchy of Lithuania in several editions. It was a convergence of the collective legal relations of the city and the countryside. This was especially important for privately owned cities, such as Nesvizh. As a result, the law began to play an important role, which determined the dominance of the constitutional economy model in economic activity.

After the collapse of the Hansa, trading in the Baltic Sea region was controlled by merchants from Holland. Their interests in trade with Eastern Europe focused on the transshipment opportunities of Danzig, where grain and other products of agricultural and forestry activities were delivered. The legal acts followed the succession methodology. The best achievements of European law were recorded. Outstanding representatives of the Renaissance and Reformation contributed to the development of legal documents. Among them, F. Skorin, N. Gusovsky, S. Budny, A. Volan, M. Litvin, L. Sapega. As amended in 1588, the Statute of the Grand Duchy of Lithuania had a number of advantages due to the fact that the experience of developing the Statute in the revisions of 1529, 1566 was taken into account. This is a comprehensive systemic document in which the legal subjects necessary for the economy, civil society, and government structures are integrated.

The dominant of natural law turned out to be important for Belarus in the conditions of active contact in the space of its spiritual culture of various religious traditions. Belarusian society adhered to the framework of Christianity, Orthodoxy and Catholicism. Together with the Tatar communities, Islam began to be cultivated in Belarusian cities. Mosques became its symbol in the city.

Following the example of European cities, Belarusian cities began to develop on the basis of Magdeburg Law. A special world of the Belarusian economy was formed by agriculture. On the basis of the concentration of ownership of land, large commodity farms arose. The owners of these farms housed residences in the small cities they owned. The lands within Belarus and Lithuania were owned by the Radziwills, Guts, Oginsky, Sapieha, Tyzengauz, Tyszkiewicz and Chapsky. They lived in the palace and park complexes. For their construction, they invited architects from Italy, Germany. Landowners with significant financial resources patronized religious movements, education, determined the policy of the Grand Duchy of Lithuania.

Natives of Belarus while in Italy in parallel with the university education system used studia humanitatis. These studies involved independent work on the manuscripts of ancient authors written in Latin and Greek. In this context, an important role was given to fluency in the Latin and Greek languages and texts written in these languages. Representatives of studia humanitatis reinforced their

skills with appropriate public behavior designed to ensure social status and material support for influential families of local aristocrats within Italian cities.

The bulk of the population of Europe used the language volgare. As a result, intellectual humanism was not accessible to ordinary people. The Bible was also not very accessible, since only the upper strata of society spoke the Latin language. A similar linguistic situation existed in medieval England after the conquest of the Normans. Ordinary people used English, Latin and French. England was the first to actualize the movement for translating the Bible into a language that was used by the bulk of the population. In this language, national poetry was formed.

The natives of Belarus F. Skorina, S. Budny, A. Volan, M. Smotrytsky, V. Tyapinsky, S. Sobol, P. Mstislavets followed this path in the 16th century. They translated the ideology of humanism into the Belarusian language. At the same time, they remained in the linguistic practices of multilingualism. They continued to publish texts in Latin, Polish, and Greek. In the Belarusian intellectual tradition, studia humanitatis, as in Holland, was not limited only to philology. They included law issues. Natural law prescribed to proceed from the diversity of forms of social and spiritual life and guaranteed this diversity through the principle of tolerance, which was relevant in the conditions of the Reformation.

Intellectual migrations in the East European region in the XVIII-XIX centuries were formed by the role of German philosophy in the region.

Supporters of German classical philosophy in Belarus were T. Schenevsky and Y. Kragaevsky. Critical analysis of the work of supporters of German classical philosophy from the standpoint of the second scholasticism was carried out by I. Golovinsky and M. Yakubovich. In the subject field of their criticism were the philosophical works of F. Bochwitz.

Physiocrat, a native of the Belarusian city of Novogrudok, S. Askerka was an adviser to King of Prussia Ferdinand II. Anthony Heinrich Radziwill became the author of the opera Faust. Goethe wrote the libretto for the opera. The Berlin branch of the Radziwills has become part of German society. The reverse processes of the resettlement of representatives of German clans to Belarus also contributed to intellectual contacts in the East European cultural space.

An example was given by the Tizengauz family. In the XVIII century, Anthony Tizengauz, who held an important public office and managed the Grodno economy, invited the famous French scientist Jean Emmanuel Zhilibert to Grodno to create a botanical garden, pharmacies, a medical academy, and medical institutions in the city. The scientist arrived in 1775. For a short time in the city, he fulfilled a list of obligations to develop science and medical infrastructure. A medical academy functioned in the city, in which scientists from Europe taught.

More than two thousand plants were planted in the botanical garden. The dismissal of A. Tizengauz's public office interrupted the scientific activity of J.E. Zhibiber in Grodno. In addition to the Tizengauz, representatives of the German clans Guttenov and Wendorff moved to Belarus. Gutten von Chapsky contributed to the development of Minsk and its environs. Wendorff was glori-

fied by the researcher of the indigenous peoples of Western Siberia, Eva Wendorff. After marriage, she became Eva Felinsky.

Since the end of the 18th century, Belarus has been a part of the Russian Empire. As a result of this, the natives of Belarus began to receive education at the universities of Kazan and St. Petersburg. In the direction of these universities, they had the opportunity to study at German universities. One of these students was L.I. Petrazhitsky. He is born in 1867 in the Vitebsk province. He studied at the gymnasium in Vitebsk. He continued his education at the Faculty of Law of Kiev Imperial University of St. Vladimir. Since 1890, he trained at the University of Heidelberg and at the Russian Institute of Roman law. In 1898, he was awarded the degree of Doctor of Roman Law. In 1898-1918 he headed the department of the encyclopedia of law at St. Petersburg University.

From September 9, 1905 to September 25, 1906 he was dean of the law faculty of the university. He headed the Department of Sociology at the University of Warsaw. L.I. Petrazhitsky developed emotional psychology. He had to combine it with the right. This was not easy in the conditions of his methodology of Roman law.

The first independent work of L. Petrazhitsky, written in Germany under the title "Fruchtverteilung beim Wechsel der Nutzungsberechtigten" (Berlin, 1892), was devoted to the doctrine of income from the standpoint of Roman law. On the basis of this work, in 1892 he defended a master's thesis at the University of Kiev, specializing in Roman law, entitled "On the Distribution of Incomes When Transferring the Right of Use under Roman law". In 1898, Mr. at St. Petersburg University defended his doctoral dissertation in the specialty of Roman law on the topic: "Rights of a bona fide owner on income from the point of view of dogma and civil law policy." The scientific interests of L. I. Petrazhitsky were related to the theory of law. He created a legal sociological school. His students subsequently became famous scientists in the field of sociology of law and general sociology – P. Sorokin, N. Timashev, J. Gurvich, N. Kondratiev. But then his interests shifted to the field of psychological theory of law.

Another native of Belarus, I. Domeiko, appeared in the space of European scientific communication. He was born near the Belarusian city of Novogrudok. Since 1812 he studied at a public relations school in Schuchin. In 1816 he entered the Department of Physics and Mathematics of Vilnius University. 14 years of age made him one of the youngest university students. Studying at the university was completed in 1820. In 1822, he was awarded the master's degree in philosophy. Later he devoted his life to politics. But he was forced to leave her. In 1832 he went to Saxony. He traveled to Switzerland. I was in Freiburg. Then he went to Paris. He attended lectures at the University of Sorbonne and the French College, studied at the Botanical Garden, participated in geological excursions. In 1834 he entered the Mining School - Ecole des Mines. He compiled a geographical, geological and economic map of the former lands of the Commonwealth and wrote extensive comments on it (the map and comments

were not published; materials were used in other publications). He accepted the invitation of the La Serena Mining School in Coquimbo in northern Chile.

Until 1846, he taught at the La Serena Mining School in Coquimbo. He conducted various studies, completed mineralogical collections, a scientific library, and a zoological collection. According to the method developed by Domeyko, knowledge was fixed by practical exercises in chemistry, physics, and geology. In 1845 he published a book in Spanish with a description of life, culture, and the language of the Araucan Indians, translated into several languages. He organized a meteorological service in Santiago de Chile. He continued to engage in mineralogical research, studied a meteorite discovered in the Atacama Desert, and studied the natives of South America. He wrote scientific works mainly in French and Spanish. Several editions of his textbook and at the same time the scientific work “Fundamentals of Mineralogy” - Elementos de mineralojia, with several applications. He maintained ties with Eastern Europe, sending his works to the universities of Warsaw and Krakow. He was a member of European scientific societies.

In the summer of 1884 he arrived in Bordeaux with his sons. In Paris, he met with friends of his youth Vladislav Laskovich and Jozef Bogdan Zalesky, visited the family of Vladislav Mitskevich, the son of the famous poet. In Krakow, he was enthusiastically received by the scientific community. In Warsaw, met with Odynets, visited Vilna, at home in Medvedka, in the World and Novogrudok. In the fall he returned to Paris. In 1885 he traveled to Rome. I visited Naples. With research purposes climbed Mount Vesuvius. Then he again visited Krakow, from where he went with Peter Semenenko on a pilgrimage journey through the Holy Land. Returning to Paris, he soon returned to his homeland and spent there more than two years, only occasionally leaving for a short while.

Narkevich-Iodko Yakov (Yakub) Ottonovich - Belarusian naturalist in medicine, inventor of electrography and wireless transmission of electrical signals, was born on December 27, 1847 in the family of a landowner in the estate of Ottonovo, Igumen district of Minsk province. He graduated from the Minsk gymnasium. He studied in Vienna, Paris and Florence. Having received serious training in physics, biology, medicine, Y. O. Narkevich-Iodko returned to his homeland. In 1872, he conducted scientific experiments in a laboratory equipped at the Nadneman estate (80 km southwest of Minsk).

Designed by Y.O. Narkevichem-Iodko visual observation method, or recording on a photographic material the glow of a gas discharge that occurs near the surface of the investigated object when the latter was placed in a high-voltage electric field, after 50 years experienced a rebirth and is known in many countries under the name “Kirlian effect” (the term also applies "Bioelectrography"). Narkevich-Iodko opens a sanatorium on the estate, offering those who wish to improve their health with the help of sun and air baths, gymnastics, mineral water from a well opened here, as well as the freshest koumiss. To produce the latter, he specially brought from Bashkiria a herd of thoroughbred horses and even specialists in the preparation of a healing drink. The kind-hearted gentle-

man generously distributes bottles with koumiss to the surrounding peasants - right from the window of the entrance gate (gate) to the palace. In the picturesque Nadnemansky sanatorium, patients were offered more radical methods of treatment - electromassage and electrotherapy. Many discharges helped. At the Roman Institute of Physiotherapy, the treatment procedures borrowed from J. Iodka were called the "Iodka System". He was a corresponding member of the Paris Medical, Physical, Astronomical, magnetic societies and electrotherapy societies; member of the Italian Medical Psychological Society.

At the end of the 19th century, Europe approached a new cultural quality in the form of Art Nouveau. The beginning of this era was formulated by F. Nietzsche under the name "revaluation of values." Art Nouveau adhered to a bourgeois lifestyle. He combined secularization, imperialism with original everyday solutions in the field of architecture, fine art. Bourgeois prosperity was created in an atmosphere of crisis in European culture. The culture of aristocrats and estates was a thing of the past. An increasingly important role in the social life of Europe was played by the crowd, whose energy the political elites directed to the fronts of the First World War.

The intelligent part of Europe felt the atmosphere of the crisis of the old continent. She tried to explain this phenomenon by analyzing the features of ancient tradition and subsequent historical eras (E. Husserl, V. Dilthey, K. Jaspers and O. Spengler). It was a rational approach. But there were those who turned to irrational principles. The works of A. Schopenhauer, F. Nietzsche, and Z. Freud became relevant. Biologism and physiologism were not acceptable to everyone.

The European aristocracy hoped that the crisis part of society would remain on the fronts of the First World War. Cozy salons cultivated patriotism, an aristocratic secular lifestyle, collecting and existentialism.

The crisis of the old continent brought an era of technological progress. Futurists admired changes, including military equipment. They went to the fronts of the First World War, where they died.

Against the background of such a rational absurdity, the search for other principles of European consciousness intensified. As part of these searches, a project of intuitionism was implemented. In France, A. Bergson became its author. Of the natives of Belarus, N. Lossky developed intuitionism, after the 1917 revolution he migrated to the Czech Republic. Another native of Belarus, N. Minsky, developed an applied area of a new philosophy called meonism. It has become the methodology of East European symbolism.

A. Bergson affirms life as an initial reality, which, being in integrity differs from matter and spirit. Matter and spirit are products of its decay. The basic concepts by which the philosopher determines the essence of life demonstrate "duration", "creative evolution" and "life impulse". Life cannot be reflected by intelligence. Intelligence is capable of creating general concepts. He is the activity of reason. Reality can be reproduced in organics and universality only by reconstructing it. This is only possible by intuition.

She directs attention to the primary reality of her own consciousness. Only self-observation is subject to continuous variability of states, duration. On these premises, A. Bergson created the doctrine of the evolution of the organic world, drawn by a stream of creative tension. Man is at the center of creative evolution. The ability to realize its inner power is the destiny of the elect, a divine gift. This explains the elitism of culture. There are proportionally two types of sociality and morality - closed and open types. Closed morality caters to the demands of social instinct when a person is sacrificed to a collective. In open morality, the priority is the manifestation of individuality, the creation of moral, religious and aesthetic values.

Henri Bergson understands being as a creative force, Language and other systems of symbols, being completely utilitarian, mechanize our life, hiding from reality a man. Intuition is characterized by detachment from practical interest. Her aesthetic character and duration are pronounced in it. Art does not abide in static material carriers, but lives in human experience. Art is art when it is perceived by someone. The perception of art is intuitive, which allows you to distance yourself from the conceptual fragmentation inherent in the activities of the intellect.

N. Lossky was born in Vitebsk province. He studied at the Vitebsk classical gymnasium. He was expelled in 1887 for promoting atheism and socialist teachings. He left for Switzerland, where he attended lectures at the Faculty of Philosophy of the University of Bern (1888-1889). After returning to Russia, he studied at St. Petersburg University. He was left at the university to prepare for a professorship in the department of philosophy. In the years 1895-1899 was a teacher at the Prince Oldenburg Women's College. Since 1898 he taught at the gymnasium M.N. Stoyunina.

In 1903, he received a master's degree in philosophy for his dissertation "Basic doctrines of psychology in terms of voluntarism"; Doctor of Philosophy degree - in 1907 for the dissertation "Justification of Intuitionism". In 1922, he was expelled from Soviet Russia as part of a large group of intelligentsia that did not accept Marxist ideology.

Until 1942, at the invitation of the President of Czechoslovakia, he lived in Prague. He was a professor at the Russian National University. Since 1942 he was a professor of philosophy in Bratislava in Slovakia. Since 1945, he lectured on philosophy at the St. Sergius Theological Institute in Paris. Since 1947 he lived in the USA. He taught in Yonkers, New York, at St. Vladimir Theological Academy. Last years he lived in Paris.

N. Lossky is one of the researchers of the works of F. Dostoevsky. He wrote a work on the history of Russian philosophy, which became one of the best publications. N. Lossky was part of religious Russian philosophy. In this context, his biography became the subject of study. The philosophical system he developed is integral. The key role in it is played by intuitionism. The university science of St. Petersburg played an important role in this emphasis.

Under the influence of Russian religious philosophy of Vladimir Solovyov and modern aesthetics, a native of Belarus Nikolai Maksimovich Minsky was found. He came from a poor Jewish family. He studied at the gymnasium in Minsk. He continued his studies at the Law Faculty of St. Petersburg University. At the end, he chose a literary career. In his student years he began to print poetry in periodicals.

It went through evolution to the mystical lyrics of Vladimir Solovyov. He was fascinated by populist ideas; The first fame was in 1879 as the author of the drama poem Last Confession, published in the underground newspaper, which inspired I. Repin to create the painting Refusal of Confession before Execution. In the mid XIX century underwent an ideological turning point and became one of the first preachers of the new mystical art.

The main philosophical treatise of N. Minsky is “In the light of conscience. Thoughts and dreams about the purpose of life” (1890) had a great socio-cultural resonance. He became one of the first ideological declarations of Russian symbolism. Speaking about the crisis of modern culture caused by the loss of a sense of meaningful existence, N. Minsky developed a new philosophy of meonism. It brought together the rational and irrational, mystical experience of the modern soul. His religious and philosophical poems “The Light of Truth” (1892) and “City of Death” (1894) continued with artistic means the ideas stated in the theoretical composition. They were perceived by contemporaries (in particular, V. Bryusov) as a new word of decadent art.

In the 1890s - early 1900s. N. Minsky was one of the main authors of the magazines "Northern Herald" and "New Way". In 1905, shocked by political events, N. Minsky again made a sharp turn in his convictions regarding the place of literature in society. Dreaming of the union of the intelligentsia and the people, N. Minsky became a supporter of social democracy. He wrote the Anthem of the workers - "Workers of all countries, unite!" Due to political persecution, N. Minsky left for Paris for casual literary earnings. He wrote plays based on the philosophy of God-seeking.

After the amnesty of 1913 (in honor of the 300th anniversary of the Romanov dynasty) N. Minsky returned to Russia, but did not stay there long and again went abroad. He was a war correspondent in France. After 1917, he lived in Berlin, served in the Soviet embassy in London.

At the beginning of the twentieth century, Belarus was influenced by transformations in the visual arts and architecture. The main reason for the transformations in the visual arts was the search for new forms of self-preservation and self-expression of artistic creativity against the background of the development of photography and visual technologies. There has been a tendency to move away from classical realism with its characteristic photographic reality. It was necessary to find new ways of dialogue between the artist and the viewer.

Such searches were conducted within the framework of bourgeois and socialist modernism. Organizationally, these searches focused in Paris. Institutions of aesthetics institutionalized here began to spread to the European periphery.

There was a huge oncoming movement from local art schools and artists. Belarus was no exception. In the country, art schools functioned in Minsk, Vitebsk. Graduates of these schools received higher art education in St. Petersburg. One of the elements of their education was creative trips to Paris.

In the triangle Belarus-St. Petersburg-Paris, the work of L. Bakst from Grodno, M. Chagall from Vitebsk was formed. Passing St. Petersburg, H. Sutin went from Minsk to Paris. Most attention in modern Belarus has received M. Chagall. In 1997, the memorial museum of Marc Chagall was opened in the house on Pokrovskaya st. in which the artist spent his childhood and youth. Its exposition contains household items from the turn of the XIX-XX centuries, archival documents, the first artwork, personal belongings of the artist and his family. Ancient exhibits for the collection were selected using a series of drawings, which M. Chagall created from memory, capturing the interiors of the parental home.

On the left bank of the Western Dvina is the second museum building - the Art Center of Marc Chagall. Here is one of the largest collections of M. Chagall in the world, combining more than 300 original graphic works and reproductions of his famous paintings. The art center of Marc Chagall opened in 1992 in the building of the 19th century, which is depicted on the world-famous canvas "Above the City". The first exhibits in the collection were works donated by the "Circle of Assistance to the Chagall House-Museum in Vitebsk" (Ninbur, Germany). The museum has a rich collection of graphic works by the artist, which includes lithographs, woodcuts, as well as 3 colored aquatints donated in 1994 by the artist's daughter Ida Chagall, and 96 etchings representing a series of book illustrations transmitted by the granddaughters of the artist Meret and Bella. These are magnificent illustrations by M. Chagall to literary works, including a series of sketches for the poem by N. Gogol "Dead Souls" (1923-1925), a series of color lithographs entitled "The Bible" (1956 and 1960) and "12 tribes of Israel "(1960).

A collection of printed graphics of the outstanding representatives of the European avant-garde is stored - Juan Miro, Pablo Picasso, Henri Matisse, Fernand Leger. The building of the Art Center houses a scientific library where you can find books about the life and work of M. Chagall. The opening took place in 2002 in honor of the 115th anniversary of the artist and was made possible thanks to Dr. Heinrich Mandel (Irrell, Germany). The library collection contains more than 3,500 books in English, German, French and Russian.

19. Philosophical traditions of the Russia

Although one can find scattered remarks of a philosophical nature in Russian writings before the mid-eighteenth century, these are at best of marginal interest to the professionally trained philosopher. For the most part, these remarks were not intended to stand as rational arguments in support of a position. Even in the ecclesiastic academies, the thin scholastic veneer of the accepted texts was

merely a traditional schematic device, a relic from the time when the only appropriate texts available were Western. For whatever reason, only with the opening of the nation's first university in Moscow in 1755 do we see the emergence of something resembling philosophy, as we use that term today. Even then, however, the floodgates did not burst wide open. The first occupant of the chair of philosophy, N. Popovsky (1730-1760), was more suited to the teaching of poetry and rhetoric, to which chair he was shunted after one brief year.

Sensing the dearth of adequately trained native personnel, the government invited two Germans to the university, thus initiating a practice that would continue well into the next century. The story of the first ethnic Russian to hold the professorship in philosophy for any significant length of time is itself indicative of the precarious existence of philosophy in Russia for much of its history. Having already obtained a magister's degree in 1760 with a thesis entitled «A Treatise on the Immortality of the Human Soul», Dmitry Anichkov (1733-1788) submitted in 1769 a dissertation on natural religion. Anichkov's dissertation was found to contain atheistic opinions and was subjected to a lengthy 18-year investigation. Legend has it that the dissertation was publicly burned, although there is no firm evidence for this. As was common at the time, Anichkov used Wolffian philosophy manuals and during his first years taught in Latin.

Another notable figure at this time was S. Desnitsky (1740-1789), who taught jurisprudence at Moscow University. Desnitsky attended university in Glasgow, where he studied under Adam Smith (1723-1790) and became familiar with the works of David Hume (1711-1776). The influence of Smith and British thought in general is evident in memoranda from February 1768 that Desnitsky wrote on government and public finance. Some of these ideas, in turn, appeared virtually verbatim in a portion of Catherine the Great's famous Nakaz, or Instruction, published in April of that year.

Also in 1768 appeared Kozelsky's «Philosophical Propositions», an unoriginal but noteworthy collection of numbered statements on a host of topics, not all of which were philosophical in a technical, narrow sense. By his own admission, the material dealing with theoretical philosophy was drawn from the Wolffians, primarily Baumeister, and that dealing with moral philosophy from the French Enlightenment thinkers, primarily Rousseau, Montesquieu, and Helvetius. The most interesting feature of the treatise is its acceptance of a social contract, of an eight-hour workday, the explicit rejection of great disparities of wealth and its silence on religion as a source of morality. Nevertheless, in his theoretical philosophy, Kozelsky (1728-1795) rejected atomism and the Newtonian conception of the possibility of empty space.

During Catherine's reign, plans were made to establish several universities in addition to that in Moscow. Of course, nothing came of these. Moscow University itself had a difficult time attracting a sufficient number of students, most of whom, came from poorer families. Undoubtedly, given the state of the Russian economy and society, the virtually ubiquitous attitude was that the study of philosophy was a sheer luxury with no utilitarian value. In terms of general edu-

cation, the government evidently concluded that sending students abroad offered a better investment than spending large sums at home where the infrastructure needed much work and time to develop. Unfortunately, although there were some who returned to Russia and played a role in the intellectual life of the country, many more failed to complete their studies for a variety of reasons, including falling into debt.

Progress, however, skipped a beat in 1796 when Catherine's son and successor, Paul, ordered the recall of all Russian students studying abroad. Despite its relatively small number of educational institutions, Russia felt a need to invite foreign scholars to help staff these establishments. One of the scholars, J. Schaden (1731-1797), ran a private boarding school in Moscow in addition to teaching philosophy at the university. The most notorious incident from these early years, however, involves the German Ludwig Mellman, who in the 1790s introduced Kant's thought into Russia. Mellman's advocacy found little sympathy even among his colleagues at Moscow University, and in a report to the Tsar the public prosecutor charged Mellman with "mental illness." Not only was Mellman dismissed from his position, but he was forced to leave Russia as well.

Under the initiative of the new Tsar, Alexander I, two new universities were opened in 1804. With them, the need for adequately trained professors again arose. Once more the government turned to Germany, and, with the dislocations caused by the Napoleonic Wars, Russia stood in an excellent position to reap an intellectual harvest. Unfortunately, many of these invited scholars left little lasting impact on Russian thought. For example, one of the most outstanding, Johann Buhle (1763-1821), had already written a number of works on the history of philosophy before taking up residence in Moscow. Yet, once in Russia, his literary output plummeted, and his ignorance of the local language certainly did nothing to extend his influence.

Nonetheless, the sudden influx of German scholars, many of whom were intimately familiar with the latest philosophical developments, acted as an intellectual tonic on others. The arrival of the Swiss physicist Franz Bronner (1758-1850) at the new University of Kazan may have introduced Kant's epistemology to the young future mathematician Lobachevsky. The Serb physicist, A. Stoikovich (1773-1832), who taught at Kharkov University, prepared a text for class use in which the content was arranged in conformity with Kant's categories. One of the earliest Russian treatments of a philosophical topic, however, was A. Lubkin's two «Letters on Critical Philosophy» from 1805. Lubkin (1770/1-1815), who at the time taught at the Petersburg Military Academy, criticized Kant's theory of space and time for its agnostic implications saying that we obtain our concepts of space and time from experience.

Likewise, in 1807 a professor of mathematics at Kharkov University, T. Osipovsky (1765-1832), delivered a subsequently published speech «On Space and Time», in which he questioned whether, given the various considerations, Kant's position was the only logical conclusion possible. Assuming the Leibnizian notion of a preestablished harmony, we can uphold all of Kant's

specific observations concerning space and time without concluding that they exist solely within our cognitive faculty. Osipovsky went on to make a number of other perceptive criticisms of Kant's position, though Kant's German critics already voiced many of these during his lifetime.

In the realm of social and political philosophy, as understood today, the most interesting and arguably the most sophisticated document from the period of the Russian Enlightenment is A. Kunitsyn's «Natural Law». In his summary text consisting of 590 sections, Kunitsyn (1783-1840) clearly demonstrated the influence of Kant and Rousseau, holding that rational dictates concerning human conduct form moral imperatives, which we feel as obligations. Since each of us possesses reason, we must always be treated morally as ends, never as means toward an end. In subsequent paragraphs, Kunitsyn elaborated his conception of natural rights, including his belief that among these rights is freedom of thought and expression. His outspoken condemnation of serfdom, however, is not one that the Russian authorities could either have missed or passed over. Shortly after the text reached their attention, all attainable copies were confiscated, and Kunitsyn himself was dismissed from his teaching duties at St. Petersburg University in March 1821.

Another scholar associated with St. Petersburg University was Aleksandr I. Galich (1783-1848). Sent to Germany for further education, he there became acquainted with the work of Friedrich Wilhelm Joseph von Schelling (1775-1854). With his return to Russia in 1813, he was appointed adjunct professor of philosophy at the Pedagogical Institute in St. Petersburg; and in 1819, when the institute was transformed into a university. Galich was named to the chair of philosophy. His teaching career, however, was short-lived, for in 1821 Galich was charged with atheism and revolutionary sympathies. Although stripped of teaching duties, he continued to draw a full salary until 1837. Galich's importance lays not so much in his own quasi-Schellingian views as his pioneering treatments of the history of philosophy, aesthetics and philosophical anthropology.

His two-volume «History of Philosophical Systems» from 1818-19 concluded with an exposition of Schelling's position and contained quite probably the first discussion in Russian of G.W.F. Hegel (1770-1831) and, in particular, of his «Science of Logic». Galich's «An Attempt at a Science of the Beautiful» from 1825 is certainly among the first Russian treatises in aesthetics. For Galich, the beautiful is the sensuous manifestation of truth and as such is a subdiscipline within philosophy. His 1834 work «A Picture of Man», marked the first Russian foray into philosophical anthropology. For Galich all scientific disciplines, including theology, are in need of an anthropological foundation; and, moreover, such a foundation must recognize the unity of the human aspects and functions, be they corporeal or spiritual.

The increasing religious and political conservativism that marked Tsar Alexander's later years imposed onerous restrictions on the dissemination of philosophy, both in the classroom and in print. By the time of the Tsar's death in 1825, most reputable professors of philosophy had already been administratively

silenced or cowed into compliance. At the end of that year, the aborted coup known as the «Decembrist Uprising»—many of whose leaders had been exposed to the infection of Western European thought—only hardened the basically anti-intellectual attitude of the new Tsar Nicholas. Shortly after I. Davydov (1792/4-1863), hardly either an original or a gifted thinker, had given his introductory lecture "On the Possibility of Philosophy as Science" in May 1826 as professor of philosophy at Moscow University, the chair was temporarily abolished and Davydov shifted to teaching mathematics.

Nevertheless, despite the oppressive atmosphere, some independent philosophizing emerged during the Nicholas years. At first, Schelling's influence dominated abstract discussions, particularly those concerning the natural sciences and their place with regard to the other academic disciplines. However, the two chief Schellingians of the era—D. Vellansky (1774-1847) and M. Pavlov (1793-1840)—both valued German Romanticism, more for its sweeping conclusions than for either its arguments or its being the logical outcome of a philosophical development that had begun with Kant. Though both Vellansky and Pavlov penned a considerable number of works, none of them would find a place within today's philosophy curriculum.

Slightly later, in the 1830s and '40s, the discussion turned to Hegel's system, again with great enthusiasm but with little understanding either with what Hegel actually meant or with the philosophical backdrop of his writings. Not surprisingly, Hegel's own self-described voyage of discovery, the «Phenomenology of Spirit», remained an unknown text. Suffice it to say that, but for the dearth of original competent investigations at this time, the mere mention of the Stankevich and the Petrashevsky circles, the Slavophiles and the Westernizers, etc. in a history of philosophy text would be regarded a travesty. Nevertheless, amid the darkness of official obscurantism, there were a few brief glimmers of light. In his 1833 «Introduction to the Science of Philosophy», F. Sidonsky (1805-1873) treated philosophy as a rational discipline independent of theology.

Although conterminous with theology, Sidonsky regarded philosophy as both a necessary and a natural searching of the human mind for answers that faith alone cannot adequately supply. By no means did he take this to mean that faith and reason conflict. Revelation provides the same truths, but the path taken, though dogmatic and therefore rationally unsatisfying, is considerably shorter. Much more could be said about Sidonsky's introductory text, but both it and its author were quickly consigned to the margins of history. Notwithstanding his book's desired recognition in some secular circles, Sidonsky soon after its publication was shifted first from philosophy to the teaching of French and then simply dismissed from the St. Petersburg Ecclesiastic Academy in 1835. This time it was the clerical authorities who found his book, it was said, insufficiently rigorous from the official religious standpoint. Sidonsky spent the next 30 years (until the re-introduction of philosophy in the universities) as a parish priest in the Russian capital.

The teaching of philosophy at this time was not eliminated from the ecclesiastic academies; the separate institutions of higher education were parallel to the secular universities for those from a clerical background. Largely with good reason, the government felt secure about their political and intellectual passivity. Among the most noteworthy of the professors at an ecclesiastic academy during the Nicholaevan years was F. Golubinsky (1798-1854), who taught in Moscow. Generally recognized as the founder of the "Moscow School of Theistic Philosophy," his historical importance lies solely in his unabashed subordination of philosophy to theology and epistemology to ontology.

For Golubinsky, humans seek knowledge in an attempt to recover an original diremption, a lost intimacy with the Infinite! Nevertheless, the idea of God is felt immediately within us. Owing to this immediacy, there is no need for and cannot be a proof of God's existence. Such was the tenor of "philosophical" thought in the religious institutions of the time. P. Jurkevich (1826-1874) stood with one foot in the Russian philosophical past and one in the future. Serving as the bridge between the eras, he largely defined the contours along which philosophical discussions would be shaped for the next two generations.

P. Lavrov (1823-1900), a teacher of mathematics at the Petersburg Military Academy, actively aspired to a university chair in philosophy (namely, the one in the capital when the position was restored in the early 1860s). However, the government apparently already suspected Lavrov of questionable allegiance and, despite a recommendation from a widely respected scholar (K. Kavelin), awarded the position instead to Sidonsky.

In a series of lengthy essays written when he had university aspirations, Lavrov developed a position, which he termed "anthropologism," that opposed metaphysical speculation, including the then-fashionable materialism of left-wing radicalism. Instead, he defended a simple epistemological phenomenalism that at many points bore a certain similarity to Kant's position, though without the latter's intricacies, nuances, and rigor. Essentially, Lavrov maintained that all claims regarding objects are translatable into statements about appearances or an aggregate of them. Additionally, he held that we have a collection of convictions concerning the external world, convictions whose basis lies in repeated experiential encounters with similar appearances.

The indubitability of consciousness and our irresistible conviction in the reality of the external world are fundamental and irreducible. The error of both materialism and idealism, fundamentally, is the mistaken attempt to collapse one into the other. Since both are fundamental, the attempt to prove either is ill-conceived from the outset. Consistent with this skepticism, Lavrov argued that the study of "phenomena of consciousness," a "phenomenology of spirit," could be raised to a science only through introspection, a method he called "subjective." Likewise, the natural sciences, built on our firm belief in the external world, need little support from philosophy. To question the law of causality, for example, is, in effect, to undermine the scientific standpoint.

Parallel to the two principles of theoretical philosophy, Lavrov spoke of two principles underlying practical philosophy. The first is that the individual is consciously free in his worldly activity. Unlike for Kant, however, this principle is not a postulate but a phenomenal fact; it carries no theoretical implications. For Lavrov, the moral sphere is quite autonomous from the theoretical. The second principle is that of "ideal creation." Just as in the theoretical sphere we set ourselves against a real world, so in the practical sphere we set ourselves against ideals.

Just as the real world is the source of knowledge, the world of our ideals serves as the motivation for action. In turning our own image of ourselves into an ideal, we create an ideal of personal dignity. Initially, the human individual conceives dignity along egoistic lines. In time, however, the individual's interaction, including competition, with others gives rise to his conception of them as having equal claims to dignity and to rights. In linking rights to human dignity, Lavrov thereby denied that animals have rights.

Of a similar intellectual bent, N. Mikhailovsky (1842-1904) was even more of a popular writer than Lavrov. Nevertheless, Mikhailovsky's importance in the history of Russian philosophy lies in his defense of the role of subjectivity in human studies. Unlike the natural sciences, the aim of which is the discovery of objective laws, the human sciences, according to Mikhailovsky, must take into account the epistemologically irreducible fact of conscious, goal-oriented activity. While not disclaiming the importance of objective laws, both Lavrov and Mikhailovsky held that social scientists must introduce a subjective, moral evaluation into their analyses. Unlike natural scientists, social scientists recognize the malleability of the laws under their investigation.

Comtean positivism, which for quite some years enjoyed considerable attention in 19th century Russia, found its most resolute and philosophically notable defender in V. Lesevich (1837-1905). Finding that it lacked a scientific grounding, Lesevich believed that positivism needed an inquiry into the principles that guide the attainment of knowledge. Such an inquiry must take for granted some body of knowledge without simply identifying itself with it. To the now-classic Hegelian charge that such a procedure amounted to not venturing into the water before learning how to swim, Lesevich replied that what was sought was not, so to speak, how to swim but, rather, the conditions that make swimming possible. In this vein, he consciously turned to the Kantian model while remaining highly critical of any talk of the a priori. In the end, Lesevich drew heavily upon psychology and empiricism for establishing the conditions of knowledge, thus leaving himself open to the charge of psychologism and relativism. Undoubtedly, of the philosophical figures to emerge in the 1870s, indeed arguably in any decade the greatest was V. Solovyov (1853-1900).

In fact, if we view philosophy not as an abstract, independent inquiry but as a more or less sustained intellectual conversation, then we can precisely date the start of Russian secular philosophy: 24 November 1874, the day of Solovyov's defense of his magister's dissertation «The Crisis of Western Philosophy». For

only from that day forward do we find a sustained discussion within Russia of philosophical issues considered on their own terms, that is, without overt appeal to their extra-philosophical ramifications, such as their religious or political implications.

After completion and defense of his magister's dissertation, Solovyov penned a highly metaphysical treatise entitled «Philosophical Principles of Integral Knowledge», which he never completed. However, at approximately the same time, he also worked on what became his doctoral dissertation «Critique of Abstract Principles» - the very title suggesting a Kantian influence. Although originally intended to consist of three parts, one each covering ethics, epistemology, and aesthetics, the completed work omitted the latter. For more than a decade, Solovyov remained silent on philosophical questions, preferring instead to concentrate on topical issues. When his interest was rekindled in the 1890s in preparing a second edition of his Kritika of a fundamental shift in his views led him to recast their systemization in the form of an entirely new work «The Justification of the Good». Presumably, he intended to follow up his ethical investigations with respective treatises on epistemology and aesthetics. Unfortunately, Solovyov died having completed only three brief chapters of the Theoretical Philosophy.

Solovyov's most relentless philosophical critic was B. Chicherin (1828-1904), certainly one of the most remarkable and versatile figures in Russian intellectual history. Despite his sharp differences with Solovyov, Chicherin himself accepted a modified Hegelian standpoint in metaphysics. Although viewing all of existence as rational, the rational process embodied in existence unfolds dialectically. Chicherin, however, parted with the traditional triadic schematization of the Hegelian dialectic, arguing that the first moment consists of an initial unity of the one and the many. The second and third moments, paths, or steps are antithetical and take various forms in different spheres, such as matter and reason or universal and particular. The final moment is a fusion of the two into a higher unity.

In the social and ethical realm, Chicherin placed great emphasis on individual human freedom. Social and political laws should strive for moral neutrality, permitting the flowering of individual self-determination. In this way, he remained a staunch advocate of economic liberalism, seeing essentially no role for government intervention. The government itself had no right to use its powers either to aim at a moral ideal or to force its citizens to seek an ideal. On the other hand, the government should not use its powers to prevent the citizenry from the exercise of private morality. Despite receiving less treatment than the negative conception of freedom, Chicherin nevertheless upheld the idealist conception of positive freedom as the striving for moral perfection and, in this way, reaching the Absolute.

Another figure to emerge in the late 1870s and 1880s was the neo-Leibnizian A. Kozlov (1831- 1901), who taught at Kiev University and who called his highly developed metaphysical stance "panpsychism." As part of this

stance, he, in contrast to Hume, argued for the substantial unity of the Self or I, which makes experience possible. This unity he held to be an obvious fact. Additionally, rejecting the independent existence of space and time, Kozlov held that they possessed being only in relation to thinking and sensing creatures. Like Augustine, however, Kozlov believed that God viewed time as a whole without our divisions into past, present, and future. Indeed, the very formulation of the problem presupposes a relation space. Lastly, unlike Kant, Kozlov thought all judgments are analytic.

An unfortunately largely neglected figure to emerge in this period was M. Karinsky (1840- 1917), who taught philosophy at the St. Petersburg Ecclesiastic Academy. Unlike many of his contemporaries, Karinsky devoted much of his attention to logic and an analysis of arguments in Western philosophy, rather than metaphysical speculation. Unlike his contemporaries, Karinsky came to philosophy with an analytical bent rather than with a literary flair—a fact that made his writing style often decidedly torturous. True to those schooled in the Aristotleian tradition, Karinsky, like Brentano (to whom he has been compared) held that German Idealism was essentially irrationalist. Arguing against Kant, Karinsky believed that our inner states are not merely phenomenal, that the reflective self is not an appearance. Inner experience, unlike outer, yields no distinction between reality and appearance. In his general epistemology, Karinsky argued that knowledge was built on judgments, which were legitimate conclusions from premises.

Knowledge, however, could be traced back to a set of ultimate unprovable, yet reliable, truths, which he called "self-evident." Karinsky argued for a pragmatic interpretation of realism, saying that something exists in another room unperceived by me means I would perceive it if I were to go into that room. Additionally, he accepted an analogical argument for the existence of other minds similar to that of John Stuart Mill and Bertrand Russell.

In his two-volume magnum opus «The Positive Tasks of Philosophy», L. Lopatin (1855-1920), who taught at Moscow University, defended the possibility of metaphysical knowledge. He claimed that empirical knowledge is limited to appearances, whereas metaphysics yields knowledge of the true nature of things. Although Lopatin saw Hegel and Spinoza as the definitive expositors of rationalistic idealism, he rejected both for their very transformation of concrete relations into rational or logical ones. Nevertheless, Lopatin affirmed the role of reason particularly in philosophy in conscious opposition to, as he saw it, Solovyov's ultimate surrender to religion. In the first volume, he attacked materialism as itself a metaphysical doctrine that elevates matter to the status of an absolute that cannot explain the particular properties of individual things or the relation between things and consciousness. In his second volume, Lopatin distinguishes mechanical causality from "creative causality," according to which one phenomenon follows another, though with something new added to it.

Despite his wealth of metaphysical speculation, quite foreign to most contemporary readers, Lopatin's observations on the self or ego derived from specu-

lation that is not without some interest. Denying that the self has a purely empirical nature, Lopatin emphasized that the undeniable reality of time demonstrated the non-temporality of the self, for temporality could only be understood by that which is outside time. Since the self is extra-temporal, it cannot be destroyed, for that is an event in time. Likewise, in opposition to Solovyov, Lopatin held that the substantiality of the self is immediately evident in consciousness.

In the waning years of the 19th century, neo-Kantianism came to dominate German philosophy. Because of the increasing tendency to send young Russian graduate students to Germany for additional training, it should come as no surprise that that movement gained a foothold in Russia too. In one of the very few Russian works devoted to philosophy of science A. Vvedensky (1856-1925) presented, in his lengthy dissertation, a highly idealistic Kantian interpretation of the concept of matter as understood in the physics of his day. He tried therein to defend and update Kant's own work as exemplified in the Metaphysical Foundations of Natural Science. Vvedensky's book, however, attracted little attention and exerted even less influence.

Much more widely recognized were his own attempts in subsequent years, while teaching at St. Petersburg University, to recast Kant's transcendental idealism in, what he called, "logicism." Without drawing any conclusions based upon the nature of space and time, Vvedensky believed it possible to prove the impossibility of metaphysical knowledge and, as a corollary so to speak, that everything we know, including our own self, is merely an appearance, not a thing in itself. Vvedensky was also willing to cede that the time and the space in which we experience everything in the world are also phenomenal. Although metaphysical knowledge is impossible, metaphysical hypotheses, being likewise irrefutable, can be brought into a world-view based on faith. Particularly useful are those demanded by our moral tenets such as the existence of other minds.

We have already noted the Christian Platonism of Jurkevich, and his student Solovyov, who with his central concept of total-unity can, in turn, also be seen as a modern. In the immediate decades preceding the Bolshevik Revolution of 1917, a veritable legion of philosophers worked in Solovyov's wide shadow. Among the most prominent of these was S. Trubetskoi (1862-1905). The Platonic strain of his thought is evident in the very topics Trubetskoi chose for his magister's and doctoral theses: «Metaphysics in Ancient Greece», 1890 and «The History of the Doctrine of Logos», 1900, respectively. It is, however, in his programmatic essays "O prirode chelovecheskovo soznanija" ("The Nature of Human Consciousness"), 1889-1891 and "Osnovanija idealizma" ("The Foundations of Idealism"), 1896 that Trubetskoi elaborated his position with regard to modern philosophy.

Holding that the basic problem of contemporary philosophy is whether human knowledge is of a personal nature, Trubetskoi maintained that modern Western philosophers relate personal knowledge to a personal consciousness. Human consciousness is not an individual consciousness, but, rather, an ongoing universal process. Likewise, this process is a manifestation not of a per-

sonal mind but of a cosmic one. Personal consciousness, as he puts it, presupposes a collective consciousness, and the latter presupposes an absolute consciousness. Kant's great error was in conceiving the transcendental consciousness as subjective. In the second of the essays mentioned above, Trubetskoi claims that there are three means of knowing reality: empirically through the senses, rationally through thought, and directly through faith.

For him, faith is what convinces us that there is an external world, a world independent of my subjective consciousness. It is faith that underlies our accepting the information provided by our sense organs as reliable. Moreover, it is faith that leads me to think there are in the world other beings with a mental organization and capacity similar to mine. However, Trubetskoi rejects equating his notion of faith with the passive "intellectual intuition" of Schelling and Solovyov. For Trubetskoi, faith is intimately connected with the will, which is the basis of my individuality. My discovery of the other is grounded in my desire to reach out beyond myself, that is, to love.

Although generally characterized as a neo-Leibnizian, N. Lossky (1870-1965) was also greatly influenced by a host of Russian thinkers including Solovyov and Kozlov. In addition to his own views, Lossky, having studied at Bern and Goettingen among other places, is remembered for his pioneering studies of contemporary German philosophy. He referred to Edmund Husserl's «Logical Investigations» already as early as 1906, and in 1911 he gave a course on Husserl's "intentionalism." Despite this early interest in strict epistemological problems, Lossky in general drew ever closer to the ontological concerns and positions of Russian Orthodoxy. He termed his epistemological views "intuitivism," believing that the cognitive subject apprehends the external world as it is in itself directly. Nevertheless, the object of cognition remains ontologically transcendent, while epistemologically immanent.

This direct penetration into reality is possible, Lossky tells us, because all worldly entities are interconnected into an "organic whole." Additionally, all sensory properties of an object (for example, its color, texture, temperature, and so on) are actual properties of the object, our sense stimulation serving merely to direct our mental attention to those properties. That different people see one object in different ways is explained as a result of different ways individuals have of getting their attention directly towards one of the object's numerous properties. All entities, events, and relations that lack a temporal and spatial character possess "ideal being" and are the objects of "intellectual intuition." Yet, there is another, a third, realm of being that transcends the laws of logic (here we see the influence of Lossky's teacher, Vvedensky), which he calls "metalogical being" and is the object of mystical intuition.

Another kindred spirit was S. Frank (1877-1950), who in his early adult years was involved with Marxism and political activities. His magister's thesis «The Object of Knowledge», 1915, is notable as much for its masterful handling of current Western philosophy as for its overall metaphysical position. Demonstrating a grasp not only of German neo-Kantianism, Frank drew freely

from, among many others, Husserl, Henri-Louis Bergson, and Max Scheler; he may even have been the first in Russian to refer to Gottlob Frege, whose Foundations of Arithmetic Frank calls "one of the rare genuinely philosophical works by a mathematician." Frank contends that all logically determined objects are possible thanks to a metalogical unity, which is itself not subject to the laws of logic. Likewise, all logical knowledge is possible thanks solely to an "intuition," an "integral intuition," of this unity.

Such intuition is possible because all of us are part of this unity or Absolute. In a subsequent book «The Unknowable», 1939, Frank further elaborated his view stating that mystical experience reveals the supra-logical sphere in which we are immersed but which cannot be conceptually described. Although there is a great deal more to Frank's thought, we see that we are quickly leaving behind the secular, philosophical sphere for the religious, if not mystical.

No survey, however brief, of Russian thinkers under Solovyov's influence would be satisfactory without mention of the best known of these in the West, namely N. Berdjaev (1874-1948). Widely hailed as a Christian existentialist, he began his intellectual journey as a Marxist. However, by the time of his first publications he was attempting to unite a revolutionary political outlook with transcendental idealism, particularly a Kantian ethic. Within the next few years, Berdjaev's thought evolved quickly and decisively away from Marxism and away from critical idealism to an outright Orthodox Christian idealism.

On the issue of free will versus determinism, Berdjaev moved from an initial acceptance of soft determinism to a resolute incompatibilist. Morality, he claimed, demanded his stand. Certainly, Berdjaev was among the first, if not the first, philosopher of his era to diminish the importance of epistemology in place of ontology. In time, however, he himself made clear that the pivot of his thought was not the concept of being as it would be for some others, and even less that of knowledge, but, rather, the concept of freedom. Acknowledging his debt to Kant, Berdjaev too saw science as providing knowledge of phenomenal reality but not of actuality, of things as they are in themselves.

However applicable the categories of logic and physics may be to appearances, they are assuredly inapplicable to the noumenal world and, in particular, to God. In this way Berdjaev does not object to the neo-Kantianism of Vvedensky, for whom the objectification of the world is a result of functioning of the human cognitive apparatus, but only that it does not go far enough. There is another world or realm, namely one characterized by freedom.

Just as all of the above figures drew inspiration from Christian neo-Platonism, so too did they all feel the need to address the Kantian heritage. Lossky's dissertation The Foundations of Intuitivism, for example, is an extended engagement with Kant's epistemology, Lossky himself having prepared a Russian translation of Kant's Critique of Pure Reasoncomparable in style and adequacy to Norman Kemp Smith's famous rendering into English.

Trubetskoi called Kant the "Copernicus of modern philosophy," who "discovered that there is an a priori precondition of all possible experience." Never-

theless, among the philosophers of this era, not all saw transcendental idealism as a springboard to religious and mystical thought. A student of Vvedensky's, I. Lapshin (1870-1952) in his dissertation «The Laws of Thought and the Forms of Cognition», 1906, attempted to show that, contrary to Kant's stand, space and time were categories of cognition and that all thought, even logical, relies on a categorical synthesis. Consequently, the laws of logic are themselves synthetic, not analytic, as Kant had thought and are applicable only within the bounds of possible experience.

G. Chelpanov (1863-1936), who taught at Moscow University, was another with a broadly conceived Kantian stripe. Remembered as much, if not more so, for his work in experimental psychology as in philosophy, Chelpanov, unlike many others, wished to retain the concept of the thing-in-itself, seeing it as that which ultimately "evokes" a particular representation of an object. Without it, contended Chelpanov, we are left (as in Kant) without an explanation of why we perceive this, and not that, particular object. In much the same manner, we must appeal to some transcendent space in order to account for why we see an object in this spot and not another. For these reasons, Chelpanov called his position "critical realism" as opposed to the more usual construal of Kantianism as "transcendental idealism." In psychology, Chelpanov upheld the psychophysical parallelism of Wilhelm Wundt.

As the years of the First World War approached, a new generation of scholars came to the fore who returned to Russia from graduate work in Germany broadly sympathetic to one or even an amalgam of the schools of neo-Kantianism. Among these young scholars, the works of B. Kistjakovsky (1868-1920) and P. Novgorodtsev (1866-1924) stand out as arguably the most accessible today for their analytic approach to questions of social-science methodology.

During this period, Husserlian phenomenology was introduced into Russia from a number of sources, but its first and, in a sense, only major propagandist was G. Shpet (1879-1937), whom we have referred to earlier. In any case, besides his historical studies Shpet did pioneering work in hermeneutics as early as 1918. Additionally, in two memorable essays he respectively argued, along the lines of the early Husserl and the late Solovyov, against the Husserlian view of the transcendental ego and in the other traced the Husserlian notion of philosophy as a rigorous science back to Parmenides.

Regrettably, Shpet was permanently silenced during the Stalinist era, but A. Losev (1893-1988), whose early works fruitfully employed some early phenomenological techniques, survived and blossomed in its aftermath. Concentrating on ancient Greek thought, particularly aesthetics, his numerous publications have yet to be assimilated into world literature, although during later years his enormous contributions were recognized within his homeland and by others to whom they were linguistically accessible. It must be said, nonetheless, that Losev's personal pronouncements hark back to a neo-Platonism completely at odds with the modern temperament.

The best known dispute occurred between the "mechanists" and the "dialecticians" or "Deborinists," after its principal advocate A. Deborin (1881-1963). Since a number of individuals composed both groups and the issues in dispute evolved over time, no simple statement of the respective stances can do complete justice to either. Nevertheless, the mechanists essentially held that philosophy as a separate discipline had no reason for being within the Soviet state. All philosophical problems could and would be resolved by the natural sciences. The hallowed dialectical method of Marxism was, in fact, just the scientific method.

The Deborinists, on the other hand, defended the existence of philosophy as a separate discipline. Indeed, they viewed the natural sciences as built on a set of philosophical principles. Unlike the mechanists, they saw nature as fundamentally dialectical, which could not be reduced to simpler mechanical terms. Even human history and society proceeded dialectically in taking leaps that resulted in qualitatively different states. The specifics of the controversy, which raged until 1929, are of marginal philosophical importance now, but to some degree the basic issue of the relation of philosophy to the sciences, of the role of the former with regard to the latter, endures to this day. Regrettably, politics played as much of a role in the course of the dispute as abstract reasoning, and the outcome was a simple matter of a political fiat with the Deborinists gaining a temporary victory.

Subsequent events over the next two decades, such as the defeat of the Deborinists, have nothing to do with philosophy. What philosophy did continue to be pursued during these years within Russia was kept a personal secret, any disclosure of which was at the expense of one's life. To a certain degree, the issue of the role of philosophy arose again in the 1950s when the philosophical implications of relativity theory became a disputed subject. Again, the issue arose of whether philosophy or science had priority. This time, however, with atomic weapons securely in hand there could be no doubt as to the ultimate victor with little need for political intervention.

I. Pavlov (1849-1936), already a star of Russian science at the time of the Revolution, was quickly seen as utilizing a method that subjected psychic activity to the objective methods of the natural sciences. The issue became, however, whether the use of objective methods would eliminate the need to invoke such traditional terms as consciousness. The central figure here was V. Bekhterev (1857-1927), who believed that since all mental processes eventually manifested themselves in objectively observable behavior, subjective terminology was superfluous. Again, the discussion was silenced through political means once a victory was secured over the introspectionists. Bekhterev's behaviorism was itself found to be dangerously leftist.

As noted above, during the 1930s and '40s, independent philosophizing virtually ceased to exist, and what little was published is of no more than historical interest. Indicative of the condition of Russian thought at this time is the fact that when in 1946 the government decided to introduce logic into the curriculum

of secondary schools the only suitable text available was a slim book by Chelpanov dating from before the Revolution.

After Joseph Stalin's death, a relative relaxation or "thaw" in the harsh intellectual climate was permitted, of course within the strict bounds of the official state ideology. In addition to the re-surfacing of the old issue of the role of Marxism with respect to the natural sciences, Russian scholars sought a return to the traditional texts in hopes of understanding the original inspiration of the official philosophy. Some, such as the young A. Zinoviev (1922-2006) sought an understanding of "dialectical logic" in terms of the operations, procedures and techniques employed in political economics. Others, for example, V. Tugarinov, drew heavily on Hegel's example in attempting to delineate a system of fundamental categories.

After the formal recognition in the validity of formal logic, it received significant attention in the ensuing years by Zinoviev, D. Gorsky, and E. Voishvillo, among many others. Their works have deservedly received international attention and made no use of the official ideology. What sense, if any, to make of "dialectical logic" was another matter that could not remain politically neutral. Until the last days of the Soviet period, there was no consensus as to what it is or its relation to formal logic.

One of the most resolute defenders of dialectical logic was E. Ilyenkov, who has received attention even in the West. In epistemology too, surface agreement, demonstrated through use of an official vocabulary obscured (but did not quite hide) differences of opinion concerning precisely how to construe the official stand. It certainly now appears that little of enduring worth in this field was published during the Soviet years. However, some philosophers who were active at that time produced works that only recently have been published. Perhaps the most striking example is M. Mamardashvili (1930-1990), who during his lifetime was noted for his deep interest in the history of philosophy and his anti-Hegelian stands.

20. Ontology of philosophy

As a first approximation, ontology is the study of what there is. Some contest this formulation of what ontology is, so it's only a first approximation. Many classical philosophical problems are problems in ontology: the question whether or not there is a god, or the problem of the existence of universals, etc. These are all problems in ontology in the sense that they deal with whether or not a certain thing, or more broadly entity, exists. But ontology is usually also taken to encompass problems about the most general features and relations of the entities which do exist. There are also a number of classic philosophical problems that are problems in ontology understood this way. For example, the problem of how a universal relates to a particular that has it (assuming there are universals and particulars), or the problem of how an event like John eating a cookie relates to the particulars John and the cookie, and the relation of eating, assuming there

are events, particulars and relations. These kinds of problems quickly turn into metaphysics more generally, which is the philosophical discipline that encompasses ontology as one of its parts. The borders here are a little fuzzy. But we have at least two parts to the overall philosophical project of ontology: first, say what there is, what exists, what the stuff is reality is made out off, secondly, say what the most general features and relations of these things are.

This way of looking at ontology comes with two sets of problems which to the philosophical discipline of ontology being more complex than just answering the above questions. The first set of problems is that it isn't clear how to approach answering these questions. This leads to the debate about ontological commitment. The second set of problems is that it isn't so clear what these questions really are. This leads to the philosophical debate about meta-ontology. One of the troubles with ontology is that it not only isn't clear what there is, it also isn't so clear how to settle questions about what there is, at least not for the kinds of things that have traditionally been of special interest to philosophers: numbers, properties, God and etc.

Ontology is thus a philosophical discipline that encompasses besides the study of what there is and the study of the general features of what there is also the study of what is involved in settling questions about what there is in general, especially for the philosophically tricky cases. How we can find out what there is isn't an easy question to answer. It seems simple enough for regular objects that we can perceive with our eyes, like my house keys, but how should we decide it for such things as, say, numbers or properties? One first step to making progress on this question is to see if what we believe already rationally settles this question.

That is to say, given that we have certain beliefs, do these beliefs already bring with them a rational commitment to an answer to such questions as ‘Are there numbers?’ If our beliefs bring with them a rational commitment to an answer to an ontological question about the existence of certain entities then we can say that we are committed to the existence of these entities. What precisely is required for such a commitment to occur is subject to debate, a debate we will look at momentarily. To find out what one is committed to with a particular set of beliefs, or acceptance of a particular theory of the world, is part of the larger discipline of ontology.

Besides it not being so clear what it is to commit yourself to an answer to an ontological question, it also isn't so clear what an ontological question really is, and thus what it is that ontology is supposed to accomplish. To figure this out is the task of meta-ontology, which strictly speaking is not part of ontology construed narrowly, but the study of what ontology is. However, like most philosophical disciplines, ontology more broadly construed contains its own meta-study, and thus meta-ontology is part of ontology, more broadly construed. Nonetheless it is helpful to separate it out as a special part of ontology.

Many of the philosophically most fundamental questions about ontology really are meta-ontological questions. Meta-ontology has not been too popular in

the last couple of decades, partly because one meta-ontological view, the one often associated with Quine, has been accepted as the correct one, but this acceptance has been challenged in recent years in a variety of ways. One motivation for the study of meta-ontology is simply the question of what question ontology aims to answer. Take the case of numbers, for example. What is the question that we should aim to answer in ontology if we want to find out if there are numbers, that is, if reality contains numbers besides whatever else it is made up from?

This way an easy answer: 'Are there numbers?' But this question seems like an easy one to answer. An answer to it is implied, it seems, by trivial mathematics, say that the number 7 is less than the number 8. If the latter, then there is a number which is less than 8, namely 7, and thus there is at least one number. Can ontology be that easy? The study of meta-ontology will have to determine, amongst others, if 'Are there numbers?' really is the question that the discipline of ontology is supposed to answer, and more generally, what ontology is supposed to do. We will pursue these questions below. As we will see, several philosophers think that ontology is supposed to answer a different question than what there is, but they often disagree on what that question is.

21. Philosophy of space and time

Philosophy of space and time is the branch of philosophy concerned with the issues surrounding the ontology, epistemology, and character of space and time. While such ideas have been central to philosophy from its inception, the philosophy of space and time was both an inspiration for and a central aspect of early analytic philosophy. The subject focuses on a number of basic issues, including whether time and space exist independently of the mind, whether they exist independently of one another, what accounts for time's apparently unidirectional flow, whether times other than the present moment exist, and questions about the nature of identity (particularly the nature of identity over time).

Plato identified time with the period of motion of the heavenly bodies, and space as that in which things come to be. Aristotle, in Book IV of his «Physics», defined time as the number of changes with respect to before and after, and the place of an object as the innermost motionless boundary of that which surrounds it. In Book 11 of St. Augustine's «Confessions», he ruminates on the nature of time, asking, "What then is time? If no one asks me, I know: if I wish to explain it to one that asketh, I know not."

He goes on to comment on the difficulty of thinking about time, pointing out the inaccuracy of common speech: "For but few things are there of which we speak properly; of most things we speak improperly, still the things intended are understood." But Augustine presented the first philosophical argument for the reality of Creation (against Aristotle) in the context of his discussion of time, saying that knowledge of time depends on the knowledge of the movement of

things, and therefore time cannot be where there are no creatures to measure its passing.

In contrast to ancient Greek philosophers who believed that the universe had an infinite past with no beginning, medieval philosophers and theologians developed the concept of the universe having a finite past with a beginning, now known as temporal finitism. A traditional realist position in ontology is that time and space have existence apart from the human mind. Idealists, by contrast, deny or doubt the existence of objects independent of the mind. Some anti-realists, whose ontological position is that objects outside the mind do exist, nevertheless doubt the independent existence of time and space.

In 1781, Immanuel Kant published the «Critique of Pure Reason», one of the most influential works in the history of the philosophy of space and time. He describes time as an a priori notion that, together with other a priori notions such as space, allows us to comprehend sense experience. Kant denies that either space or time are substance, entities in them selves, or learned by experience; he holds, rather, that both are elements of a systematic framework we use to structure our experience. Spatial measurements are used to quantify how far apart objects are, and temporal measurements are used to quantitatively compare the interval between (or duration of) events. Although space and time are held to be transcendentally ideal in this sense, they are also empirically real—that is, not mere illusions.

Idealist writers, such as J. M. E. McTaggart in «The Unreality of Time», have argued that time is an illusion (see also the flow of time, below). The writers discussed here are for the most part realists in this regard; for instance, Gottfried Leibniz held that his monads existed, at least independently of the mind of the observer. The great debate between defining notions of space and time as real objects themselves (absolute), or mere orderings upon actual objects (relational), began between physicists Isaac Newton (via his spokesman, Samuel Clarke) and Gottfried Leibniz in the papers of the Leibniz–Clarke correspondence. Arguing against the absolutist position,

Leibniz offers a number of thought experiments with the purpose of showing that there is contradiction in assuming the existence of facts such as absolute location and velocity. These arguments trade heavily on two principles central to his philosophy: the principle of sufficient reason and the identity of indiscernibles. The principle of sufficient reason holds that for every fact, there is a reason that is sufficient to explain what and why it is the way it is and not otherwise. The identity of indiscernibles states that if there is no way of telling two entities apart, then they are one and the same thing.

The example Leibniz uses involves two proposed universes situated in absolute space. The only discernible difference between them is that the latter is positioned five feet to the left of the first. The example is only possible if such a thing as absolute space exists. Such a situation, however, is not possible, according to Leibniz, for if it were, a universe's position in absolute space would have no sufficient reason, as it might very well have been anywhere else. Therefore, it

contradicts the principle of sufficient reason and there could existes two distinct universes that were in all ways indiscernible, thus contradicting the identity of indiscernibles.

Standing out in Clarke's (and Newton's) response to Leibniz's arguments is the bucket argument: Water in a bucket, hung from a rope and set to spin, will start with a flat surface. As the water begins to spin in the bucket, the surface of the water will become concave. If the bucket is stopped, the water will continue to spin, and while the spin continues, the surface will remain concave. The concave surface is apparently not the result of the interaction of the bucket and the water, since the surface is flat when the bucket first starts to spin, it becomes concave as the water starts to spin, and it remains concave as the bucket stops.

In this response, Clarke argues for the necessity of the existence of absolute space to account for phenomena like rotation and acceleration that cannot be accounted for on a purely relationalist account. Clarke argues that since the curvature of the water occurs in the rotating bucket as well as in the stationary bucket containing spinning water, it can only be explained by stating that the water is rotating in relation to the presence of some third thing—absolute space.

Leibniz describes a space that exists only as a relation between objects, and which has no existence apart from the existence of those objects. Motion exists only as a relation between those objects. Newtonian space provided the absolute frame of reference within which objects can have motion. In Newton's system, the frame of reference exists independently of the objects contained within it. These objects can be described as moving in relation to space itself. For many centuries, the evidence of a concave water surface held authority.

Another important figure in this debate is 19th-century physicist Ernst Mach. While he did not deny the existence of phenomena like that seen in the bucket argument, he still denied the absolutist conclusion by offering a different answer as to what the bucket was rotating in relation to: the fixed stars.

Mach suggested that thought experiments like the bucket argument are problematic. If we were to imagine a universe that only contains a bucket, on Newton's account, this bucket could be set to spin relative to absolute space, and the water it contained would form the characteristic concave surface. But in the absence of anything else in the universe, it would be difficult to confirm that the bucket was indeed spinning. It seems equally possible that the surface of the water in the bucket would remain flat.

Mach argued that, in effect, the water experiment in an otherwise empty universe would remain flat. But if another object were introduced into this universe, perhaps a distant star, there would now be something relative to which the bucket could be seen as rotating. The water inside the bucket could possibly have a slight curve. To account for the curve that we observe, an increase in the number of objects in the universe also increases the curvature in the water. Mach argued that the momentum of an object, whether angular or linear, exists as a result of the sum of the effects of other objects in the universe (Mach's Principle).

Albert Einstein proposed that the laws of physics should be based on the principle of relativity. This principle holds that the rules of physics must be the same for all observers, regardless of the frame of reference that is used, and that light propagates at the same speed in all reference frames. This theory was motivated by Maxwell's equations, which show that electromagnetic waves propagate in a vacuum at the speed of light. However, Maxwell's equations give no indication of what this speed is relative to. Prior to Einstein, it was thought that this speed was relative to a fixed medium, called the luminiferous ether.

In contrast, the theory of special relativity postulates that light propagates at the speed of light in all inertial frames, and examines the implications of this postulate. All attempts to measure any speed relative to this ether failed, which can be seen as a confirmation of Einstein's postulate that light propagates at the same speed in all reference frames. Special relativity is a formalization of the principle of relativity that does not contain a privileged inertial frame of reference, such as the luminiferous ether or absolute space, from which Einstein inferred that no such frame exists.

Einstein generalized relativity to frames of reference that were non-inertial. He achieved this by positing the Equivalence Principle, which states that the force felt by an observer in a given gravitational field and that felt by an observer in an accelerating frame of reference are indistinguishable. This led to the conclusion that the mass of an object warps the geometry of the space-time surrounding it, as described in Einstein's field equations.

In classical physics, an inertial reference frame is one in which an object that experiences no forces does not accelerate. In general relativity, an inertial frame of reference is one that is following a geodesic of space-time. An object that moves against a geodesic experiences a force. An object in free fall does not experience a force, because it is following a geodesic. An object standing on the earth, however, will experience a force, as it is being held against the geodesic by the surface of the planet. In light of this, the bucket of water rotating in empty space will experience a force because it rotates with respect to the geodesic. The water will become concave, not because it is rotating with respect to the distant stars, but because it is rotating with respect to the geodesic.

Einstein partially advocates Mach's principle in that distant stars explain inertia because they provide the gravitational field against which acceleration and inertia occur. But contrary to Leibniz's account, this warped space-time is as integral a part of an object as are its other defining characteristics, such as volume and mass. If one holds, contrary to idealist beliefs, that objects exist independently of the mind, it seems that relativistics commits them to also hold that space and temporality have exactly the same type of independent existence.

The position of conventionalism states that there is no fact of the matter as to the geometry of space and time, but that it is decided by convention. The first proponent of such a view, Henri Poincaré, reacting to the creation of the new non-Euclidean geometry, argued that which geometry applied to a space was decided by convention, since different geometries will describe a set of ob-

jects equally well, based on considerations from his sphere-world. This view was developed and updated to include considerations from relativistic physics by Hans Reichenbach. Reichenbach's conventionalism, applying to space and time, focuses around the idea of coordinative definition.

Coordinative definition has two major features. The first has to do with coordinating units of length with certain physical objects. This is motivated by the fact that we can never directly apprehend length. Instead we must choose some physical object, say the Standard Metre at the Bureau International des Poids et Mesures (International Bureau of Weights and Measures), or the wavelength of cadmium to stand in as our unit of length. The second feature deals with separated objects.

Although we can, presumably, directly test the equality of length of two measuring rods when they are next to one another, we can not find out as much for two rods distant from one another. Even supposing that two rods, whenever brought near to one another are seen to be equal in length, we are not justified in stating that they are always equal in length. This impossibility undermines our ability to decide the equality of length of two distant objects. Sameness of length, to the contrary, must be set by definition.

Such a use of coordinative definition is in effect, on Reichenbach's conventionalism, in the General Theory of Relativity where light is assumed, i.e. not discovered, to mark out equal distances in equal times. After this setting of coordinative definition, however, the geometry of spacetime is set. As in the absolutism/relationalism debate, contemporary philosophy is still in disagreement as to the correctness of the conventionalist doctrine. While conventionalism still holds many proponents, cutting criticisms concerning the coherence of Reichenbach's doctrine of coordinative definition have led many to see the conventionalist view as untenable.

22. Dialectical philosophical theory

Dialectical materialism, a philosophical approach to reality derived from the teachings of Karl Marx and Friedrich Engels. For Marx and Engels, materialism meant that the material world, perceptible to the senses, has objective reality independent of mind or spirit. They did not deny the reality of mental or spiritual processes but affirmed that ideas could arise, therefore, only as products and reflections of material conditions. Marx and Engels understood materialism as the opposite of idealism, by which they meant any theory that treats matter as dependent on mind or spirit, or mind or spirit as capable of existing independently of matter. For them, the materialist and idealist views were irreconcilably opposed throughout the historical development of philosophy. They adopted a thoroughgoing materialist approach, holding that any attempt to combine or reconcile materialism with idealism must result in confusion and inconsistency.

Marx’s and Engels’ conception of dialectics owes much to G.W.F. Hegel. In opposition to the metaphysical mode of thought, which viewed things

in abstraction, each by itself and as though endowed with fixed properties, Hegelian dialectics considers things in their movements and changes, interrelations and interactions. Everything is in continual process of becoming and ceasing to be, in which nothing is permanent but everything changes and is eventually superseded. All things contain contradictory sides or aspects, whose tension or conflict is the driving force of change and eventually transforms or dissolves them. But whereas Hegel saw change and development as the expression of the world spirit, or Idea, realizing itself in nature and in human society, for Marx and Engels change was inherent in the nature of the material world. They therefore held that one could not, as Hegel tried, deduce the actual course of events from any principles of dialectics; the principles must be inferred from the events.

The theory of knowledge of Marx and Engels started from the materialist premise that all knowledge is derived from the senses. But against the mechanist view that derives knowledge exclusively from given sense impressions, they stressed the dialectical development of human knowledge, socially acquired in the course of practical activity. Individuals can gain knowledge of things only through their practical interaction with those things, framing their ideas corresponding to their practice; and social practice alone provides the test of the correspondence of idea with reality - i.e., of truth. This theory of knowledge is opposed equally to the subjective idealism according to which individuals can know only sensible appearances while things-in-themselves are elusive and to the objective idealism according to which individuals can know supersensible reality by pure intuition or thought, independent of sense.

The concept of dialectical materialism - which is a theoretical basis for a method of reasoning - should not be confused with “historical materialism,” which is the Marxist interpretation of history in terms of the class struggle. There exists no systematic exposition of dialectical materialism by Marx and Engels, who stated their philosophical views mainly in the course of polemics.

23. Principle and law of the dialectica

Hegel and Marx developed a new form of thinking and Logic, which he called "speculative reason" (which includes the more famous concept of "dialectic") to try to overcome what he saw as the limitations of both common sense and of traditional philosophy at grasping philosophical problems and the relation between thought and reality. His method was to begin with ultra-basic concepts (like Being and Nothing), and to develop these through a long sequence of elaborations towards solutions that take the form of series of concepts.

He employed the tried-and-tested process of dialectic (which dates back to Aristotle and involves resolving a thesis and its opposing antithesis into a synthesis), but asserted that this logical process was not just a matter of form as separate from content, but had applications and repercussions in the real world. He also took the concept of the dialectic one step further, arguing

that the new synthesis is not the final truth of the matter, but rather became the new thesis with its corresponding antithesis and synthesis. This process would continue effectively ad infitum, until reaching the ultimate synthesis, which is what Hegel called the Absolute Idea.

Hegel's main philosophical project, then, was to take the contradictions and tensions he saw throughout modern philosophy, culture and society, and interpret them as part of a comprehensive, evolving, rational unity that, in different contexts, he called "the absolute idea" or "absolute knowledge". He believed that everything was interrelated and that the separation of reality into discrete parts (as all philosophers since Aristotle had done) was wrong. He advocated a kind of historically-minded Absolute Idealism developed out of the Transcendental Idealism of Immanuel Kant, in which the universe would realize its spiritual potential through the development of human society, and in which mind and nature can be seen as two abstractions of one indivisible whole Spirit.

However, the traditional triadic dialectical interpretation of Hegel's approach (thesis - antithesis - synthesis) is perhaps too simplistic. From Hegel's point of view, analysis of any apparently simple identity or unity reveals underlying inner contradictions, and it is these contradictions that lead to the dissolution of the thing or idea in the simple form in which it presented itself, and its development into a higher-level, more complex thing or idea that more adequately incorporates the contradictions.

Hegel was the first major philosopher to regard history and the Philosophy of History as important. Hegel's Historicism is the position that all human societies (and all human activities such as science, art or philosophy) are defined by their history, and that their essence can be sought only through understanding that. According to Hegel, to understand why a person is the way he is, you must put that person in a society; and to understand that society, you must understand its history, and the forces that shaped it. He is famously quoted as claiming that "Philosophy is the history of philosophy".

His system for understanding history, and the world itself, was developed from his famous dialectic teachings of thesis, antithesis and synthesis. He saw history as as a progression, always moving forward, never static, in which each successive movement emerges as a solution to the contradictions inherent in the preceding movement. He believed that every complex situation contains within itself conflicting elements, which work to destabilize the situation, leading it to breakdown into a new situation in which the conflicts are resolved. Thus, the history of any human endeavour not only builds upon, but also reacts against, what has gone before. This process, though, is an ongoing one, because the resulting synthesis has itself inherent contradictions which need to be resolved (so that the synthesis becomes the new thesis for another round of the dialectic). Crucially, however, Hegel believed that this dialectical process was not just random, but that it had a direction or a goal, and that goal was freedom (and our consciousness and awareness of freedom) and of the absolute knowledge of mind as the ultimate reality.

24. Philosophy of the nature

Natural philosophy or philosophy of nature (from Latin philosophia naturalis) was the philosophical study of nature and the physical universe that was dominant before the development of modern science. It is considered to be the precursor of natural science.

From the ancient world, starting with Aristotle, to the 19th century, the term «natural philosophy» was the common term used to describe the practice of studying nature. It was in the 19th century that the concept of «science» received its modern shape with new titles emerging such as «biology» and «biologist», «physics» and «physicist» among other technical fields and titles; institutions and communities were founded, and unprecedented applications to and interactions with other aspects of society and culture occurred. Isaac Newton's book «Philosophiae Naturalis Principia Mathematica» (1687), whose title translates to «Mathematical Principles of Natural Philosophy», reflects the then-current use of the words «natural philosophy», akin to "systematic study of nature". Even in the 19th century, a treatise by Lord Kelvin and Peter Guthrie Tait, which helped define much of modern physics, was titled «Treatise on Natural Philosophy» (1867).

In the German tradition, Naturphilosophie (philosophy of nature) persisted into the 18th and 19th century as an attempt to achieve a speculative unity of nature and spirit. Some of the greatest names in German philosophy are associated with this movement, including Goethe, Hegel and Schelling. Naturphilosophie was associated with Romanticism and a view that regarded the natural world as a kind of giant organism, as opposed to the philosophical approach of figures such as John Locke and Isaac Newton who espoused a more mechanical view of the world, regarding it as being like a machine.

The term natural philosophy preceded our current natural science (i.e. empirical science). Empirical science historically developed out of philosophy or, more specifically, natural philosophy. Natural philosophy was distinguished from the other precursor of modern science, natural history, in that natural philosophy involved reasoning and explanations about nature (and after Galileo, quantitative reasoning), whereas natural history was essentially qualitative and descriptive.

In the 14th and 15th centuries, natural philosophy was one of many branches of philosophy, but was not a specialized field of study. The first person appointed as a specialist in Natural Philosophy per se was Jacopo Zabarella, at the University of Padua in 1577.

Modern meanings of the terms science and scientists date only to the 19th century. Before that, science was a synonym for knowledge or study, in keeping with its Latin origin. The term gained its modern meaning when experimental science and the scientific method became a specialized branch of study apart from natural philosophy.

From the mid-19th century, when it became increasingly unusual for scientists to contribute to both physics and chemistry, "natural philosophy" came to mean just physics, and the word is still used in that sense in degree titles at the University of Oxford. In general, chairs of Natural Philosophy established long ago at the oldest universities are nowadays occupied mainly by physics professors. Isaac Newton's book «Philosophiae Naturalis Principia Mathematica» (1687), whose title translates to "Mathematical Principles of Natural Philosophy", reflects the then-current use of the words "natural philosophy", akin to "systematic study of nature". Even in the 19th century, a treatise by Lord Kelvin and Peter Guthrie Tait, which helped define much of modern physics, was titled «Treatise on Natural Philosophy» (1867).

25. Philosophical conception of the natural science

In Plato's earliest known dialogue, Charmides distinguishes between science or bodies of knowledge that produce a physical result, and those that do not. Natural philosophy has been categorized as a theoretical rather than a practical branch of philosophy (like ethics). Sciences that guide arts and draw on the philosophical knowledge of nature may produce practical results, but these subsidiary sciences (e.g., architecture or medicine) go beyond natural philosophy. The study of natural philosophy seeks to explore the cosmos by any means necessary to understand the universe. Some ideas presuppose that change is a reality. Although this may seem obvious, there have been some philosophers who have denied the concept of metamorphosis, such as Plato's predecessor Parmenides and later Greek philosopher Sextus Empiricus, and perhaps some Eastern philosophers. George Santayana, in his Scepticism and Animal Faith, attempted to show that the reality of change cannot be proven. If his reasoning is sound, it follows that to be a physicist, one must restrain one's skepticism enough to trust one's senses, or else rely on anti-realism.

René Descartes' metaphysical system of Cartesian Dualism describes two kinds of substance: matter and mind. According to this system, everything that is "matter" is deterministic and natural—and so belongs to natural philosophy—and everything that is "mind" is volitional and non-natural, and falls outside the domain of philosophy of nature.

Major branches of natural philosophy include astronomy and cosmology, the study of nature on the grand scale; etiology, the study of (intrinsic and sometimes extrinsic) causes; the study of chance, probability and randomness; the study of elements; the study of the infinite and the unlimited (virtual or actual); the study of matter; mechanics, the study of translation of motion and change; the study of nature or the various sources of actions; the study of natural qualities; the study of physical quantities; the study of relations between physical entities; and the philosophy of space and time.

Humankind's mental engagement with nature certainly predates civilization and the record of history. Philosophical, and specifically non-religious thought

about the natural world, goes back to ancient Greece. These lines of thought began before Socrates, who turned from his philosophical studies from speculations about nature to a consideration of man, viz. and political philosophy.

The thought of early philosophers such Parmenides, Heraclitus, and Democritus centered on the natural world. In addition, three presocratic philosophers who lived in the Ionian town of Miletus (hence the Milesian School of philosophy,) Thales, Anaximander, and Anaximenes, attempted to explain natural phenomena without recourse to creation myths involving the Greek gods. They were called the physikoi (natural philosophers,) or, as Aristotle referred to them, the physiologoi. Plato followed Socrates in concentrating on man. It was Plato's student, Aristotle, who, in basing his thought on the natural world, returned empiricism to its primary place, while leaving room in the world for man. Martin Heidegger observes that Aristotle was the originator of conception of nature that prevailed in the middle Ages into the modern era:

The Physics is a lecture in which he seeks to determine beings that arise on their own, τ φύσει ντα, with regard to their being. Aristotelian "physics" is different from what we mean today by this word, not only to the extent that it belongs to antiquity whereas the modern physical sciences belong to modernity, rather above all it is different by virtue of the fact that Aristotle's physics is philosophy, whereas modern physics is a positive science that presupposes a philosophy. This book determines the warp and woof of the whole of Western thinking, even at that place where it, as modern thinking, appears to think at odds with ancient thinking. But opposition is invariably comprised of a decisive, and often even perilous, dependence. Without Aristotle's Physics there would have been no Galileo.

The scientific method has ancient precedents and Galileo exemplifies a mathematical understanding of nature which is the hallmark of modern natural scientists. Galileo proposed that objects falling regardless of their mass would fall at the same rate, as long as the medium they fall in is identical. The 19th-century distinction of a scientific enterprise apart from traditional natural philosophy has its roots in prior centuries. Proposals for a more "inquisitive" and practical approach to the study of nature are notable in Francis Bacon, whose ardent convictions did much to popularize his insightful Baconian method. The late 17th-century natural philosopher Robert Boyle wrote a seminal work on the distinction between physics and metaphysics called, A Free Enquiry into the Vulgarly Received Notion of Nature, as well as The Skeptical Chymist, after which the modern science of chemistry is named, (as distinct from proto-scientific studies of alchemy). These works of natural philosophy are representative of a departure from the medieval scholasticism taught in European universities, and anticipate in many ways, the developments which would lead to science as practiced in the modern sense.

As Bacon would say, vexing nature to reveal her secrets, (scientific experimentation), rather than a mere reliance on largely historical, even anecdotal, observations of empirical phenomena, would come to be regarded as a defining

characteristic of modern science, if not the very key to its success. Boyle's biographers, in their emphasis that he laid the foundations of modern chemistry, neglect how steadily he clung to the scholastic sciences in theory, practice and doctrine. However, he meticulously recorded observational detail on practical research, and subsequently advocated not only this practice, but its publication, both for successful and unsuccessful experiments, so as to validate individual claims by replication.

26. Biosphere and Noosphere

The development of civilization is impossible without rational interaction with nature, which develops and operates millions of years. The person receives from it all necessary for life: energy, food, materials, and, no less importantly, emotional and aesthetic enthusiasm.

The focus of action on human nature determines not only positive impact but also leads to negative consequences. The man is so out of balance when natural the entire global ecosystem that it started to deteriorate, losing the ability to heal itsel. This effect will increase with the increasing globalization of the world economy.

The environmental factor was actually limiting people's well-being: to know and this affects the health, increases the risk of genetic faults reduces life expectancy. According to the world health organization public health is 50% dependent on lifestyle and 25% of the state of the environment.

The main components of natural environment: atmosphere, hydrosphere, lithosphere, biosphere. Each of them has its constituent elements, structure and features. Three of them - the atmosphere, hydrosphere and lithosphere — educated lifeless substances and is aralon functioning of living matter-biota — the main component of the fourth component of the environment — biosphere. Let us consider each of them. A special place in the structure of the natural environment is the biosphere.

Biosphere (BIOS — life, sphere of activity) — the outer shell of the Earth within which life exists. The basic element of the biosphere is. Man is the highest development of living organisms on Earth, the subject of socio-historical activity and culture.

The trend of evolution of the biosphere is: a gradual increase in total biomass and productivity; accumulation of the accumulated solar energy in the surface shells of the planet; increase the capacity of the biosphere, which manifests itself in increasing life-forms; strengthening of some of the biogeochemical functions of the living and of waste products and the emergence of new functions; the increasing role of living matter in geological, geochemical and physical geographical processes; the complexity of the structure of the biotic turnover. You must add also the transforming influence of human activities, causing evolutionary replacement of certain Bioelements. Sometimes this substitution at the regional level is accompanied by a complete decline. Rapid withdrawal types

of ecosystem composition and affect the trend reverse to the above, — reduced biomass, productivity and information in the biosphere, changing the nature of the fixation of solar energy. Therefore, evolution can be seen not only by progressive but also regressive.

The problem of man — biosphere has two main aspects:

1. The feasibilityassociated with growing depletion of natural resources of the planet that poses a lot of problems scientists search for new energy sources and the like.

2. Socio-ecologicalpollution of the environment and violation of the biological balance in the system man — biosphere.

The socio-ecological process is directed, as all evolution, then in what direction? This question is answered by the law formulated by V. Vernadsky: the biosphere will inevitably turn into a noosphere, i.e. the sphere where the human mind will play a dominant role in the development of the system "man — nature". In other words, chaotic self-development based on the natural processes of self-regulation, will be replaced by a sound strategy based on forecasting and planning principles and regulation of the processes of natural development.

The founders of this doctrine B. Le Roy, P. Teilhard de Chardin, Vernadsky, Florensky was invested in the concept of "human mind" and the divine (ascension to the divine mind) that followed from their worldview. In the above formulation of the law of the noosphere seems logical, since humanity as part of nature, becoming a devastating global "geological force" that can either completely destroy the biosphere, and thereby destroy themselves, or to preserve her own existence. But, in the figurative expression of Russian geologist M. Wassouf, "the biosphere is both the people and the house, and we in him."

A distinctive feature of the modern world is a constant increase of technological and anthropogenic loads on the biosphere. This is the reason for increasing the size tehnosfera regions, which are home to most of the world's population. These regions are characterized by a high level of concentration of industrial objects and population density.

On the planet formed regions where the level of pollution of the biosphere has reached alarming proportions.

Scientific evidence suggests that changes in the biosphere. But they took place over a long enough periods. It is known that significant changes in environmental conditions caused the disappearance of a number of types of organisms, but it saw the acceleration of evolutionary Adaptations. This happened on the principle of catastrophic jolt, according to which disaster always causes significant evolutionary change can be interpreted as a progressive phenomenon. The acceleration phase is altered by the stage of evolution, that is, the principle of continuity and discontinuity of development of the biosphere.

In our time, anthropogenic impact on the biosphere occu intensively and regularly, and expect a new acceleration of evolutionary mutations, the consequences of which we cannot even imagine. First of all there is a problem of awareness of mankind not only on the state of the biosphere, as well as its in-

formation-management network. Awareness of the humanity of the crisis in the biosphere and response to the global environmental crisis, which has already begun, is characterized by excessive slowness. And it threatens humanity's physical destruction. According to some estimates, we're 40-100 years old.

27. Philosophical antropology

Philosophical anthropology as a kind of thought, before it was founded as a distinct philosophical discipline in the 1920s, emerged as post-medieval thought striving for emancipation from Christian religion and Aristotelic tradition. The origin of this liberation, characteristic of modernity, has been the Cartesian skepticism formulated by Descartes in the first two of his «Meditations on First Philosophy».

Immanuel Kant (1724–1804) taught the first lectures on anthropology in the European academic world. He specifically developed a conception of pragmatic anthropology, according to which the human being is studied as a free agent. At the same time, he conceived of his anthropology as an empirical, not a strictly philosophical discipline. Both his philosophical and his anthropological work has been one of the influences in the field during the 19th and 20th century. After Kant, Ludwig Feuerbach is sometimes considered the next most important influence and founder of anthropological philosophy.

During the 19th century, an important contribution came from post-kantian German idealists like Fichte, Schelling and Hegel, as well fromSøren Kierkegaard. From the late 19th century till the early 20th century, influential contributors have been Friedrich Nietzsche, John Dewey and Rudolf Steiner.

Since its development in the 1920s, in the milieu of Germany Weimar culture, philosophical anthropology has been turned into a philosophical discipline, competing with the other traditional sub-disciplines of epistemology, ethics, metaphysics, aesthetics. It is the attempt to unify disparate ways of understanding behaviour of humans as both creatures of their social environments and creators of their own values. Although the majority of philosophers throughout the history of philosophy can be said to have a distinctive anthropology that undergirds their thought, philosophical anthropology itself, as a specific discipline in philosophy, arose within the later modern period as an outgrowth from developing methods in philosophy, such as phenomenology and existentialism. The former, which draws its energy from methodical reflection on human experience (first person perspective) as from the philosopher's own personal experience, naturally aided the emergence of philosophical explorations of human nature and the human condition.

Max Scheler, from 1900 till 1920 had been a follower of Husserl's phenomenology, the hegemonic form of philosophy in Germany at the time. Scheler sought to apply Husserl's phenomenological approach to different topics. From 1920 Scheler laid the foundation for philosophical anthropology as a philosophical discipline, competing with phenomenology and other philosophic disci-

plines. Husserl and Martin Heidegger (1889–1976), were the two most authoritative philosophers in Germany at the time, and their criticism to philosophical anthropology and Scheler have had a major impact on the discipline.

Scheler defined the human being not so much as a rational animal (as has traditionally been the case since Aristotle) but essentially as a loving being. He breaks down the traditional hylomorphic conception of the human person, and describes the personal being with a tripartite structure of lived body, soul, and spirit. Love and hatred are not psychological emotions, but spiritual, intentional acts of the person, which he categorises as intentional feelings. Scheler based his philosophical anthropology in a Christian metaphysics of the spirit. Helmuth Plessner would later emancipate philosophical anthropology from Christianity. Helmuth Plessner and Arnold Gehlen have been influenced by Scheler, and they are the three major representatives of philosophical anthropology as a movement.

Ernst Cassirer, a neo-Kantian philosopher, has been the most influential source for the definition and development of the field from the 1940s till the 1960s. Particularly influential has been Cassirer's description of man as a symbolic animal, which has been reprised in the 1960s by Gilbert Durand, scholar of symbolic anthropology and the imaginary.

In 1953, future pope Karol Wojtyla based his dissertation thesis on Max Scheler, limiting himself to the works Scheler wrote before rejecting Catholicism and the Judeo-Christian tradition in 1920. Wojtyla used Scheler as an example that phenomenology could be reconciled with Catholicism. Some authors have argued that Wojtyla influenced philosophical anthropology.

In the 20th century, other important contributors and influences to philosophical anthropology have been Paul Häberlin (1878–1960), Martin Buber (1878–1965), E.R. Dodds (1893–1979), Hans-Georg Gadamer (1900–2002), Eric Voegelin (1901–85), Hans Jonas (1903–93) Josef Pieper (1904–97), Hans-Eduard Hengstenberg (1904–98), Jean-Paul Sartre(1905–80), Joseph Maréchal (1878–1944), Maurice Merleau-Ponty (1908–61), Paul Ricoeur (1913–2005), René Girard (1923–2015), Alasdair MacIntyre (1929–), Pierre Bourdieu (1930–2002), Hans Blumenberg, Jacques Derrida (1930–2004), Emerich Coreth (1919–2006), Leonardo Polo (1926–2013).

28. Nature and essence of the man

Marx's concept of man is rooted in Hegel's thinking. Hegel begins with the insight that appearance and essence do not coincide. Or, to put it differently, it is the problem of the relationship between essence and existence. In the process of existence, the essence is realized, and at the same time, existing means a return to the essence. For Hegel, knowledge is not obtained in the position of the subject object split, in which the object is grasped as something separated from and opposed to the thinker. In order to know the world, man has to make the world

his own. This essence, the unity of being, the identity throughout change is, according to Hegel.

The culmination of all of Hegel's thinking is the concept of the potentialities inherent in a thing, of the dialectical process in which they manifest themselves, and the idea that this process is one of active movement of these potentialities. This emphasis on the active process within man is already to be found in the ethical system of Spinoza. For Spinoza, all affects were to be divided into passive affects (passions), through which man suffers and does not have an adequate idea of reality, and into active affects (actions) (generosity and fortitude) in which man is free and productive.

Goethe, who like Hegel was influenced by Spinoza in many ways, developed the idea of man's productivity into a central point of his philosophical thinking. For him all decaying cultures are characterized by the tendency for pure subjectivity, while all progressive periods try to grasp the world as it is, by one's own subjectivity, but not separate from it. Goethe gave the most poetic and powerful expression to the idea of human productivity in his Faust. Neither possession, nor power, nor sensuous satisfaction, Faust teaches, can fulfill man's desire for meaning in his life; he remains in all this separate from the whole, hence unhappy. Only in being productively active can man make sense of his life, and while he thus enjoys life, he is not greedily holding on to it.

He has given up the greed for having, and is fulfilled by being; he is filled because he is empty; he is much, because he has little. Hegel gave the most systematic and profound expression to the idea of the productive man, of the individual who is he, inasmuch as he is not passive-receptive, but actively related to the world; who is an individual only in this process of grasping the world productively, and thus making it his own. For Hegel the development of all individual powers, capacities and potentialities is possible only by continuous action, never by sheer contemplation or receptivity. For Spinoza, Goethe, Hegel, as well as for Marx, man is alive only inasmuch as he is productive, inasmuch as he grasps the world outside of himself in the act of expressing his own specific human powers, and of grasping the world with these powers.

Inasmuch as man is not productive, inasmuch as he is receptive and passive, he is nothing, he is dead. In this productive process, man realizes his own essence, he returns to his own essence, which in theological language is nothing other than his return to God.

The concept of productivity as against that of receptivity can be understood more easily when we read how Marx applied it to the phenomenon of love. Marx expressed also very specifically the central significance of love between man and woman as the immediate relationship of human being to human being. It is of the utmost importance for the understanding of Marx's concept of activity to understand his idea about the relationship between subject and object. Man's senses, as far as they are crude animal senses, have only a restricted meaning.

The senses which man has, so to speak, naturally, need to be formed by the objects outside of them. Any object can only be confirmation of one of my own

faculties. Subject and object cannot be separated. What Marx means by "species-character" is the essence of man; it is that which is universally human, and which is realized in the process of history by man through his productive activity. From this concept of human self-realization, Marx arrives at a new concept of wealth and poverty, which is different from wealth and poverty in political economy.

29. Personality and society

Society has several mechanisms for building us and our personality. The first mechanism is socialization. A second mechanism society has for building us is social control, which is used to re-build deviants or at least keep them from interfering with the normal operation of society. Social control ranges from gossip and ridicule to imprisonment and execution.

Society also has mechanisms for distributing valued resources. Through stratification society categorizes people and distributes valued resources to them based on the categories. Among the most important categories are class, race and gender. Our social class, race and gender affect how we are socialized, what type of social control we face, what opportunities we receive and what obstacles weface.

Primary socialization theory as formulated by Oetting and his associates emphasizes the transmission of societal norms during childhood and adolescence within society's three major socializing agencies: family, school, and small, intimate peer groups. The norms thus transmitted may be pro-social or deviant, with pro-social norms more likely to be transmitted through strong bonds to healthy families or schools.

Personality traits and other personal characteristics influence negative outcomes only to the extent that they interfere with socialization. Our research does not address primary socialization theory directly. We have studied social factors, personality factors, and various psychopathologies as etiological for deviance and substance abuse. Our research has supported the hypotheses of primary socialization theory.

30. Philosophy of mind

Philosophy of Mind is the branch of philosophy that studies the nature of the mind (mental events, mental functions, mental properties and consciousness) and its relationship to the physical body. It intersects to some extent with the fields of neurobiology, computer science and psychology.

Within philosophy, the Philosophy of Mind is usually considered a part of Metaphysics, and has been particularly studied by schools of thought such as Analytic Philosophy, Phenomenology and Existentialism, although it has been discussed by philosophers from the earliest times. It has a potential influence on philosophical questions such as the nature of death, the nature of free

will, the nature of what a person is (and his or her identity and the self), and the nature of emotion, perceptionand memory. The central issue in Philosophy of Mind is the mind-body problem (the relationship of the mind to the body), and the challenge is to explain how a supposedly non-material mind can influence a material body and vice-versa. The two major schools of thought that attempt to resolve this problem are Dualism and Monism (see the sections below), with Pluralism as a small minority viewpoint.

However, there are those (notably Ludwig Wittgenstein and his followers) who reject the problem as an illusory one which has arisen purely because mental and biological vocabulary are incompatible, and such illusory problems arise if one tries to describe the one in terms of the other's vocabulary, or if the mental vocabulary is used in the wrong contexts.

Dualism is the position that mind and body are in some categorical way separate from each other, and that mental phenomena are, in some respects, non-physical in nature. It can be traced back to Plato, Aristotle, and the Sankhya and Yoga schools of Hindu philosophy, but it was most precisely formulated by René Descartes in the 17th Century. Descartes was the first to clearly identify the mind with consciousness and self-awareness, and to distinguish this from the brain, which was the physical seat of intelligence.

Dualism appeals to the common-sense intuition of the vast majority of non-philosophically-trained people, and the mental and the physical do seem to most people to have quite different, and perhaps irreconcilable, properties. Mental events have a certain subjective quality to them (known as qualia or "the ways things seem to us"), whereas physical events do not.

There are three main Dualist schools of thought:

- Substance Dualism (or Cartesian Dualism) argues that the mind is an independently existing substance - the mental does not have extension in space, and the material cannot think. This is the type of Dualism most famously defended by Descartes, and it is compatible with most theologies which claim that immortal souls occupy an independent "realm" of existence distinct from that of the physical world. There are three main types of Substance Dualism:
  - Interactionism, which allows that mental causes (such as beliefs and desires) can produce material effects, and vice-versa. Descartes believed that this interaction physically occurred in the pineal gland.
  - Occasionalism, asserts that a material basis of interaction between the material and immaterial is impossible, and that the interactions were really caused by the intervention of God on each individual occasion. Nicholas Malebranche was the major proponent of this view.
  - Parallelism (or Psychophysical Parallelism), holds that mental causes only have mental effects, and physical causes only have physical effects, but that God has created a pre-established harmony so that it seems as if physical and mental events (which are really monads, completely independent of each other) cause, and are caused by, one another. This unusual view was most prominently advocated by Gottfried Leibniz.

• Property Dualism maintains that the mind is a group of independent properties that emerge from the brain, but that it is not a distinct substance. Thus, when matter is organized in the appropriate way (i.e. in the way that living human bodies are organized), mental properties emerge.

• Epiphenomenalism, which asserts that mental events are causally inert (i.e. have no physical consequences). Physical events can cause other physical events, and physical events can cause mental events, but mental events cannot cause anything, since they are just causally inert by-products of physical events which occur in the brain (i.e. epiphenomena) of the physical world. This doctrine was first formulated by Thomas Henry Huxley in the 19th Century, although based on Thomas Hobbes' much earlier Materialism theories.

• Predicate Dualism argues that more than one predicate (how we describe the subject of a proposition) is required to make sense of the world, and that the psychological experiences we go through cannot be redescribed in terms of (or reduced to) physical predicates of natural languages.

• Monism is the position that mind and body are not ontologically distinct kinds of entities. This view was first advocated in Western Philosophy by Parmenides in the 5th Century B.C. and was later espoused by Baruch Spinoza in the 17th Century and George Berkeley in the 18th Century.

• There are three main Monist schools of thought:

• Physicalism (also known as Materialistic Monism) argues that the mind is a purely physical construct (the only existing substance is physical), and will eventually be explained entirely by physical theory, as it continues to evolve. With the huge strides in science (especially in atomic theory, evolution, neuroscience and computer technology) in the 20th Century, Physicalism of various types has become the dominant doctrine. There are two main types:

• Reductive Physicalism, which asserts that all mental states and properties will eventually be explained by scientific accounts of physiological processes and states, has been the most popular form during the 20th Century. Behaviourism, which holds that mental states are just descriptions of observable behaviour. Type Identity Theory, which holds that various kinds of mental states are identical to certain kinds, or types, of physical states of the brain. Token Identity Theory, which holds that particular instances of mental states are identical to particular instances of physical states of the brain. Functionalism, which holds that mental states (beliefs, desires, being in pain, etc.) are constituted solely by their functional role and can be characterized in terms of non-mental functional properties.

• Non-Reductive Physicalism, which argues that, although the brain is all there is to the mind, the predicates and vocabulary used in mental descriptions and explanations cannot be reduced to the language and lower-level explanations of physical science. Thus, mental states supervene (depend) on physical states, and there can be no change in the mental without some change in the physical, but they are not reducible to them. There are three main types:

• Anomalous Monism, which states that mental events are identical with physical events, but that the mental is anomalous i.e. these mental events are not regulated by strict physical laws. Emergentism, which involves a layered view of nature, with the layers arranged in terms of increasing complexity, each corresponding to its own special science. Eliminativism (or Eliminative Materialism), which holds that people's common-sense understanding of the mind ("folk psychology") is hopelessley flawed, and will eventually be replaced (eliminated) by an alternative, usually taken to be neuroscience. Idealism (or Mentalism or Immaterialism) maintains that the mind is all that exists (the only existing substance is mental), and that the external world is either mental itself, or an illusion created by the mind. According to idealism, then, the problem of the interaction between mind and body is not a problem at all. A pure form of idealism was espoused by Bishop George Berkeley, and variations were formulated by various members of the German idealism school, including Kant, Fichte, Schelling and Hegel.

• Neutral Monism maintains that existence consists of one kind of primal substance (hence monism), which in itself is neither mental nor physical, but is capable of mental and physical aspects or attributes (it is sometimes described as a dual-aspect theory). Thus, there is some other, neutral substance (variously labelled as Substance, Nature or God), and that both matter and mind are properties of this other unknown substance. Such a position was adopted by Baruch Spinoza and also by Bertrand Russell for a time.

31. Human mind and artificial intellect

Whole brain emulation (WBE), mind upload or brain upload (sometimes called "mind copying" or "mind transfer") is the hypothetical process of scanning mental state (including long-term memory and "self") of a particular brain substrate and copying it to a computer. The computer could then run a simulation model of the brain's information processing, such that it responds in essentially the same way as the original brain (i.e., indistinguishable from the brain for all relevant purposes) and experiences having a conscious mind.

Mind uploading may potentially be accomplished by either of two methods: Copy-and-Transfer or gradual replacement of neurons. In the case of the former method, mind uploading would be achieved by scanning and mapping the salient features of a biological brain, and then by copying, transferring, and storing that information state into a computer system or another computational device. The simulated mind could be within a virtual reality or simulated world, supported by an anatomic 3D body simulation model. Alternatively, the simulated mind could reside in a computer that is inside (or connected to) a (not necessarily humanoid) robot or a biological body in real life.

Among some futurists and within the transhumanist movement, mind uploading is treated as an important proposed life extension technology. Some believe mind uploading is humanity's current best option for preserving the identi-

ty of the species, as opposed to cryonics. Another aim of mind uploading is to provide a permanent backup to our mind-file, and a means for functional copies of human minds to survive a global disaster or interstellar space travels. Whole brain emulation is discussed by some futurists as a «logical endpoint» of the topical computational neuroscience and neuroinformatics fields, both about brain simulation for medical research purposes. It is discussed in artificial intelligence research publications as an approach to strong AI.

Computer-based intelligence such as an upload could think much faster than a biological human even if it were no more intelligent. A large-scale society of uploads might, according to futurists, give rise to a technological singularity, meaning a sudden time constant decrease in the exponential development of technology. Mind uploading is a central conceptual feature of numerous science fiction novels and films.

Substantial mainstream research in related areas is being conducted in animal brain mapping and simulation, development of faster super computers, virtual reality, brain–computer interfaces, connectomics and information extraction from dynamically functioning brains. According to supporters, many of the tools and ideas needed to achieve mind uploading already exist or are currently under active development; however, they will admit that others are, as yet, very speculative, but still in the realm of engineering possibility. Neuroscientist Randal Koene has formed a nonprofit organization called Carbon Copies to promote mind uploading research.

Information technology was created in the twentieth century on the basis of the paradigm of functionalism. According to this paradigm, the description of functional properties and relationships is logically independent of the description of physical properties and relationships. This means that the same functions can be reproduced on substrates with different properties. In this context of consideration, human thinking is similar to mathematical calculation. It was only necessary to develop, within the framework of formal logic, the programming mechanisms necessary for the transformation of natural language statements into statements of an artificial language, one of the modifications of which is the language of mathematical calculi.

Mathematical logic coped with this task. Human thinking was formalized on the basis of a specific set of functions for processing information, storing and transmitting information. At this stage, algorithms were developed for solving specific computational problems related to statistics, costing, document management, design and construction. Human thinking was freed from routine arithmetic calculations similar to the function of a calculator. After the computers were combined into an information network, they began to perform the function of transmitting and receiving information (feedback). It turned out to be relevant in the face of increased volumes of information necessary for decision-making. It was the beginning of cybernetics.

Information technology developers wanted to transfer more functions of human thinking to computer technologies. This means that in the description of

the function of thinking it was necessary to introduce features of human consciousness. That was the beginning of the methodology of simulation modeling of information processing functions in the human mind. For this purpose, the categorial apparatus of cognitive science has been updated. He became the basis of the paradigm of cognitive sciences. The initial thesis of this paradigm is that people act on the basis of cognitive codes. Their behavior is a causal consequence of operations performed on the basis of these codes.

As a result of cognitive activity, a system of meanings (concepts fixed by the word) is created, which refers to the fact that the individual knows and thinks about the world. In a systematic form, these meanings are represented by a mentality, which is understood as a stable set of attitudes and predispositions of an individual or social group to perceive the world in a certain way. Mentality reflects the style of thinking, as well as mental attitude, national character, attitudes, values, behavior, activities, mental processes.

The subject of cognitive linguistics is the processes of perception, categorization, classification and understanding of the world, the accumulation of knowledge, that part of the information that is reflected and fixed in the forms of language. Frames (stereotypical situations, scenarios), concepts (the totality of all meanings expressed by the means of the language), aestaltes (integral additional images of fragments of the world) became the instruments of operation. The language sign system plays a role in coding and transformation of information.

Categorization develops concepts in which the most relevant properties for everyday consciousness are concentrated. Generative (transformational) linguistics of N. Chomsky has become one of the grounds for creating a new generation of computer programs that take into account the characteristics of subjective reality. Its essence is that transformational and structural rules, principles describe the creation and interiorization of language expressions. Using a finite set of grammar rules and concepts, people can create an unlimited number of sentences. The ability to structure expressions is an inherent part of the genetic program of humans. They are practically unaware of these structural principles. People only need to learn lexical units and morphemes in order to construct expressions. Understanding the language is not due to past experience of behavior, but to the mechanism of language acquisition (internal memory structure).

J. Fodor developed the theory of human brain activity with the concept of modularity of consciousness. According to this approach, the human cognitive system consists of a central processor and modules. Central processors (conclusions) have access to the entire cognitive system of a person. They form censorship mechanisms. These mechanisms are culturally determined. Information that does not fit into cultural models does not reach the human mind, as it is censored. Censored (recognition, identity procedures) information is divided into modules (fragments). In the general semantic picture, it is collected only in the central processor. Information is structured to fit the cultural program. In the theory of artificial intelligence, connectionism began to dominate.

From the standpoint of connectionism, the mental activity of the brain is modeled through the distribution of activation signals between simple computational units (neurons), which it possible in conditions of fuzzy or insufficient data, contextually dependent concepts, and dynamic representations. Neurons can enter quantitatively measured states of activation and measure the weight of connections with each other, creating complex systems, configurations, described by a mathematical apparatus. Each configuration described by a mathematical vector is a representation of a mental state. A neural network, unlike computers of linear architecture, practically does not need preliminary programming. She is capable of self-learning, as a result of which she performs the functions of generalization, classification, prediction, speech recognition, images, memory research, learning processes.

In 2010, the Image Net database was developed. It contains 15 million images in 22 thousand categories. Based on such a database, a neural network is capable of making practically error-free decisions. Despite the successes in the field of artificial intelligence theory, computer programs in the field of cybernetics only contribute to human decision making. He remains the main actor. There was a rejection of the thesis about the isomorphism of a computer program and human consciousness. As a result, cognitive sciences have focused on the connection of the human psyche with the functions of his brain. Physicalism, psychologism, and functionalism were combined. The result of concentration of efforts was neuropsycholinguistics.

A statement is formulated that organisms use internal representations (representations) and perform computational operations on them. Cognition in this sense is the controlled manipulation of representations.

The developers of the theory of behavioral economics and neuromarketing began to believe that the understanding of the situation and decision-making by individuals is formed by mechanisms of unconscious thinking. D. Kahneman believes that the role of rational judgment is overestimated. It focuses only a small part of the perceived information, reaching the stage of analysis. In many cases, a judgment on a positive outcome of a choice is made on the basis of a subjective opinion of its correctness, without taking into account real facts. Reflective thinking systems are knowledge-based. Impulsive thinking systems are based on off-the-shelf schemes.

The unconscious thinking model is preferred because it is highly effective due to the low consumption of intellectual resources. No additional cognitive effort is required. Activation of ready-made patterns of social relations occurs without the participation of consciousness (automatic thinking). When there are many variables, the brain performs mental tasks better without the participation of consciousness. When there are few variables and the solution of the problem is reduced to the simplest logical operations, conscious thought works. As a result, unconscious thought is wider than conscious thought due to the limited capacity of working memory.

The neural system is a biological carrier and a causal generator of mental states. These conditions are identical to neural states. The spatial and environmental organization of the human nervous system is ontologically integrated into the brain and generates neural and mental states. A particular individual is a carrier of a mentalized brain.

Formalization of decision-making processes is designed to ensure decision-making, but not to replace them. First of all, it is supposed to support decision-making based on poorly structured information; assessment of the situation and assessment of alternatives. A multi-criteria hierarchical assessment of the situation is implemented. The analysis of influences in the management of poorly structured situations is carried out. Provides intelligent support for management decisions involving intelligent. Methods of formation of enterprise development scenarios are used. Experts, analysts use ideas about the processes occurring in dynamic situations at the enterprise. They use scenarios for the development of the situation in the enterprise in rapidly changing conditions and correlations.

The fourth industrial revolution formulated the trend of a digital society based on the network structures of artificial intelligence. One of the conditions of this trend is the compatibility of all participants in social communication. The infrastructure of crowd platforms has been created. It is a place of updating the creative resources of society. Project applicants through crowd platforms have the opportunity to dialogue with potential investors and donors. If in a timely manner the project is gaining the necessary financial support, then it becomes innovative. According to this technique, the commercial crowdfunding platform "Ulej" (Ulej.by) operates in Belarus. Information support for startups is provided by the BTW-Portal of the creative industry. He also provides information support for projects.

One of the first issues of the creative industry in Belarus began to be considered by I. Matsevich. She traced the evolution of social communities in a new paradigm. The conceptual apparatus used was developed in English-language studies on the creative industry ("creative city" C. Landry), "cluster"). The subject of discussion was the importance of clusters in the field of creative economy for the development of social communities in the city. An important part of this process is the formation of the information environment of the cognitive economy and the mechanisms of functioning of cyber-physical systems. Elements of the cognitive economy are "smart enterprise", "smart city".

The basis of management practices is formed by methods and models of artificial intelligence, intelligent information systems, decision support systems, intelligent data processing. Intelligent production planning systems, dynamic expert systems for dispatching enterprise management, financial analysis and planning using neural networks and evolutionary algorithms, as well as intelligent investment portfolio management and risk management systems are used. An important explanation is the nature of the evolution of organizations and social institutions under structural uncertainty.

The basis is an understanding of the mental activity of a person and a model from the field of cognitive sciences. An interdisciplinary concept of heterodox economic theory has been formed. This theory integrated the sections of cognitive, experimental, and behavioral economies. Formed business analytics, data mining, text mining, web mining, business intelligence. Hybrid intelligent systems have been developed that analyze the consciousness and logic of an expert. They consist of cognitive and analytical levels. The cognitive level provides information for processing at the analytical level.

Cognitive methods of analyzing the consciousness of social agents used, testing is carried out of the quality of decision logic for their brain activity, for parametric tuning of intelligent decision support systems. Methods of pairing forecast models and evaluating unstructured situations are used based on cognitive modeling approaches. Models reproduce all stages of the decision support process - from analyzing the situation to choosing the best alternative. They are designed to support analysts in the face of uncertainty. The expert's knowledge about the situation is modeled in the aspect of his ideas and preferences regarding the control goal and the dynamic properties of the situation. The influence of emotions on decision making, learning processes, decision making in the absence of time is studied. According to the results of research, a whole group of cognitive distortions is classified.

The human-machine system combines the functions of human decision making and artificial intelligence decision making. In the process of creating the conditions for supporting decision-making, computer systems for analyzing situations and the method of cognitive maps used in them play an important role. Experts and analysts use ideas about processes that occur in dynamic situations modeled by a cognitive map. The importance of a cognitive map of the environment was noticed as early as 1948 by Tolman. In his opinion, it determines the response of the body to the environment.

System reconstruction with elements of visual clarity achieved by using diagrams and drawings in mind maps contributes to a better presentation and assimilation of knowledge (Tony Buzan). Concept Maps emphasize the importance of previous experience in creating new concepts (Joseph D. Novak, David Ausubel). B. Kosko substantiated the methodology of fuzzy cognitive maps - mathematical models that describe a problem situation and complex weakly structured systems. These models allow you to study the evolution of the situation in terms of self-development, external influences.

In the structure of the cognitive map, there are many concepts (vertices), as well as many relationships between concepts (arcs). Concepts are elements of the system under study. The same elements are the relationships between them. As a result, a structural diagram of causal relationships is created. A formalized modeling apparatus allows you to work with quantitative and qualitative data.

The cognitive map contains the basic laws of the observed situation known to the subject in the form of an oriented sign graph. The vertices of the graph are factors, signs, characteristics of the situation. Arcs capture cause-effect relation-

ships between vertices. Fuzzy flow control methods have been developed in geographic information systems. A sectoral approach to modeling processes in local spaces of activity and management is used. Attention is paid to the analysis of complex control input factors, the potential strength of their influence, of their influence on the system parameters. Factors (domains) that have a large number of relationships with other factors are investigated. Factors are found that do not have relationships with other factors (orphan factors). Clusters (subsystems) are distinguished, as well as elements of the hierarchical organization of the cognitive map.

But not only knowledge and information provide effective decision making. An important role is played by the subjective human factor. Therefore, the cognitive economy is the knowledge of how managers formulate goals, alternatives, how they reflect. Based on this knowledge, neuromarketing strategies are built.

32. Artificial intellect and virtual reality

There is a long last tradition in Artificial Intelligence as use of Robots endowing human peculiarities, from a cognitive and emotional point of view, and not only in shape. Today Artificial Intelligence is more oriented to several form of collective intelligence, also building robot simulators (hardware or software) to deeply understand collective behaviors in human beings and society as a whole.

Modeling has also been crucial in the social sciences, to understand how complex systems can arise from simple rules. However, while engineers' simulations can be performed in the physical world using robots, for social scientist this is impossible. For decades, researchers tried to improve simulations by endowing artificial agents with simple and complex rules that emulated human behavior also by using artificial intelligence (AI). To include human beings and their real intelligence within artificial societies is now the big challenge.

Hybrid (human-artificial) platform where experiments can be performed by simulated artificial worlds in the following manner: 1) agents' behaviors are regulated by the behaviors shown in Virtual Reality involving real human beings exposed to specific situations to simulate, and 2) technology transfers these rules into the artificial world. These form a closed-loop of real behaviors inserted into artificial agents, which can be used to study real society.

Belarus High Technology Park is a special tax-free economic zone and a favorable legal regime for its resident companies. First companies were registered as HTP residents in 2006 and by April 2019 the number of HTP residents has grown to. Most HTP residents are foreign companies and joint ventures. HTP provides an extremely favorable atmosphere for innovative science technologies and IT progress. The resident companies are engaged in IT and related industries. HTP follows its mission to create business-friendly conditions for

high technology industry development in Belarus, paying special attention to the export-oriented programming industry.

– World of Tanks game developer company was one of the first to become a HTP resident; – In 2018, the revenue exceeded USD $1,4 billion; – First legally licensed and legislated crypto exchange Currency.com is a HTP resident; – HTP residents are legally allowed to use ICO (initial coin offering); – Rakuten Viber is also a resident of HTP; – One of the HTP resident companies is owned by Facebook.

The HTP mission is to create favorable conditions for the development of the export-oriented programming industry in Belarus, the development of other export industries based on new and high technologies, as well as to concentrate human, scientific, production and financial capacities to enhance the competitiveness of the national economy.

The organization is headed by the Director of the HTP Administration. There are two Boards in the Park structure - the Expert Board and the Supervisory Board. The HTP Administration is subordinate to the President of the Republic of Belarus and reports to the Council of Ministers. It's a legal entity at the national level and a nonprofit state institution. The HTP Administration's activities involve creating conditions favorable for HTP residents, promoting domestic and foreign investments in information technologies and creating a modern infrastructure.

The High-Tech Park is the organization in the country that has the right to provide tax benefits on a systematic basis. Resident companies enjoy important government support: they are exempted from most taxes, including value-added tax and income tax. Further, employees of the resident companies enjoy a 30% reduction in personal income tax compared with other sectors of the economy.

Highly qualified specialists enhance the competitiveness of Belarus HTP in overseas markets. They participate in IT projects of any complexity, starting from systems analysis and consulting and finishing with the design and development of complex systems. Belarusian specialists are being trained in prestigious international educational centers, such as IBM, Microsoft, SAP, Lotus, Sun and Novell. Another advantage of Belarusian developers is that they also have deep knowledge in mathematics, physics and other sciences.

HTP is actively engaged in supporting IT education and innovative entrepreneurship. Today, HTP resident companies support about 80 joint laboratories in Belarusian technical universities. With the participation of HTP residents, the Educational Center of the Hi-Tech Park was established to provide re-education for adults who want to start a career in the IT industry, as well as training for employees of IT companies willing to improve their knowledge and skills. 1,629 people received training there in 2016, with 340 of them getting jobs in HTP companies. I Teen Academy for kids aged 6–15 years old also operates within the Educational Center.

In 2016, the HTP business incubator in Minsk hosted 55 events (conferences, workshops, contests, hackathons, etc.) which attracted more than 9,000

participants (in 2015, there were 12 events and 2,000 participants). Here, startup companies rent offices at lower rates, receive advice on commercialization of their products and assistance in search for partners and investors.

In summer 2017, a new revolutionary draft Decree regulating HTP activities has been submitted to state bodies for consideration. The Decree aims to create conditions that would facilitate the inflow of international investments, the opening of foreign representative offices and development centers. The Decree was initiated by the Director of the Belarus HTP Administration Vsevolod Yanchevsky who had been responsible for ensuring state policy in the spheres of information and high technologies since 2013. For the first time, prospects of the Decree were announced by him and Viktor Prokopenya during the visit of Belarus President Alexander Lukashenko to several IT companies in Minsk on March 13, 2017.

In close cooperation with government authorities, a working group of the best specialists of the country worked on the project. It was led by the HTP Administration to ensure an effective interaction between lawmakers and people working in the IT industry. The key person among lawmakers who imbued the Decree with regulatory innovations was a Belarusian lawyer Denis Aleinikov.

This Decree opens HTP doors for product companies, investment funds, as well as foreign companies that monetize IT products through advertising and paid subscription. On top of that, the Decree introduces separate institutes of English law that will stimulate investment activities, sets legal basis for driverless car technology, lifts many restrictions regarding financial operations for IT companies, stimulates a breakthrough in IT education, as well as creates prerequisites for new jobs and revenue growth.

According to a presidential decree passed in December 2017, the High Technologies Park will become a sandbox for blockchain startups offering tax exemptions and relying on elements of English law in commercial matters.

33. Collective and individual consciousness

The collective consciousness informs our sense of belonging and identity, and our behavior. Founding sociologist Émile Durkheim developed this concept to explain how unique individuals are bound together into collective units like social groups and societies.

What is it that holds society together? This was the central question that preoccupied Durkheim as he wrote about the new industrial societies of the 19th century. By considering the documented habits, customs, and beliefs of traditional and primitive societies, and comparing those to what he saw around him in his own life, Durkheim crafted some of the most important theories in sociology. He concluded that society exists because unique individuals feel a sense of solidarity with each other. This is why we can form collectives and work together to achieve community and functional societies. The collective consciousness, or conscience collective as he wrote it in French, is the source of this solidarity.

Durkheim first introduced his theory of the collective consciousness in his 1893 book «The Division of Labor in Society». Later, he would also rely on the concept in other books, including Rules of the Sociological Method, Suicide, and The Elementary Forms of Religious Life.

In this text, he explains that the phenomenon is "the totality of beliefs and sentiments common to the average members of a society." Durkheim observed that in traditional or primitive societies, religious symbols, discourse, beliefs, and rituals fostered the collective consciousness. In such cases, where social groups were quite homogenous (not distinct by race or class, for example), the collective consciousness resulted in what Durkheim termed a "mechanical solidarity"—in effect an automatic binding together of people into a collective through their shared values, beliefs, and practices.

Durkheim observed that in the modern, industrialized societies that characterized Western Europe and the young United States when he wrote, which functioned via a division of labor, an "organic solidarity" emerged based on the mutual reliance individuals and groups had on others in order to allow for a society to function.

In cases such as these, religion still played an important role in producing collective consciousness among groups of people affiliated with various religions, but other social institutions and structures would also work to produce the collective consciousness necessary for this more complex form of solidarity, and rituals outside of religion would play important roles in reaffirming it. These other institutions include the state (which fosters patriotism and nationalism), news and popular media (which spreads all kinds of ideas and practices, from how to dress, to who to vote for, to how to date and be married), education, and the police and judiciary (which shape our notions of right and wrong, and direct our behavior through threat of or actual physical force), among others.

Rituals that serve to reaffirm the collective conscious range from parades and holiday celebrations to sporting events, weddings, grooming ourselves according to gender norms, and even shopping.

Primitive or modern societies—collective consciousness is something "common to the whole of society," as Durkheim put it. It is not an individual condition or phenomenon, but a social one. As a social phenomenon, it is "diffused across society as a whole," and "has a life of its own." It is through collective consciousness that values, beliefs, and traditions can be passed down through generations.

Though individual people live and die, this collection of intangible things, including the social norms connected to them, are cemented in our social institutions and thus exist independent of individual people. Most important to understand is that collective consciousness is the result of social forces that are external to the individual, that course through society. We, as individuals, internalize these and make the collective consciousness a reality by doing so, and we reaffirm and reproduce it by living in ways that reflect it.

34. Epistemology

Epistemology is the study of knowledge (Greek episteme). Epistemologists study the putative sources of knowledge, including intuition, a priori reason, memory, perceptual knowledge, self-knowledge and testimony. They also ask: What is truth? Is knowledge justified true belief? Are any beliefs justified? Putative knowledge includes propositional knowledge (knowledge that something is the case), know-how (knowledge of how to do something) and acquaintance (familiarity with someone or something). Epistemologists examine these and ask whether knowledge is really possible.

Skepticism is the position which doubts claims to knowledge. The regress argument, a fundamental problem in epistemology, occurs when, in order to completely prove any statement, its justification itself needs to be supported by another justification. This chain can go on forever, called infinitism, it can eventually rely on basic beliefs that are left unproven, called foundationalism, or it can go in a circle so that a statement is included in its own chain of justification, called coherentism.

Rationalism is the emphasis on reasoning as a source of knowledge. It is associated with a priori knowledge, which is independent of experience, such as math and logical deduction. Empiricism is the emphasis on observational evidence via sensory experience as the source of knowledge.

Among the numerous topics within metaphysics and epistemology, broadly construed are:

- Philosophy of language explores the nature, the origins and the use of language.
- Philosophy of mind explores the nature of the mind and its relationship to the body. It is typified by disputes between dualism and materialism. In recent years this branch has become related to cognitive science.
- Philosophy of religion explores questions that arise in connection with religions, including the soul, the afterlife, God, religious experience, analysis of religious vocabulary and texts and the relationship of religion and science.
- Philosophy of human nature analyzes the unique characteristics of human beings, such as rationality, politics and culture.
- Metaphilosophy explores the aims of philosophy, its boundaries and its methods.

35. Theory of knowledge

Epistemology, the study of the theory of knowledge, is among the most important areas of philosophy.

The first problem encountered in epistemology is that of defining knowledge. Much of the time, philosophers use the tripartite theory of knowledge, which analyses knowledge as justified true belief, as a working model. The tripartite theory has, however, been refuted: Gettier cases show that

some justified true beliefs do not constitute knowledge. Rival analyses of knowledge have been proposed, but there is as yet no consensus on what knowledge is. This fundamental question of epistemology remains unsolved.

Though philosophers are unable to provide a generally accepted analysis of knowledge, we all understand roughly what we are talking about when we use words such as “knowledge”. Thankfully, this means that it is possible to get on with epistemology, leaving unsolved the fundamental question as to what knowledge is.

A second important issue in epistemology concerns the ultimate source of our knowledge. There are two traditions: empiricism, which holds that our knowledge is primarily based in experience, and rationalism, which holds that our knowledge is primarily based in reason. Although the modern scientific worldview borrows heavily from empiricism, there are reasons for thinking that a synthesis of the two traditions is more plausible than either of them individually. There are better and worse ways to form beliefs. In general terms, it is important to consider evidence when deciding what to believe, because by doing so we are more likely to form beliefs that are true. Precisely how this should work, when we are justified in believing something and when we are not, is another topic in the theory of knowledge. The three most prominent theories of epistemic justification are foundationalism, coherentism, and reliabilism.

Much of our knowledge, it seems, does come to us through our senses, through perception. Perception, though, is a complex process. The way that we experience the world may be determined in part by the world, but it is also determined in part by us. We do not passively receive information through our senses; arguably, we contribute just as much to our experiences as do the objects that they are experiences of. How we are to understand the process of perception, and how this should effect our understanding of the world that we inhabit, is therefore vital for epistemology.

The area of epistemology that has captured most imaginations is philosophical scepticism. Alongside the questions of what knowledge is and how we come to acquire it is the question whether we do in fact know anything at all. There is a long philosophical tradition that says that we do not, and the arguments in support of this position, though resisted by most, are remarkably difficult to refute. The most persistent problem in the theory of knowledge is not what knowledge is or what it comes from, but whether there is any such thing at all.

36. Cognitive psychology and logic

Cognitive Psychology is a branch of psychology dealing with the 'cognitive' aspects of mind: perception, attention, categorization, memory, learning, language use, reasoning, and decision-making. As a branch of psychology, cognitive psychology typically focuses on the human mind. Unlike the psychological behaviorists, cognitive psychologists want to know the underlying, 'internal' mechanisms that brings about these cognitie phenomena. Thus, cognitive psy-

chologists are not just interested in cataloging human cognitive performance under various conditions, but try to explain such cognitive performance by postulating and testing models of these mechanisms. Cognitive psychology is therefore very much an empirical science.

Philosophical logic deals with formal descriptions of ordinary, non-specialist ("natural") language, that is strictly only about the arguments within philosophy's other branches. Most philosophers assume that the bulk of everyday reasoning can be captured in logic if a method or methods to translate ordinary language into that logic can be found. Philosophical logic is essentially a continuation of the traditional discipline called "logic" before the invention of mathematical logic. Philosophical logic has a much greater concern with the connection between natural language and logic. As a result, philosophical logicians have contributed a great deal to the development of non-standard logics (e.g. free logics, tense logics) as well as various extensions of classical logic (e.g. modal logics) and non-standard semantics for such logics (e.g. Kripke's supervaluationism in the semantics of logic).

Logic and the philosophy of language are closely related. Philosophy of language has to do with the study of how our language engages and interacts with our thinking. Logic has an immediate impact on other areas of study. Studying logic and the relationship between logic and ordinary speech can help a person better structure his own arguments and critique the arguments of others. Many popular arguments are filled with errors because so many people are untrained in logic and unaware of how to formulate an argument correctly.

At the origins of cognitive psychology was L. Vygotsky. He was born in the Belarusian city of Orsha. His main creative ideas in the field of psychology were formulated by him in the Belarusian city of Gomel, where he carried out pedagogical activities, combining it with reflexological research.

The results of his research L.S. Vygotsky presented at the Second All-Russian Congress on Psychoneurology. They emphasize the features of the study of the human psyche. The basis was taken on the aspect of the mood of students in graduation classes. This was an application for research in the field of developmental psychology, as well as for the problems of studying the crisis of identity caused by cultural factors of socialization of the individual.

This position was close to A.R. Luria. He invited L.S. Vygotsky to Moscow. In 1924, he became an employee of the Moscow Institute of Psychology.

At the level of a systems approach L.S. Vygotsky formulated the thesis of human behavior according to the criterion of reaction based on speech (verbal communication, dialogue). With this approach, language and art as cultural forms are taken into account. To strengthen the theoretical research resources L.S. Vygotsky studied the work of representatives of behaviorism, gestalt psychology, psychoanalysis. He remained true to his original position in psychology and pedagogy. Confirmation was the work "The meaning of the psychological crisis." Strengthening the cultural dominant in the analysis of mental processes was expressed in the concept of a sign. As a result, the communication model

was transformed into a paradigm of understanding communication. In the process of this communication, a special role is given to the sign in the dialogue. The sign stimulates dialogue and forms the basis of feedback in the form of verbal communication.

In the process of operating the sign system, the primary mental processes of memory, attention, thinking are transformed into sociocultural processes. The theory was accompanied by defectological and pedological studies. S.V. Vygotsky wrote unique works on the developmental psychology of personality development in the space of cultural forms. Empirical applied research has contributed to the expansion of the conceptual interpretation of the paradigm of understanding communication. The scientist began to consider the sign in connection with meaning and dialogue, training and education.

The results of fundamental generalizations were presented in the work "Thinking and Speech". Training and education (socialization) L.S. Vygotsky associated with a strategy for the long-term development of thinking and the psyche of personality. Therefore, teaching methods should be emphasized not only on the present and past of culture, but also on factors leading the reflection of reality, knowledge, creating the prospect of creativity, self-realization and self-identification of a person in specific research and design niches of the future. The subject of study was the evolution of the meanings of signs in the cultural context of modernization. Thus, the zone of the actual development of the personality was in contact with the potential of its future formation in the context of a specific cultural order.

The diversity of interests of L.S. Vygotsky, his proximity to the themes of the culture of the Silver Age, determined his scientific research in the field of creative psychology and the sphere of art. In this area, the main components of the psychology of understanding related to experience, emotions, and innovation are realized.

L.S. Vygotsky sought to study the features of understanding didactic communication of a teacher with different age categories of the population. He attached a special role to childhood, within the boundaries of which the person assigns the main array of cultural values, creative resources forming his resource. From this follows the fundamental conclusion about the crucial role of the education system in the socialization of the individual. J. Piaget supplemented the paradigm of understanding communication with an aspect of the individual's internal resources contained in the resource of logical operations of thinking.

F.E. Vasilyuk proposed and implemented a project of psychology in the context of the philosophy of practice of L.S. Vygotsky and the philosophy of dialogue MM Bakhtin. F.E. Vasilyuk developed methodological criteria for understanding, psychotechnical knowledge, dialogical attitudes and experiences. Together, they form the content of the psychotechnical theory.

The didactic function of understanding lies in a dialogical setting. The goal is to clear the space of dialogue and realize the possibility of freedom of speech, experience, self-expression. With this approach, it is not the statistical volume of

information that is important, but the formation of the skills of appropriating cultural resources in the aspect of individual experience, development epistemology. Nurturing a culture of experience is a condition of being able to overcome critical life situations.

Thus, the art of the Silver Age era influenced one of the prominent representatives of the psychological science of the native of the Belarusian city of Orsha L.S. Vygotsky. He formulated a thesis on human behavior according to the criterion of reaction based on speech (verbal communication, dialogue). With this approach, language and art as cultural forms are taken into account. To strengthen the theoretical research resources L.S. Vygotsky studied the work of representatives of behaviorism, gestaltpsychology and psychoanalysis. He remained true to his original position in psychology and pedagogy. In the process of operating the sign system, the primary mental processes of memory, attention and thinking are transformed into sociocultural processes.

The theory was accompanied by defectological and pedological studies. S.V. Vygotsky wrote unique works on the developmental psychology of personality development in the space of cultural forms. The teaching methods, in his opinion, should be focused not only on the present and past of culture, but also on factors leading the reflection of reality, knowledge, creating the prospect of creativity, self-realization and self-identification of a person in specific research and design niches of the future.

The special role of L.S. Vygotsky assigned to childhood, within the boundaries of which the individual appropriates the main array of cultural values that form his creative resources. L. Vygotsky analyzed a number of philosophical and psychological concepts, showing the inappropriateness of reducing the higher forms of human behavior to the lower elements of his behavior. Human speech thinking is localized, in his opinion, in the form of structural units of brain activity. The material of child psychology, defectology and psychiatry led him to conclude that human consciousness is a dynamic semantic system in the unity of affective, volitional and intellectual processes.

The result of the research was the cultural-historical theory of consciousness. In the light of the paradigm of sciences related to the theory of artificial intelligence, the thesis of L. Vygotsky on consciousness as higher psychophysiological processes, phenomena, functions, systems of functions, forms of behavior is relevant.

The hypothesis put forward by L. Vygotsky, gave a new solution to the problem of the ratio of lower (elementary) and higher psychological functions. The difference between them is the level of randomness. Natural psychological processes are not subject to regulation by humans. People can consciously control higher psychological functions. Conscious regulation is associated with the mediated nature of higher psychological functions. Between the acting stimulus and the human reaction (both behavioral and mental), an additional connection arises through the mediating link of the stimulus-means, through the sign.

In the cultural space of signs, the functions of socializing people and managing their own behavior are realized. The word is a means of arbitrary direction of attention, abstraction of properties and their synthesis into the meaning of the formation of concepts, arbitrary control of their own psychological operations. The manifestation and realization of the higher psychological functions of human consciousness is illustrated by the "situation of the Buridan donkey". This is a problematic situation between two equal opportunities. She was interested in L. Vygotsky in terms of means that allow to solv the situation.

Throwing lots, a person enters the situation, changing it, and finds in it new auxiliary incentives unrelated to it. The cast of lots becomes a means of transforming and resolving the situation. The casting operation reveals a new and peculiar structure. In this way, a person creates stimuli that determine his reactions. He uses these incentives as a means of mastering the processes of his own behavior. The method of researching higher psychological functions is guided by the principle of manifestation of the great in the smallest. In this context, in addition to casting lots, L. Vygotsky analyzed the phenomena of tying a knot in memory and counting on fingers.

L. Vygotsky pointed to the different genesis of the development of thinking and speech in phylogenesis. In his opinion, the relationship between them is not a constant. In phylogenesis, the pre-speech phase of intelligence is detected, as well as the pre-intellectual phase of the development of speech itself. In the process of genetic development, thinking and speech intersect. After that, a person's thinking becomes speech, and his speech becomes intellectual. Inner speech develops through the accumulation of long-term functional and structural changes. It branches off from the child's external speech, along with the differentiation of the social and egocentric function of speech. The speech functions acquired by the child become the main functions of his thinking.

L. Vygotsky examined in detail the problem of the relationship between the role of socialization and learning in the development of the higher psychological functions of the child. He formulated the principle according to which the safety and timely maturation of brain structures is a necessary but insufficient condition for the development of higher psychological functions. The source for this development is a changing social environment. To describe it, L. Vygotsky introduced the term social development situation. It is defined as a unique relationship specific to a given age between a child and the surrounding social reality. According to L. Vygotsky, he creates special forms of behavior and modifies the activity of a psychological function. The concept of the child's cultural development is explained to him as a process corresponding to individual development. In the development of the child, the biological and cultural-historical types of socialization are repeated. These two types of development are in dialectical unity. In this context, the zone of proximal development plays an important role.

This is an area of ripening processes with which the child at this level of development cannot cope. He is able to solve them with the help of an adult.

The disciples of L. Vygotsky became A.N. Leontiev, A.R. Luria, A.V. Zaporozhets, L.I. Bozhovich, P.Y. Halperin, D.B. Elkonin, P.I. Zinchenko, L.V. Zankov. In Europe and the USA, the work of the scientist has acquired fundamental significance.

An additional factor in the popularity of the works of L. Vygotsky was a critical rethinking of his texts in different editions. The subject of criticism was the translation of his work into other languages. The subject of critical analysis was the authenticity of his texts published in the Soviet Union. Scientists from Europe, Asia and Latin America participate in this critical work.

The work of L. Vygotsky was widely recognized in the United States. The first translations of his work into English were carried out in the 50-60s XX century as part of articles on psychology. In 1962, the publishing house of the Massachusetts Institute of Technology published the book "Thinking and Speech". In 1978, a collection of works by L. Vygotsky “Mind in Society” was published.

In the Dictionary of the American Association of Psychologists 2007, L. Vygotsky is described as an outstanding scientist. Researchers and educators in the United States discovered in the scientist's work the applied aspects of activity. The Harvard University Library has more than two thousand books and articles examining the scientist's ideas in the field of psychology, pedagogy, and applied linguistics.

A comprehensive historical analysis and a complete bibliography of works on L. Vygotsky and his ideas are contained in the publication of R. Van der Veer and J. Walsiner, “Knowing Vygotsky: the search for synthesis”, as well as in the studies of G. Daniels “Introduction to Vygotsky’s theory” and Vygotsky and Pedagogy. Based on the works of L. Vygotsky, B. Usher and K. Gibbs defend the idea of cultural development of a person in the relationship of physical development and cultural events. V. Tirumurti analyzes the idea of teaching students through a cultural context in the study of foreign languages.

D. Hang and M. Nichani use the theory of L. Vygotsky as the basis of experimental practice for the interaction of schools and districts, as well as for the development of curricula and the system of classes. J. Jaramiyo considers the sociocultural theory of L. Vygotsky as the basis for the development of training programs. E. Bodrova, K. Germerot and D. Leong are studying the possibilities of applying the scientist's ideas in the aspect of the development of game learning and the formation of self-regulation processes in childhood.

The sociological and psychological theory of social constructivism is associated with the name of L. Vygotsky. The involvement of the individual in social relations takes place simultaneously with the creation of the individual qualities and characteristics of reality. Knowledge is a product of social and cultural construction. In the process of interaction of individuals, communication is the putting values and meanings of the elements of reality. The processes of training and education are the social activity of the individual. Social norms, the values of the elements of social reality are not comprehended in passive perception.

They are constructed in the process of social interaction. Social factors are constituted in the situation and nature of their relationship.

The role of social constructivism in the formation of social structures in the process of individual-personal learning, accompanying interpersonal interaction, is emphasized.

Social constructivism is adapted to psychology, education, pedagogy and is used in theories of learning. It is one of the main theories of child development that arose on the basis of the concept of cognitive development of J. Piaget. G. Chiari and M. Nuzzo distinguish two types of constructivist theories: epistemological and hermeneutic constructivisms. Jonathan D. Raskin identifies three theories of constructivism: personal constructivism, also called the theory of personality construct, radical constructivism and social constructionism.

Based on the paradigm of cognitive sciences, the works of L. Vygotsky received a new direction of application related to the development of the theory of artificial intelligence.

Sofya Aleksandrovna Yanovskaya was born in the Belarusian city of Pruzhany. Research S.A. Yanovskaya in the history of mathematics focused on the formation of mathematical science.

The characteristic features of S.A. Yanovskaya in the history of mathematics was the depth of elaboration of initial historical materials, which required a lot of time, but S. A. Yanovskaya, who suffered from a serious illness, could not complete a number of scientific works. In particular, an important book on the work of R. Descartes "Geometry", conceived before the Great Patriotic War, was not completed. The result was only an article “On the role of mathematical rigor in the creative development of mathematics and specifically on Descartes' Geometry”. The paper considers the importance of rigorous mathematical and logical refinement of concepts for the development of mathematics and logic.

S.A. Yanovskaya and M.Y. Vygodsky began to read the history of mathematics at Moscow State University. The main emphasis was placed on the history of the justification of mathematics, from the era of antiquity to the present. The questions of substantiation of the concepts of number, quantity, limit, infinitesimal quantity, differential and integral were considered. In 1933, S.A. Yanovskaya together with M.Y. Vygodsky organized a seminar on the history of mathematics at Moscow State University. One of the leaders of this seminar was her student A.P. Yushkevich. The seminar became a training center for domestic researchers in the field of the history of mathematics.

S.A. Yanovskaya was actively engaged in mathematical logic. She taught this subject at the Faculty of Mechanics and Mathematics of Moscow University. The lecture course has been constantly improved. She prepared the article “Mathematical Logic” for the first edition of the Great Soviet Encyclopedia, which became the first review article on the subject in the USSR. S.A. Yanovskaya read two lecture courses in mathematical logic annually. Lecture courses were not repeated, because every year it included new material in the program and improved the presentation methodology.

S.A. Yanovskaya played an important role in the publication of logical and mathematical literature in the USSR, the formation of new scientific structures of a logical profile, the protection of mathematical logic from attacks by opponents who tried to ban mathematical logic by analogy with genetics and cybernetics. In 1943, S.A. Yanovskaya organized the first seminar in the USSR on mathematical logic at Moscow State University, which she led together with I.I. Zhegalkin and P.S. Novikov.

S. A. Yanovskaya brought mathematical logic to the level of graduate school. The first postgraduate students in mathematical logic appeared at the Department of the History of Mathematics of Moscow State University.

In 1947, a Russian translation of the book of D. Hilbert and W. Ackerman, Fundamentals of Theoretical Logic, was published. This was the first monograph on mathematical logic published in our country. The editor of the translation of the book, the author of the introductory article and comments was S.A. Yanovskaya, on the initiative of which the book was published. In 1948, A. Tarski's book, Introduction to the Logic and Methodology of the Deductive Sciences, was published. In 1957, she initiated the publication of S. Kleene's book, Introduction to Metamathematics. In 1960, with her support, the work of A. Church was published "Introduction to Mathematical Logic", and in 1961, domestic scientists were able to get acquainted with the work of R.L. Goodstein "Mathematical Logic." Translations of books by A. Tarsky and R.L. Goodstein came out on the initiative, under the editorship and with the introduction by S.A. Yanovskaya, and translations of books by S. Klini and A. Church - on her initiative and with her support.

In 1948 in the collection "Mathematics in the USSR for Thirty Years" S.A. Yanovskaya which contained an analysis of the achievements of Russian logicians and mathematicians. Her second review on this subject was published in 1959 in the collection "Mathematics in the USSR for Forty Years." These reviews played an important role in the development of logical research in the country. Their peculiarity was that questions of the theory of mathematical logic were considered in them together with questions of the history and methodology of this science, as in its early work "On the so-called definitions through abstraction" of 1935.

S.A. attached great importance. Yanovskaya applied issues of mathematical logic and its applications in technology, cybernetics. Her first acquaintance with the applications of logic in technology occurred in the thirties of the twentieth century, when V.I. Shestakov, V.I. Glivenko, worked on his Ph.D. thesis on the application of Boolean algebra of logic for mathematical modeling of the statics of relay-contact circuits. In 1948, S.A. Yanovskaya defended the priority of V.I. Shestakova in the discovery of logical modeling of relay-contact circuits. Its authority in the scientific world has led to the fact that this point of view has become widespread in the USSR.

In 1946, she acted as an official opponent in the doctoral dissertation of M.A. Gavrilova. This was the first doctoral dissertation in the USSR, devoted to

the logical modeling of relay-contact circuits. The principle and skill of the polemicist, characteristic of S.A. Yanovskaya, saved the defense of the dissertation, which was very important for the development of Soviet cybernetics.

In 1957, in the report "On some features of mathematical logic and its relation to technical applications" at the All-Union Conference on the Theory of Relay Devices S.A. Yanovskaya gave an analysis of the role of practice in the development of mathematical logic. In 1960, under her editorship and with her introduction, a book by A. Turing, “Can a machine think?” was published in a Russian translation. In the preface S.A. Yanovskaya analyzed from a philosophical perspective the problem of cybernetics about the conjugation of human and machine capabilities. In the works: “On the philosophical questions of mathematical logic” and “Are the difficulties known as the Zeno apori overcome in modern science?», They talked about integrating science and technology into a single direction of design activity.

Created by S.A. Yanovskaya's methodological direction of research in science and technology accelerated the formation of the intellectual space of interdisciplinary philosophical reflection.

In Belarus, became interested in this interdisciplinary aspect of the interaction of the humanities and technical sciences V.V. Martynov. The subject of his research was the connection between technical phenomena integrated into the space of culture and their effective use in the processes of activity.

One of these technical devices that attracted his attention was the computer. The scientist noted that the presence of this technical device in the space of culture did not lead to its multifunctional integration into the processes of activity. And he was right, because to this day the problem of creating effective intelligent systems in the field of cybernetics, engineering, social communication remains. These systems can make real a constructive dialogue between a person and a computer program in the mode of producing activity.

Integrated man-machine systems in the field of control are especially relevant, where in the decision-making process there are risks due to lack of information. It is important for a person to deal with computer programs that have integrated functions of self-control and self-development based on the semantic resources provided by a person. In fact, we are talking about the phenomenon of the integrated responsibility of the designer, designer, programmer for the possible anthropogenic consequences of operating technical devices with an autonomous control status, providing passenger transportation services, providing information, and diagnosing diseases. Intelligent systems require functioning in the feedback mode based on constant contact with information and decision-making algorithms that form the spectrum of sustainable activities of technical infrastructure and communications.

V.V. Martynov realized his scientific interests in the field of linguistics. This interest was facilitated by studies at the philological faculty of Odessa University, the defense of a candidate dissertation at the University of Lviv on the topic of literary work of Y. Slovatsky. Unbeknownst to himself, the scientist

found himself in a space of intercultural themes. She became one of the main for him. The consolidation of its dominant occurred in studies of the Slavic-Germanic lexical interactions of ancient times. Slavic and Germanic languages gave rise to the scientist to turn to the features of the Indo-European languages as such.

The stay within Belarus motivated VV Martynova to the study of lexical and etymological features of the Belarusian language. The factor of linguistic diversity in the processes of verbal and non-verbal communication, discovered by him during the years of World War II while being in the fighting in Moldova, Yugoslavia, Austria, Romania, Bulgaria, Hungary, pointed out the relevance of research in the field of linguistic comparative studies.

Language demarcations at the level of their historical origin and evolution are not entirely desirable, according to the scientist in the field of human-machine dialogue. The machine needs to be offered a language that would allow it to avoid language demarcations, as well as limitations in the field of logical thinking. The scientist decided to convey to the machine a semantic basis sufficient to represent knowledge and to construct it in the light of contexts formulated by the user. Linguistic diversity, in his opinion, contains a common semantic basis, which is clearly visible on the Indo-European group of languages. The same verb with small national pronunciation features means the same action.

A common semiotic basis opened the way to solving the problem of artificial intelligence. V.V. Martynov had to turn to the methodology of transdisciplinary research and determine the necessary minimum of scientific areas that contributed to the implementation of his plan. He studied cybernetics, systems theory, semiotics, logic, mathematics. In the framework of the methodology, his interests focused on ways of building a knowledge system and its presentation, functioning in feedback mode. This knowledge has acquired instrumental status. According to the works of V.V. Martynov can trace the sequence of stages that led to the implementation of his plan.

Work began at the intersection of cybernetics, semiotics and linguistics. The task was set of constructing an analogue of the semantic language in the theory of artificial intelligence. This language was endowed with two functions. It was about the language of the representation of knowledge and the language of the production of new knowledge.

To implement the second function, it was necessary to formulate the axioms of the transformation of knowledge. The main method for constructing cognitive systems was deduction and its axiomatic modification. The emphasis was placed on deductive semiotics and topological linguistics. Information was endowed with a semiotic basis in the form of a universal semiotic code, which allowed the machine to generate new knowledge and conduct a dialogue with the user. At the same time, stable decision-making structures (algorithms) were formed in the universal semantic code system.

The efficiency of the algorithms was ensured by decision logic in the universal semantic code system. Logical analysis included a semantic classification

of nominative units. All efforts were aimed at increasing the efficiency of a computer program. The maximum return could give only the function of an intelligent system.

The task was to develop a knowledge representation system capable of forming new concepts, building hypotheses about the causes and consequences of various situations. As a result, the scientist created a universal theory of calculus of meaning. The theory prescribes the classification of the verbs "shares" in order to convey changes, evolution. The three-term structure is taken as a basis - the subject, the stock, the object. The logic of decision-making in the universal semantic code system is consonant with the generative grammar developed by N. Chomsky.

As the technological component of artificial intelligence was realized, a situation of hybrid reality was discovered, in the space of which a person and a machine interact. The study of subjective (cultural-historical) aspects of the functioning of unconscious thinking and the provision of decision making in the face of uncertainty in behavioral practices determined by cognitive distortions became relevant. The cultural-historical theory of L. Vygotsky is again in demand.

The focus is on the issues of cultural-historical constructivism. It is characteristic of neuroarchaeology, the theory of material involvement of L. Malafuris, expanded knowledge and predictive coding of E. Clark, the theory of culture as knowledge, rooted in the environment of D. Oiserman.

Based on the concepts of “metaplasticity” and “material sign” L. Malafuris analyzes the co-evolution of the psyche and the material environment in the history of mankind. E. Clark proceeds from the fact that the cognitive system of man at all stages of the formation of mankind is open to the material world. D. Oiserman gives an original explanation of the dichotomy of individualistic (western) and collectivist (eastern) cultures that is widely discussed in modern cultural neuroscience. This is integration between relevant cognitive research and cultural-activity psychology.

The bodily conditionality of cognition, its environmental rootedness (embedded / located cognition), emotional and motivational regulation along with the processing of “emotional information” (emotional cognition), the distributed (“dialogical”) nature of cognition, are taken into account. its evolutionary roots and social and cultural determination.

Supporters of L. Vygotsky insist that the explanation should be based on the direct interaction of the subject with the sociocultural environment, which is an integral part of the cognitive system. These ideas have been developed in modern cognitive design. D.Norman combining a representative and anti-representation position is based on the concept of “affordance” (affordance) from environmental optics J.J. Gibson. In the development of methods for recording brain activity, a shift in the interest of scientists in the brain substrate of bodily, social and cultural conditioning of cognition is observed.

L. Malafuris refers to the work of L. Vygotsky when considering neuroarchaeology. He belongs to a new formulation of the problem of mediation, based on the interpretation of the brain as a bio-artifact that creates a culture and is formed by it. Hence M. Cole's thesis that cultural anthropology should come to the fore in cognitive research.

Representatives of cultural neuroscience are based on the idea of co-evolution of genes and culture. It is stated in the theory of double inheritance by P. Richerson and R. Boyd.

The theory of material involvement involves the conceptual apparatus of G. Gibson's activism. The sign structure is primary in relation to the speech apparatus. This is the cognitive projection of the subject into the outside world, with the direct participation of which he solves cognitive and communicative tasks. Material signification has a formative effect on the brain.

Anactivism as a philosophical and psychological direction feeds on radical constructivism and the theory of autopoiesis of W. Maturana and F. Varela. They put a sign of identity between knowledge and action. Any motor act in relation to a material object performs a predictive function for a subsequent act in relation to this object.

D. Oiserman calls his approach the theory of culture as cognition rooted in the environment (Culture as located cognition, CSC). Culture in this theory appears as a tool for solving universal human problems, a certain mindset, or "mentality" (mindset) and as a set of specific cultural practices that are characteristic of a particular society at a certain point in time and in a certain place.

Experimental data show that both individualistic and collectivistic characteristics of cognition are potentially accessible to a representative of any culture and can be brought to life using special pre-adjustment procedures. But in different cultures, the evolutionary tasks of preserving a group and an individual are solved in different ways. Any situation and any environment form certain expectations (predictions) as to how events should develop further. If they develop differently, cultural difficulties experienced by a person lead to the formation of stable attitudes in behavior (cultural mindsets).

Culture itself selects forms of behavior and cognition that are appropriate to it, using a metacognitive regulation mechanism based on feedback, which allows us to choose movement along the path of least resistance in the future. The leading role in individual socio-cultural development is played by metacognitive experience regarding how certain attitudes and behaviors are more easily and efficiently implemented in culture. Initially, a representative of any culture has a complete, redundant set of cognitive features.

E. Clark develops the constructivist principle of predictive coding. This principle allows us to come closer to explaining the inextricable link between perception and action. R. Millikan's studies are devoted to the study of the objective foundations of knowledge, the conditions of true knowledge, and the problem of representation. It includes the study of intentionality and the problem of the reference of various sign systems to the evolutionary (historical) and prac-

tical context of their functioning. The idea was expressed in the concept of biosemantics. As a condition for the reliability of knowledge (intentionality, representation), their practical functionality is considered, which allows solving problems facing a living organism or the scientific community. The property of truth or falsehood does not belong to the cognitive or linguistic representation in question, but to the effectiveness or correspondence to the functions that they perform.

Language as a cultural phenomenon, as not a cognitive competence, is subject not so much to formal rules as to the convenience and effectiveness of communication and coordination of actions. Stability in the language is not achieved through universal grammar, but through social conventions. As a result, the established elements of the language acquire new meanings or functions in different contexts. The distinction between semantics and pragmatics, the semantic and pragmatic meanings of statements is mobile and defies a clear definition or set of linguistic rules.

Knowledge, including the most fundamental ideas about social reality, forming the so-called common sense, occurs and is maintained through social interactions. In social interaction, people proceed from the premise of a similarity of perceptions of reality and common sense. Their general ideas and understanding of the reality of everyday life are reproduced and fixed. Human typologies and value systems, social formations are perceived by people as an objective reality.

One of the tasks is to study the processes by which a person forms, institutionalizes, comprehends and integrates social phenomena into tradition and social values. In this context, we must distinguish between social constructionism and social constructivism.

Social constructionism explores the dynamics of the phenomenon relative to the social context. Social constructivism studies the personality processes of the meaning of knowledge and experience in a social context.

37. Conception of the truth

There were a number of views of truth under discussion at that time, the most significant for the contemporary literature being the correspondence, coherence, and pragmatist theories of truth.

These theories all attempt to directly answer the nature question*:* what is the nature of truth? They take this question at face value: there are truths, and the question to be answered concerns their nature. In answering this question, each theory makes the notion of truth part of a more thoroughgoing metaphysics or epistemology. Explaining the nature of truth becomes an application of some metaphysical system, and truth inherits significant metaphysical presuppositions along the way.

The goal of this section is to characterize the ideas of the correspondence, coherence and pragmatist theories which animate the contemporary debate. In

some cases, the received forms of these theories depart from the views that were actually defended in the early 20th century. We thus dub them the 'neo-classical theories'. Where appropriate, we pause to indicate how the neo-classical theories emerge from their 'classical' roots in the early 20th century.

Perhaps the most important of the neo-classical theories for the contemporary literature is the correspondence theory. Ideas that sound strikingly like a correspondence theory are no doubt very old. They might well be found in Aristotle or Aquinas. When we turn to the late 19th and early 20th centuries where we pick up the story of the neo-classical theories of truth, it is clear that ideas about correspondence were central to the discussions of the time. In spite of their importance, however, it is strikingly difficult to find an accurate citation in the early 20th century for the received neo-classical view. Furthermore, the way the correspondence theory actually emerged will provide some valuable reference points for the contemporary debate. For these reasons, we dwell on the origins of the correspondence theory in the late 19th and early 20th centuries at greater length than those of the other neo-classical views, before turning to its contemporary neo-classical form.

The basic idea of the correspondence theory is that what we believe or say is true if it corresponds to the way things actually are – to the facts. This idea can be seen in various forms throughout the history of philosophy. Its modern history starts with the beginnings of analytic philosophy at the turn of the 20th century, particularly in the work of G. E. Moore and Bertrand Russell.

Let us pick up the thread of this story in the years between 1898 and about 1910. These years are marked by Moore and Russell's rejection of idealism. Yet at this point, they do not hold a correspondence theory of truth. Indeed Moore (1899) sees the correspondence theory as a source of idealism, and rejects it. Russell follows Moore in this regard. In this period, Moore and Russell hold a version of the identity theory of truth. They say comparatively little about it, but it is stated briefly in Moore (1899; 1902) and Russell (1904). According to the identity theory, a true proposition is identical to a fact. Specifically, in Moore and Russell's hands, the theory begins with propositions, understood as the objects of beliefs and other propositional attitudes. Propositions are what are believed, and give the contents of beliefs. They are also, according to this theory, the primary bearers of truth. When a proposition is true, it is identical to a fact, and a belief in that proposition is correct.

The identity theory Moore and Russell espoused takes truth to be a property of propositions. Furthermore, taking up an idea familiar to readers of Moore, the property of truth is a simple unanalyzable property. Facts are understood as simply those propositions which are true. There are true propositions and false ones, and facts just are true propositions. There is thus no "difference between truth and the reality to which it is supposed to correspond" (Moore, 1902, p. 21). (For further discussion of the identity theory of truth, see Baldwin (1991), Candlish (1999), Cartwright (1987), Dodd (2000), and the entry on the identity theory of truth.)

Moore and Russell came to reject the identity theory of truth in favor of a correspondence theory, sometime around 1910 (as we see in Moore, 1953, which reports lectures he gave in 1910–1911, and Russell, 1910b). They do so because they came to reject the existence of propositions. Why? Among reasons, they came to doubt that there could be any such things as false propositions, and then concluded that there are no such things as propositions at all.

Why did Moore and Russell find false propositions problematic? A full answer to this question is a point of scholarship that would take us too far afield. But very roughly, the identification of facts with true propositions left them unable to see what a false proposition could be other than something which is just like a fact, though false. If such things existed, we would have fact-like things in the world, which Moore and Russell now see as enough to make false propositions count as true. Hence, they cannot exist, and so there are no false propositions. As Russell (1956, p. 223) later says, propositions seem to be at best "curious shadowy things" in addition to facts.

As Cartwright (1987) reminds us, it is useful to think of this argument in the context of Russell's slightly earlier views about propositions. As we see clearly in Russell (1903), for instance, he takes propositions to have constituents. But they are not mere collections of constituents, but a 'unity' which brings the constituents together. But what, we might ask, would be the 'unity' of a proposition t hat Samuel Ramey sings – with constituents Ramey and singing – except Ramey bearing the property of singing? If that is what the unity consists in, then we seem to have nothing other than the fact that Ramey sings. But then we could not have genuine false propositions without having false facts.

Though initially the correspondence theory was seen by its developers as a competitor to the identity theory of truth, it was also understood as opposed to the coherence theory of truth.

We will be much briefer with the historical origins of the coherence theory than we were with the correspondence theory. Like the correspondence theory, versions of the coherence theory can be seen throughout the history of philosophy. Like the correspondence theory, it was important in the early 20th century British origins of analytic philosophy. Particularly, the coherence theory of truth is associated with the British idealists to whom Moore and Russell were reacting. Many idealists at that time did indeed hold coherence theories. Let us take as an example Joachim (1906). (This is the theory that Russell (1910a) attacks.) Joachim says that: Truth in its essential nature is that systematic coherence which is the character of a significant whole. We will not attempt a full exposition of Joachim's view, which would take us well beyond the discussion of truth into the details of British idealism. But a few remarks about his theory will help to give substance to the quoted passage.

The coherence theory of truth enjoys two sorts of motivations. One is primarily epistemological. Most coherence theorists also hold a coherence theory of knowledge; more specifically, a coherence theory of justification. According to this theory, to be justified is to be part of a coherent system of beliefs. An ar-

gument for this is often based on the claim that only another belief could stand in a justification relation to a belief, allowing nothing but properties of systems of belief, including coherence, to be conditions for justification. Combining this with the thesis that a fully justified belief is true forms an argument for the coherence theory of truth. The steps in this argument may be questioned by a number of contemporary epistemological views. But the coherence theory also goes hand-in-hand with its own metaphysics as well. The coherence theory is typically associated with idealism. As we have already discussed, forms of it were held by British idealists such as Joachim, and later by Blanshard (in America). An idealist should see the last step in the justification argument as quite natural. More generally, an idealist will see little (if any) room between a system of beliefs and the world it is about, leaving the coherence theory of truth as an extremely natural option.

It is possible to be an idealist without adopting a coherence theory. (For instance, many scholars read Bradley as holding a version of the identity theory of truth. See Baldwin (1991) for some discussion.) However, it is hard to see much of a way to hold the coherence theory of truth without maintaining some form of idealism. If there is nothing to truth beyond what is to be found in an appropriate system of beliefs, then it would seem one's beliefs constitute the world in a way that amounts to idealism. The neo-classical correspondence theory seeks to capture the intuition that truth is a content-to-world relation. It captures this in the most straightforward way, by asking for an object in the world to pair up with a true proposition. The neo-classical coherence theory, in contrast, insists that truth is not a content-to-world relation at all; rather, it is a content-to-content, or belief-to-belief, relation. The coherence theory requires some metaphysics which can make the world somehow reflect this, and idealism appears to be it.

A different perspective on truth was offered by the American pragmatists. As with the neo-classical correspondence and coherence theories, the pragmatist theories go with some typical slogans. For example, Peirce is usually understood as holding the view that: Truth is satisfactory to believe. James (e.g., 1907) understands this principle as telling us what practical value truth has. True beliefs are guaranteed not to conflict with subsequent experience. Likewise, Peirce's slogan tells us that true beliefs will remain settled at the end of prolonged inquiry. Peirce's slogan is perhaps most typically associated with pragmatist views of truth, so we might take it to be our canonical neo-classical theory. However, the contemporary literature does not seem to have firmly settled upon a received ‘neo-classical’ pragmatist theory.

38. Philosophy of science

Philosophy of science is a sub-field of philosophy concerned with the foundations, methods, and implications of science. The central questions of this study concern what qualifies as science. This discipline overlaps with metaphys-

ics, ontology, and epistemology, for example, when it explores the relationship between science and truth.

There is no consensus among philosophers about many of the central problems concerned with the philosophy of science, including whether science can reveal the truth about unobservable things and whether scientific reasoning can be justified at all. In addition to these general questions about science as a whole, philosophers of science consider problems that apply to particular sciences (such as biology or physics). Some philosophers of science also use contemporary results in science to reach conclusions about philosophy itself.

While philosophical thought pertaining to science dates back at least to the time of Aristotle, philosophy of science emerged as a distinct discipline only in the middle of the 20th century in the wake of the logical positivism movement, which aimed to formulate criteria for ensuring all philosophical statements' meaningfulness and objectively assessing them. Thomas Kuhn's landmark 1962 book The Structure of Scientific Revolutions was also formative, challenging the view of scientific progress as steady, cumulative acquisition of knowledge based on a fixed method of systematic experimentation and instead arguing that any progress is relative to a "paradigm," the set of questions, concepts, and practices that define a scientific discipline in a particular historical period. Karl Popper and Charles Sanders Pierce moved on from positivism to establish a modern set of standards for scientific methodology.

Subsequently, the coherentist approach to science, in which a theory is validated if it makes sense of observations as part of a coherent whole, became prominent due to W. V. Quine and others. Some thinkers such as Stephen Jay Gould seek to ground science in axiomatic assumptions, such as the uniformity of nature. A vocal minority of philosophers and Paul Feyerabend (1924–1994) in particular, argue that there is no such thing as the "scientific method", so all approaches to science should be allowed, including explicitly supernatural ones. Another approach to thinking about science involves studying how knowledge is created from a sociological perspective, an approach represented by scholars like David Bloor and Barry Barnes. Finally, a tradition in continental philosophy approaches science from the perspective of a rigorous analysis of human experience.

Philosophies of the particular sciences range from questions about the nature of time raised by Einstein's general relativity, to the implications of economics for public policy. A central theme is whether one scientific discipline can be reduced to the terms of another. That is, can chemistry be reduced to physics, or can sociology be reduced to individual psychology? The general questions of philosophy of science also arise with greater specificity in some particular sciences. For instance, the question of the validity of scientific reasoning is seen in a different guise in the foundations of statistics. The question of what counts as science and what should be excluded arises as a life-or-death matter in the philosophy of medicine. Additionally, the philosophies of biology, of psychology, and of the social sciences explore whether the scientific studies

of human nature can achieve objectivity or are inevitably shaped by values and by social relations.

In Vitebsk, K. Malevich began a theoretical understanding of Suprematism. For two years Vitebsk was the cultural capital of Suprematism. Residential houses, shops, public canteens, coffee houses, libraries in the city were painted, decorated with Suprematist panels. Signs were decorated in a Suprematist style.

Suprematist trams ran around the city - traveling exhibitions of Suprematist paintings, as well as Suprematist propaganda. At the demonstrations, the inhabitants of the city carried suprematist banners. Proletarian life was decorated with fabrics and utensils in the style of Suprematism. In Vitebsk, K. Malevich wrote the program book "The World as Objectivity".

Suprematism solves the problem of liberation from the objective world. Buddhism, Taoism, A. Schopenhauer, "Peace as a Will and Representation" by A. Schopenhauer, intuitionism of A. Bergson and B. Croce, phenomenology of E. Husserl and M. Heidegger became the philosophical sources of the suprematist justification of the world without objects.

Objectivity is the absence of objects in the mind of the artist who has comprehended being. In non-objectiveness, the creative process is a pure action in which the universal excitement of the world, excitement without a goal, in which there is no objective representation of time and space, is concentrated. The main principles of the creative process are motion and peace. There is only nothing. Malevich takes this view from the philosophy of Jacob Boehme.

K. Malevich expressed in the language of painting a sense of infinity, space beyond zero. The shape has become a white Suprematism. At the 1920 exhibition, Malevich displayed blank canvases that follow black, color, and white suprematism. This is a real zero form, a real way out of painting as such. In the white, empty, cleaned and liberated space, nothing interfered with the movement of the ray of light in front of the eyes therefore white suprematism experiences the boundaries of the visual field, the possibilities of perceiving the eye, reflection and refraction of light by the eye as a pure sensation.

K. Malevich invented space aeronautics to move in space. He discovered the supra-direct - an additional element of the dynamic order in suprematism. He opened the vacuum as a medium in which there is a weightless aerodynamic suprematism (airplanes, architectons and planets). Experiments with architects and planets mean the transition from artistic suprematist white infinity to the construction of a white universe in space. The abstraction of flight and structure in space is realized. The spatial system is given in a vacuum. As a result, there is no gravity in the paintings. The viewer sees only the motion vector.

In Vitebsk in the twenties of the twentieth century, M. Bakhtin's intellectual circle settled. On the example of K. Malevich, he highly appreciated the significance of a creative act, emphasizing creative novelty, to which a step had to be taken. The mayor of the city, P. Medvedev, contributed to the existence of intellectual and creative communities in Vitebsk. He played a prominent role in the cultural life of Vitebsk in those years as head of out-of-school education, a

teacher at the Pedagogical Institute. He was engaged in the formation in Vitebsk of a professional humanitarian and intellectual environment, collaborated with M. Chagall, Dobuzhinsky, K. Malevich, Malko, published the city magazine "Art". The Literary Studio worked.

In 1918, the Vitebsk People's (Proletarian) University was opened, in which P. Medvedev taught a course of Russian literature and society of the nineteenth century, and "Proletarian University Notes" were published. A “Society of Free Aesthetics” and a seminar on sociology functioned at the university.

At the initiative of P. Medvedev and S. Gruzenberg, M. Kagan, L. Pumpyansky, I. Sollertinsky, V. Voloshinov and M. Bakhtin were involved in teaching. Since 1920, M. Bakhtin lived in Vitebsk, where he taught at the Pedagogical Institute and the Conservatory, and gave public lectures on philosophy, aesthetics, and literature. In 1920-1924 he worked on philosophical treatises and the early edition of a book about F. Dostoevsky. In 1924 he left Vitebsk.

The works of M. Bakhtin after his death became widely known in the West. At the University of Sheffield there is a Bakhtinsky center. In France, his works were promoted by T. Todorov and Y. Kristeva. In Japan, the world's first collected works were published, as well as a large number of monographs and works on it were published.

The interpretation of the ideas of theatricality, the metaphor “world - theater” was considered by M. Bakhtin on the basis of the concept of dialogue culture. This is shown to them by the example of the analysis of the works of F. Dostoevsky as polyphony. He interprets the being of concrete reality as an event that is inconceivable without an act and a person. Outside of concrete events, there are only empty possibilities and an unrooted being. Rationalism is a prejudice, and the discretion of the essence is possible only through intuition.

M. Bakhtin developed a philosophical theory of a phenomenological type. A special place in it is the study of laughter culture on the example of carnival. Laughter and carnival showcase events.

In the field of art, his intellectual interest was attracted by verbal creativity. According to M. Bakhtin, humanitarian thought is always aimed at working with other people's thoughts, dealing with the text in its various presentations. Behind each text is a language system consisting of the languages of many social groups. The researcher works with the text, intending to create his own text assessment. The result is a dialogue between the author and the reader. The author assumes a reciprocal understanding. This expectation is due to the dialogical nature of the text.

Working with text involves a linguistic method, which is part of a comprehensive aesthetic analysis. The word is studied in linguistics based on a general aesthetic theory, epistemology and other philosophical disciplines.

The emotional-volitional tension of the literary form testifies to the value value of art. The artist's artistic and value activity is aimed at transforming the material with the aim of transmitting certain content. The content of the work of art shows how individuation, concretization of the reality of knowledge and eth-

ical action find a union in the form of an aesthetic object. The work captures reality in aesthetic intuition. A special role belongs to the literary genre of the novel. This is a multi-style, controversial, dissonant phenomenon. It is represented by diverse stylistic unity, sometimes lying in different linguistic planes and subject to different stylistic laws.

Diverse stylistic unity is combined in the novel into a harmonious art system. They submit to the higher stylistic unity of the whole. It cannot be identified with any of the unities subordinate to it.

The language of the novel is represented by a system of languages. A prerequisite for novel prose is the internal stratification of the language, social discord, and individual discord in it. The dialogical orientation of the word among the words of others creates new and significant artistic possibilities of the word, its prosaic artistry.

M. Bakhtin compared the novel and the poetic word. It follows from this that the world of poetry is illuminated by a single and indisputable word. All conflicts, doubts and experiences do not pass into the final result of creative activity. They remain at the stage of work with the material. The language of poetic genres, approaching the stylistic limit, becomes authoritarian and conservative, hiding from non-literary social dialects. An indisputable basis for poetry is the direct intention of poetic creativity.

The novel retains controversy and contributes to its deepening. The author plays on discrepancies and multilingualism, building his own style. At the same time, he maintains the unity of his creative personality and the unity of style. M. Bakhtin defined two stylistic lines of the European novel. One is a sophisticated novel. Its features are monolingual and one-style. Disagreement becomes its dialogizing background, thanks to which it is value-related to the language and world of the novel. Similar signs are possessed by a chivalrous prose novel. The pastoral and baroque novels also belong to the stylistic line of the sophisticated novel.

Second-line novels introduce social discord into the composition. The novel is subject to transformation through the processes of canonization and reaccentuation. Provincial dialect or professional jargon can be legitimized by literature. It is not always clear whether the author considers a certain language literary or places a moment of discord in it. There is a change in the level of some roles. The character, who once occupied the second roles, may become the first person of the novel, invisibly to the reader. This happens as a result of a change of eras and a dialogue background. The theoretical conclusions of M. Bakhtin were fed by an analysis of the work of F. Dostoevsky. In the novels of the writer, a dialogue structure is implemented. In the speeches of the heroes there is a deep and incomplete conflict with someone else's word. The novels of the writer are internally incomplete dialogues between the characters. They create a long-term perspective for reflection.

V. N. Ivanovsky proceeded from the criteria of science developed by representatives of positivism. He believed that philosophy can meet the criteria of

scientific, despite the universality of its subject. This position was facilitated by translations of the scientific works of V. Wildelband, A. Stöckel, E. Cassirer, J. Mil, G. Rickert. For almost three years he was sent from the Ministry of Education of the Russian Empire to the largest centers of educational activity in Europe. In England - Oxford, London, he was engaged in translations, participated in practical classes in psychology, listened to lectures on philosophy and pedagogy. In Germany - Berlin, he listened to the lectures of V. Dilthey, G. Simmel.

In France in Paris, he attended the lectures of A. Bergson, T. Ribot, F. Buisson. In July 1900, he made a presentation on philosophical terminology at the first International Congress of Philosophy in Paris. He was elected to the Bureau of Philosophical Congresses. At the Paris Russian School of Social Sciences, he lectured on the history of philosophy and theory of sciences. In 1921, the Belarusian State University was opened in Minsk.

VN Ivanovsky was invited to the post of professor. He was elected Deputy Rector for Academic Affairs and Chairman of the Board of the Scientific Society of the University, which consisted of four sections: regional studies, technical and economic, physical and mathematical and social sciences. He wrote the monograph “Methodological Introduction to Science and Philosophy”, the article “Associationism by A. Ben”. The ideas of V. Ivanovsky are in tune with the program for creating a scientific philosophy initiated by representatives of logical positivism.

The multidimensional model of science developed by V. Ivanovsky includes social, psychological, logical and methodological, worldview aspects of science, a variety of types, methods and contents of different sciences, their development in the space of culture.

Science involves the requirements of proof, of truth. Truth is such because it is verified and proven. An important property of science is systematic - the ability to systematize disparate knowledge. Not all scientific results find practical application. This is the norm for her, since there is fundamental and applied research. V.N. Ivanovsky did not conceal his discrepancy with most representatives of the materialist trend. The discrepancy was justified by the fact that he highlighted methodology and epistemology.

In the second half of the twentieth century, V.S. Stepin took the path of the methodology and philosophy of science. Stepin taught at higher educational institutions of Minsk. His PhD thesis was devoted to the consideration of the philosophy of the science of neopositivism . He postponed her defense for a while, arguing this decision by the need for a more in-depth study of the topic. He worked as a teacher. He did not go into conflict and remained within the boundaries of the research methodology. The subject of his study was the formation of scientific theory.

Using the example of physics, the methods of constructing the theory were reconstructed and a tendency toward an increased role in the construction of the hypothetical-deductive method was discovered. The work received recognition. A scientific career followed. She expressed herself in the chair of the Depart-

ment of Philosophy at Belarusian State University, which trained teachers in the philosophical sciences. During this period, V. Stepin formed close relations with the philosophical schools of Moscow. Against this background, he developed, adapted to the platform of Marxist philosophy in the USSR, the methodological concept of the structural organization and development of science as a research activity. In scientific studies, the levels of empirical, theoretical, metatheoretical systematization of scientific knowledge are highlighted.

39. Structure of science

The direct contribution of V. Stepin was the institutionalization of the metatheoretical level of systematization of scientific knowledge. The need for this block of methodological constructs in the structure of Marxist philosophy was largely motivated by the research of T. Kuhn, who proposed a mechanism for the functioning of science in the form of a change in research paradigms as a result of a conventional agreement between scientists.

V. Stepin began to use the term "scientific picture of the world" instead of the term "paradigm". In addition to the scientific picture of the world, in the metatheoretical foundations of science, ideals and norms of scientific activity, philosophical principles were highlighted. The change of scientific pictures of the world was explained not by the mechanisms of conventional agreements, but by the inability of a functioning scientific picture of the world to integrate discoveries requiring fundamental understanding into their subject field. One of the barriers to such integration was called the stereotype of scientific rationality. Overcoming this barrier is accompanied by a change in the types of scientific rationality and the style of scientific thinking.

According to V. Stepin, categorical structures of philosophy are borrowed from categorical structures of culture. At the level of philosophical reflection, these linguistic structures are interpreted in the context of a specific subject tradition - antique, eastern, new European.

Summing up the research work V. Stepin admitted that the origins of the philosophy of science are in positivism. He consistently characterized the four stages in the evolution of this intellectual tradition in the European region. The subject of discussion was positivism of O. Comte, G. Spencer, J.S. Mill, empirio-criticism of E. Mach, P. Avenarius, neo-positivism of B. Russell, A. Ufaythead, G. Frege, L. Wittgenstein, postpositivism of K. Popper, I. Lacatos, T. Kuhn, P. Feyerabend, J. Holton, M Polanyi, S. Tulmin. In this context, consideration of the work of V. Stepin turned out to be consonant with post-positivism with his characteristic desire to engage in a historical analysis of science, its social status and the internal social mechanisms of organization characteristic of it.

As a result, the philosophy of science in the works of V. Stepin was transformed into the sociology of science, integrated with cultural studies. The categorical thinking structures of the West and the East began to be taken into account. The integrated idea of the intellectual culture of mankind has become as-

sociated with the processes of evolution of civilization. The concept of anthropogenic civilization is highlighted, within the subject boundaries of which the prospects of science are analyzed in the context of the global problems of mankind.

40. Fundamental research

Basic research, also called pure research or fundamental research, is scientific research aimed to improve scientific theories for improved understanding or prediction of natural or other phenomena. Applied research, in turn, uses scientific theories to develop technology or techniques to intervene and alter natural or other phenomena. Though often driven by curiosity, basic research fuels applied science's innovations. The two aims are often coordinated in research and development.

Although many discoveries have been serendipitous, discovery science specifically seeks discoveries, and, along with theoretical science and experimental science, is now to basic research and is sometimes expressly planned. Basic research advances fundamental knowledge about the world. It focuses on refuting or supporting theories that explain observed phenomena. Pure research is the source of most new scientific ideas and ways of thinking about the world. It can be exploratory, descriptive, or explanatory; however, explanatory research is the most common.

Basic research generates new ideas, principles, and theories, which may not be immediately utilized but none theless form the basis of progress and development in different fields. Today's computers, for example, could not exist without research in pure mathematics conducted over a century ago, for which there was no known practical application at the time. Basic research rarely helps practitioners directly with their everyday concerns; nevertheless, it stimulates new ways of thinking that have the potential to revolutionize and dramatically improve how practitioners deal with a problem in the future.

In the United States, basic research is funded mainly by federal government and done mainly at universities and institutes. As government funding has diminished in the 2010s, however, private funding is increasingly important.

Applied science focuses on the development of technology and techniques. In contrast, basic science develops scientific knowledge and predictions, principally in natural sciences but also in other empirical sciences, which are used as the scientific foundation for applied science. Basic science develops and establishes information to predict phenomena and perhaps to understand nature, whereas applied science uses portions of basic science to develop interventions via technology or technique to alter events or outcomes. Applied and basic sciences can interface closely in research and development.

The interface between basic research and applied research has been studied by the National Science Foundation. It conducted a study in which it traced the relationship between basic scientific research efforts and the development of

major innovations, such as oral contraceptives and videotape recorders). Their study found that basic research played a key role in the development in all of the innovations. The number of basic science research that assisted in the production of a given innovation peaked between 20 and 30 years before the innovation itself.

While most innovation takes the form of applied science and most innovation occurs in the private sector, basic research is a necessary precursor to almost all applied science and associated instances of innovation. Roughly 76% of basic research is conducted by universities. A distinction can be made between basic science and disciplines such as medicine and technology. They can be grouped as STM (science, technology, and medicine; not to be confused with STEM [science, technology, engineering, and mathematics]) or STS (science, technology, and society). These groups are interrelated and influence each other, although they may differ in the specifics such as methods and standards.

The Nobel Prize mixes basic with applied sciences for its award in Physiology or Medicine. In contrast, the Royal Society of London awards distinguish natural science from applied science.

41. Applied research

Applied research is a form of systematic inquiry involving the practical application of science. It accesses and uses some part of the research communities' (the academia's) accumulated theories, knowledge, methods, and techniques, for a specific, often state-, business-, or client-driven purpose. Applied research is contrasted with pure research (basic research) in discussion about research ideals, methodologies, programs, and projects. Applied research deals with solving practical problems and generally employs empirical methodologies.

Because applied research resides in the messy real world, strict research protocols may need to be relaxed. For example, it may be impossible to use a random sample. Thus, transparency in the methodology is crucial. Implications for interpretation of results brought about by relaxing an otherwise strict canon of methodology should also be considered. Since Applied Research has a provisional close to the problem and close to the data orientation it may also use a more provisional conceptual framework such as working hypothesis or pillar questions. The OECD's Frascati Manual describes Applied Research as one of the three forms of research, along with Basic research & Experimental Development.

Due to its practical focus, applied research information will be found in the literature associated with individual disciplines.

The military is an organization that performs a lot of applied research. For example, they may want to know about the efficacy of soldier training, how well recruitment practices work, how best to deal with host nationals in times of war, how to use the internet to reduce home grown terrorists, and the effectiveness of operational styles.

42. Methodology of scientific research

Methodology is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases and quantitative or qualitative techniques.

A methodology does not set out to provide solutions - it is, therefore, not the same as a method. Instead, a methodology offers the theoretical underpinning for understanding which method, set of methods, or best practices can be applied to specific case, for example, to calculate a specific result.

It has been defined also as follows:

1. the analysis of the principles of methods, rules, and postulates employed by a discipline;

2. the systematic study of methods that are, can be, or have been applied within a discipline;

3. the description of methods.

The methodology is the general research strategy that outlines the way in which research is to be undertaken and, among other things, identifies the methods to be used in it. These methods, described in the methodology, define the means or modes of data collection or, sometimes, how a specific result is to be calculated. Methodology does not define specific methods, even though much attention is given to the nature and kinds of processes to be followed in a particular procedure or to attain an objective.

When proper to a study of methodology, such processes constitute a constructive generic framework, and may therefore be broken down into subprocesses, combined, or their sequence changed. A paradigm is similar to a methodology in that it is also a constructive framework. In theoretical work, the development of paradigms satisfies most or all of the criteria for methodology. An algorithm, like a paradigm, is also a type of constructive framework, meaning that the construction is a logical, rather than a physical, array of connected elements.

Any description of a means of calculation of a specific result is always a description of a method and never a description of a methodology. It is thus important to avoid using methodology as a synonym for method or body of methods. Doing this shifts it away from its true epistemological meaning and reduces it to being the procedure itself, or the set of tools, or the instruments that should have been its outcome. A methodology is the design process for carrying out research or the development of a procedure and is not in itself an instrument, or method, or procedure for doing things.

Methodology and method are not interchangeable. In recent years however, there has been a tendency to use methodologyas a "pretentious substitute for the word method. Using methodology as a synonym for method or set of meth-

ods leads to confusion and misinterpretation and undermines the proper analysis that should go into designing research.

43. Science and innovation activities

Innovation are all scientific, technological, organisational, financial and commercial steps which actually, or are intended to, lead to the implementation of innovations. Some innovation activities are themselves innovative others are not novel activities but are necessary for the implementation of innovations. Innovation activities also include research and development (R & D) that is not directly related to the development of a specific innovation.

A common feature of an innovation is that it must have been implemented. A new or improved product is implemented when it is introduced on the market. New processes, marketing methods or organisational methods are implemented when they are brought into actual use in the firm's operations.

Innovation activities vary greatly in their nature from firm to firm. Some firms engage in well-defined innovation projects, such as the development and introduction of a new product, whereas others primarily make continuous improvements to their products, processes and operations. Both types of firms can be innovative: an innovation can consist of the implementation of a single significant change, or of a series of smaller incremental changes that together constitute a significant change.

Innovation economics is a growing economic theory that emphasizes entrepreneurship and innovation. Innovation economics is based on two fundamental tenets: that the central goal of economic policy should be to spur higher productivity through greater innovation, and that markets relying on inputresources and price signals alone will not always be as effective in spurring higher productivity, and thereby economic growth. This is in contrast to the two other conventional economic doctrines, neoclassical economics and Keynesian economics.

Joseph Schumpeter was one of the first and most important scholars who extensively has tackle the question of innovation in Economics. In contrast to his contemporary John Maynard Keynes, Schumpeter con-tended that evolving institutions, entrepreneurs, and technological change were at the heart of economic growth, not independent forces that are largely unaffected by policy. He argued that "capitalism can only be understood as an evolutionary process of continuous innovation.

But it is only within the last 15 years that a theory and narrative of economic growth focused on innovation that was grounded in Schum-peter‘s ideas has emerged. Innovation economics attempted to answer the fundamental problem in the puzzle of total factor productivity growth. Continual growth of output could no longer be explained only in increase of inputs used in the production process as understood in industrialization. Hence, innovation economics focused on a theory of economic creativity that would impact the theory of the firm and organ-ization decision-making. Hovering between heterodox economics that

emphasized the fragility of conventional assumptions and orthodox eco-nomics that ignored the fragility of such assumptions, innovation eco-nomics aims for joint didactics between the two. As such, it enlarges the Schumpeterian analyses of new technological system by incorporating new ideas of information and communication technology in the global economy.

Indeed, a new theory and narrative of economic growth focused on innovation has emerged in the last decade. Innovation economics emerges on the wage of other schools of thoughts in economics, includ-ing new institutional economics, new growth theory, endogenous growth theory, evolutionary economics, neo-Schumpeterian economics – provides an economic framework that explains and helps support growth in today‘s knowledge economy. Leading theorists of innovation economics include both formal economists, as well as management the-orists, technology policy experts, and others. These include Paul Romer, Elhanan Helpman, W. Brian Arthur, Robert Axtell, Richard R. Nelson, Richard Lipsey, Michael Porter and Christopher Freeman.

Innovation economists believe that what primarily drives economic growth in today‘s knowledge-based economy is not capitalaccumula-tion, as claimed by neoclassicalism asserts, but innovative capacity spurred by appropriable knowledge and technological externalities. Economic growth in innovation economics is the end-product of knowledge; regimes and policies allowing for entrepreneurship and in-novation; technological spillovers and externalities between collabora-tive firms; and systems of innovation that create innovative environ-ments.

In 1970, economist Milton Friedman said in the New York Times that a business‘s sole purpose is to generate profits for their shareholders and companies that pursued other missions would be less competitive, resulting in fewer benefits to owners, employees, and society. Yet data over the past several decades shows that while profits matter, good firms supply far more, particularly in bringing innovation to the market. This fosters economic growth, employment gains, and other society-wide benefits. Business school professor David Ahlstrom asserts: ―the main goal of business is to develop new and innovative goods and services that generate economic growth while delivering benefits to society.‖ In contrast to neoclassical economics, innovation economics offer differing perspectives on main focus, reasons for economic growth, and the assumptions of context between economic actors:

Despite the differences in economic thought, both perspectives are based on the same core premise: the foundation of all economic growth is the optimization of the utilization of factors and the measure of suc-cess is how well the factor utilization is optimized. Whatever the fac-tors, it nonetheless leads to the same situation of special endowments, varying relative prices, and production processes. So while the innovation economics can find fertile ground in mainstream economics and rather than remain in diametric contention.

The drive of bio-tech firms in Germany was due to the R&D subsidies to joint projects, network partners, and close cognitive distance of collaborative

partners within a cluster. These factors increased patent performance in the biotech industry. Their development of a National Innovation System through heavy investment of R&D expenditures and personnel, patents, and high-tech/service exports strengthened their innovation capacity.

By linking the science sector with the business sector, establishing incentives for innovative activities, and balancing the import of technol-ogy and indigenous R&D effort, both countries experienced rap-id economic growth in recent decades. Also, the Council of Foreign Re-lations asserted that since the end of the 1970s, the U.S. has gained a disproportionate share of the world‘s wealth through their aggressive pursuit of technological change, demonstrating that technological inno-vation is a central catalyst of steady economic performance.

Concisely, evidence shows that innovation contributes to steady economic growth and rise in per capita income. However, some empirical studies investigating the innovation-performance-link lead to rather mixed re-sults and indicate that the relationship be more subtle and complex than commonly assumed. In particular, the relationship between innovative-ness and performance seems to differ in intensity and significance across empirical contexts, environmental circumstances, and conceptual dimensions.

All of the above has taken place in an era of data constraint, as iden-tified by Zvi Griliches twenty years ago. Because the primary domain of innovation is commerce the key data resides there; continually out of campus reach in reports hidden within factories, corporate offices and technical centers. This recusal still stymies progress today. Recent at-tempts at data transference have led, not least, to the positive link‘(above) being upgraded to exact algebra between R&D productivity and GDP allowing prediction from one to the other. This is pending further disclosure from commercial sources but several pertinent documents are already available.

While innovation is important, it is not a happenstance occurrence as a natural harbor or natural resources are, but a deliberate, concerted ef-fort of markets, institutions, policymakers, and effect use of geographic space. In global economic restructuring, location has become a key ele-ment in establishing competitive advantage as regions focus on their unique assets to spur innovation. Even more, thriving metropolitan economies that carry multiple clusters essentially fuel national econ-omiesthrough their pools of human capital, innovation, quality places, and infrastructure. Cities become ―innovative spaces and ―cradles of creativity as drivers of innovation. They become essential to the system of innovation through the supply side: ready, available, abundant capital and labor; good infrastructure for productive activities, and diversified production structures that spawn synergies and hence innovation. In ad-dition they grow due to the demand side: diverse population of varying occupations, ideas, skills; high and differentiated level of consumer de-mand; and constant recreation of urban order especially infrastructure of streets, water systems, energy, and transportation.

A startup company is an entrepreneurial venture which is typically a newly emerged, fast-growing business that aims to meet a marketplace need by developing a viable business model around innovative product, service, process or a platform. A startup is usually a company such as a small business, a partnership or an organization designed to effectively develop and validate a scalable business model.

Startup companies can come in all forms and sizes. Some of the crit-ical tasks are to build a co-founder team to secure key skills, know-how, financial resources, and other elements to conduct research on the target market. Typically, a startup will begin by building a first minimum via-ble product, a prototype, to validate, assess and develop the new ideas or business concepts. In addition, startups founders do research to deepen their understanding of the ideas, technologies or business concepts and their commercial potential. A Shareholders' agreement is often agreed early on to confirm the commitment, ownership and contributions of the founders and investors and to deal with the intellectual properties and assets that may be generated by the startup. Business models for startups are generally found via a "bottom-up" or "top-down" approach.

A company may cease to be a startup as it passes various mile-stones, such as becoming publicly traded on the stock market in an Ini-tial Public Offering, or ceasing to exist as an independent entity via a merger or acquisition. Companies may also fail and cease to operate altogether, an outcome that is very likely for startups, given that they are developing disruptive innovations which may not function as expected and for which there may not be market demand, even when the product or service is finally developed. Given that startups operate in high-risk sectors, it can also be hard to attract investors to support the product/service development or attract buyers.

The size and maturity of the startup ecosystem where the startup is launched and where it grows have an effect on the volume and success of the startups. The startup ecosystem consists of the individuals; insti-tutions and organizations business incubators and business accelerators and top-performing entrepreneurial firms and startups. A region with all of these elements is considered to be a "strong" startup ecosystem. Some of the most famous startup ecosystems are Silicon Valley in California, where major computer and Internet firms and top universities such as Stanford University create a stimulating startup environment, Boston and Berlin, home of WISTA, numerous creative industries, leading en-trepreneurs and startup firms.

Investors are generally most attracted to those new companies distinguished by their strong co-founding team, a balanced "risk/reward" pro-file and "scalability". Attractive startups generally have lower "boot-strapping" costs, higher risk, and higher potential return on investment. Successful startups are typically more scalable than an established busi-ness, in the sense that the startup has the potential to grow rapidly with a limited investment of capital, labor or land. Timing has often been the single most important factor for biggest

startup successes, while at the same time it's identified to be one of the hardest things to master by many serial entrepreneurs and investors.

Startups have several options for funding. Venture capital firms and angel investors may help startup companies begin operations, exchang ing seed money for an equity stake in the firm. Venture capitalists and angel investors provide financing to a range of startups, with the expec-tation that a very small number of the startups will become viable and make money. In practice though, many startups are initially funded by the founders themselves using "bootstrapping", in which loans or mone-tary gifts from friends and family are combined with savings and credit card debt to finance the venture. Factoring is another option, though it is not unique to startups. Other funding opportunities include various forms of crowdfunding, for example equity crowdfunding, in which the startup seeks funding from a large number of individuals, typically by pitching their idea on the Internet.

Startups usually need to form partnerships with other firms to enable their business model to operate. To become attractive to other business-es, startups need to align their internal features, such as management style and products with the market situation. In their 2013 study, Kask and Linton develop two ideal profiles, or also known as configurations or archetypes, for startups that are commercializing inventions. The in-heritor profile calls for a management style that is not too entrepreneuri-al and the startup should have an incremental inven-tion.

This profile is set out to be more successful in a market that has a dominant design. In contrast to this profile is the originator which has a management style that is highly entrepreneurial and in which a radical invention or a dis-ruptive innovation is being developed. This profile is set out to be more successful in a market that does not have a dominant design. New startups should align them-selves to one of the profiles when commer-cializing an invention to be able to find and be attractive to a business partner. By finding a business partner a startup will have greater chances to become successful.

Startup founders often have a more casual or offbeat attitude in their dress, office space and marketing, as compared to traditional corpora-tions. For exam-ple, startup founders in the 2010s may wear hoodies, sneakers and other casual clothes to business meetings. Their offices may have recreational facilities in them, such as pool tables, ping pong tables and pinball machines, which are used to create a fun work envi-ronment, stimulate team development and team spirit, and encourage creativity. Some of the casual approaches, such as the use of "flat" or-ganizational structures, in which regular employees can talk with the founders and chief executive officers informally, are done to promote efficiency in the workplace, which is needed to get their business off the ground.

Some startups do not use a strict command and con-trol hierarchical struc-ture, with executives, managers, supervisors and employees. Some startups offer employees stock options, to increase their "buy in" from the start up (as these employees stand to gain if the company does well). This removal of stressors al-

lows the workers and researchers in the startup to focus less on the work environment around them, and more on achieving the task at hand, giving them the potential to achieve something great for their company. This culture today has evolved to include larger companies aiming at acquiring the bright minds driving startups.

Google, among other com-panies, has made strides to make purchased startups and their workers feel at home in their offices, even letting them bring their dogs to work. The main goal behind all changes to the culture of the startup work-place, or a company hiring workers from a startup to do similar work is to make the people feel as comfortable in their new office as possible in order to optimize performance. Some companies even try to hide how large they are to capture a particular demographic, as is the case with Heineken recently.

Co-founders are people involved in the initial launch of startup com-panies. Anyone can be a co-founder, and an existing company can also be a co-founder, but frequently co-founders are entrepreneurs, engi-neers, hackers, web developers, web designers and others involved in the ground level of a new, often high-tech and venture. The language of securities regulation in the United States considers co-founders to be "promoters" under Regulation D. The U.S. Securities and Exchange Commission definition of "Promoter" includes: Any person who, acting alone or in conjunction with one or more other persons, directly or indirectly takes initiative in founding and organizing the business or enter-prise of an issuer; However not every promoter is a co-founder. In fact, there is no formal, legal definition of what makes somebody a co-founder. The right to call oneself a co-founder can be established through an agreement with one's fellow co-founders or with permission of the board of directors, investors, or shareholders of a startup compa-ny. When there is no definitive agreement, disputes about who the co-founders are can arise.

Startup investing is the action of making an investment in an early-stage company. Beyond founders' own contributions, some startups raise additional investment at some or several stages of their growth. Not all startups trying to raise investments are successful in their fund-raising. The solicitation of funds became easier for startups as result of the JOBS Act. Prior to the advent of equity crowdfunding, a form of online investing that has been legalized in several nations, startups did not advertise themselves to the general public as investment opportuni-ties until and unless they first obtained approval from regulators for an initial public offering that typically involved a listing of the startup's securities on a stock exchange. Today, there are many alternative forms of IPO commonly employed by startups and startup promoters that do not include an exchange listing, so they may avoid certain regulatory compliance obligations, including mandatory periodic disclosures of financial information and factual discussion of business conditions by management that investors and potential investors routinely receive from registered public companies.

After the Great Depression, which was blamed in part on a rise in speculative investments in unregulated small companies, startup invest-ing was primari-

ly a word of mouth activity reserved for the friends and family of a startup's co-founders, business angels and Venture Capital funds. In the United States this has been the case ever since the imple-mentation of the Securities Act of 1933. Many nations implemented similar legislation to prohibit general solicitation and general advertising of unregistered securities, including shares offered by startup compa-nies. In 2005, a new Accelerator investment model was intro-duced by Y Combinator that combined fixed terms investment model with fixed pe-riod intense bootcamp style training program, to streamline the seed/early stage investment process with training to be more systematic.

Following Y Combinator, many accelerators with similar models have emerged around the world. The accelerator model hav since be-come very common and widely spread and they are key organizations of any Startup eco-system. Title II of the Jumpstart Our Business Startups Act, first implemented on September 23, 2013, granted startups in and startup co-founders or promoters in US the right to generally solicit and advertise publicly using any method of communication on the condition that only accredited investors are allowed to purchase the securities. However the regulations affecting equity crowdfunding in different countries vary a lot with different levels and models of freedom and re-strictions. In many countries there are no limitations restricting general public from investing to startups, while there can still be other types of restrictions in place, like limiting the amount that companies can seek from investors. Due to positive development and growth of crowdfund-ing, many countries are actively updating their regulation in regards to crowdfunding.

When investing in a startup, there are different types of stages in which the investor can participate. The first round is called seed round. The seed round generally is when the startup is still in the very early phase of execution when their product is still in the prototype phase. At this level angel investors will be the ones participating. The next round is called Series A. At this point the com-pany already has traction and may be making revenue. In Series A rounds ven-ture capital firms will be participating alongside angels or super angel investors. The next rounds are Series B, C, and D. These three rounds are the ones leading towards the IPO. Venture capital firms and private equity firms will be partici-pating.

The first known investment-based crowdfunding platform for startups was launched in Feb. 2010 by Grow VC, followed by the first US based company ProFounder launching model for startups to raise investments directly on the site, but ProFounder later decided to shut down its business due regulatory rea-sons preventing them from continu-ing, having launched their model for US markets prior to JOBS Act. With the positive progress of the JOBS Act for crowd investing in US., equity crowdfunding platforms like SeedInvest and Cir-cleUp started to emerge in 2011 and platforms such as investiere, Companisto and Seedrs in Europe and OurCrowd in Israel. The idea of these platforms is to streamline the process and resolve the two main points that were tak-ing place in the market. The first problem was for startups to be able to access capital and to

decrease the amount of time that it takes to close a round of financing. The second problem was intended to increase the amount of deal flow for the investor and to also centralize the process.

Large or well-established companies often try to promote innovation by setting up "internal startups", new business divisions that operate at arm's length from the rest of the company. Examples include Bell Labs, a research unit within Bell Corporationand Target Corporation and threedegrees, a product developed by an internal startup of Microsoft.

Failed entrepreneurs, or restarters, who after some time restart in the same sector with more or less the same activities, have an increased chance of becoming a better entrepreneur. However, some studies indi-cate that restarters are more heavily discouraged in Europe than in the US.

If a company's value is based on its technology, it is often equally important for the business owners to obtain intellectual property protec-tion for their idea. The newsmagazine The Economist estimated that up to 75% of the value of US public companies is now based on their intellectual property. Often, 100% of a small startup company's value is based on its intellectual property. As such, it is important for technology-oriented startup companies to develop a sound strategy for protecting their intellectual capital as early as possible.

Startup compa-nies, particularly those associated with new technology, sometimes pro-duce huge returns to their creators and investors – a recent example of such is Google, whose creators became billionaires through their stock ownership and options. However, the failure rate of startup companies is very high. One common reason for failure is that startup companies can run out of funding, without securing their next round of investment or before becoming profitable enough to pay their staff. Sometimes these com-panies are purchased by other companies, if they are deemed to be via-ble, but oftentimes they leave employees with very little recourse to re-coup lost income for worked time.

Although there are startups created in all types of businesses, and all over the world, some locations and business sectors are particularly as-sociated with startup companies. The internet bubble of the late 1990s was associated with huge numbers of internet startup companies, some selling the technology to provide internet access, others using the inter-net to provide services. Most of this startup activity was located in the most well known startup ecosystem - Silicon Valley, an area of northern California renowned for the high level of startup company activity. Startup advocates are also trying to build a community of tech startups in New York City with organizations like NY Tech Meet Up and Built in NYC. In the early 2000s, the patent assets of failed startup companies are being purchased by what are derogatorily known as patent trolls, who then take the patents from the companies and assert those patents against companies that might be infringing the technology covered by the patent.

A business incubator is a company that helps new and startup com-paniesto develo by providing services such as management training or office space. The National Business Incubation Association defines business incubators as a cata-

lyst tool for either regional or national eco-nomic development. NBIA categorizes their member incubators by the following five incubator types: academic institutions; non-profit devel-opment corporations; for-profit property development ventures; venture capital firms, and combination of the above.

Business incubators differ from research and technology parks in their dedication to startup and early-stage companies. Research and technology parks, on the other hand, tend to be large-scale projects that house everything from corporate, government or university labs to very small companies. Most research and technology parks do not offer busi-ness assistance services, which are the hallmark of a business incubation program. However, many research and technology parks house incuba-tion programs.

Incubators also differ from the U.S. Small Business Administration's Small Business Development Centers in that they serve only selected clients. SBDCs are required by law to offer general business assistance to any company that contacts them for help. In addition, SBDCs work with any small business at any stage of development, not only startup companies. Many business incubation programs partner with their local SBDC to create a "one-stop shop" for entrepreneurial support. Within European Union countries there are different EU and state funded pro-grams that offer support in form of consulting, mentoring, prototype creation and other services and co-funding for them. TecHub is one of examples for IT companies and ideas.

The formal concept of business incubation began in the USA in 1959 when Joseph Mancuso opened the Batavia Industrial Center in a Bata-via, New York, warehouse. Incubation expanded in the U.S. in the 1980s and spread to the UK and Europe through various related forms.

The US- based International Business Innovation Association esti-mates that there are about 7,000 incubators worldwide. A study funded by the European Commission in 2002 identified around 900 incubation environments in Western Europe. As of October 2006, there were more than 1,400 incubators in North America, up from only 12 in 1980. Her Majesty's Treasury identified around 25 incubation environments in the UK in 1997; by 2005, UKBI identified around 270 incubation environ-ments across the country. In 2005 alone, North American incubation programs assisted more than 27,000 companies that provided employ-ment for more than 100,000 workers and generated annual revenues of $17 billion.

Incubation activity has not been limited to developed countries; in-cubation environments are now being implemented in developing coun-tries and raising interest for financial support from organisations such as UNIDO and the World Bank. Since startup companies lack many resources, experience and net-works, incubators provide services which helps them get through initial hurdles in starting up a business. These hurdles include space, funding, legal, accounting, computer services and other prerequisites to running the business.

Among the most common incubator services are:

- Help with business basics

- Networking activities
- Marketing assistance
- Market Research
- High-speed Internet access
- Help with accounting/financial management
- Access to bank loans, loan funds and guarantee programs
- Help with presentation skills
- Links to higher education resources
- Links to strategic partners
- Access to angel investors or venture capital
- Comprehensive business training programs
- Advisory boards and mentors
- Management team identification
- Help with business etiquette
- Technology commercialization assistance
- Help with regulatory compliance
- Intellectual property management

There are a number of business incubators that have focused on par-ticular industries or on a particular business model, earning them their own name. This list is incomplete; you can help by expanding it.

- Virtual business incubator - online business incubator
- Medical incubator - a business incubator focused on medical devices & biomaterials
- Kitchen incubator - a business incubator focused on the food industry
- Public incubator - a business incubator focused on the public good
- Seed accelerator - a business incubator focused on early startups
- Corporate accelerator - a program of a larger company that acts akin to a seed accerator
- Startup studio - a business incubator with interacting portfolio companies

More than half of all business incubation programs are "mixed-use" projects, meaning they work with clients from a variety of industries. Technology incubators account for 39% of incubation programs.

One example of a specialized type of incubator is a bioincubator. Bioincubators specialize in supporting life science-based startup compa-nies. Entrepreneurs with feasible projects in life sciences are selected and admitted for these programs.

Unlike many business assistance programs, business incubators do not serve any and all companies. Entrepreneurs who wish to enter a business incubation program must apply for admission. Acceptance cri-teria vary from program

to program, but in general only those with fea-sible business ideas and a workable business plan are admitted. It is this factor that makes it difficult to compare the success rates of incubated companies against general business survival statistics.

Although most incubators offer their clients office space and shared administrative services, the heart of a true business incubation program are the services it provides to startup companies. More than half of in-cubation programs surveyed by the National Business Incubation Asso-ciation in 2006 reported that they also served affiliate or virtual clients. These companies do not reside in the incubator facility. Affiliate clients may be home-based businesses or early-stage companies that have their own premises but can benefit from incubator services. Virtual clients may be too remote from an incubation facility to participate on site, and so receive counseling and other assistance electronically.

The amount of time a company spends in an incubation program can vary widely depending on a number of factors, including the type of business and the entrepreneur's level of business expertise. Life science and other firms with long research and development cycles require more time in an incubation program than manufacturing or service companies that can immediately produce and bring a product or service to market. On average, incubator clients spend 33 months in a program. Many in-cubation programs set graduation requirements by development bench-marks, such as company revenues or staffing levels, rather than time.

Business incubation has been identified as a means of meeting a va-riety of economic and socioeconomic policy needs, which may include job creation, fostering a community's entrepreneurial climate, technolo-gy commercialization, diversifying local economies, building or accel-erating growth of local industry clusters, business creation and retention, encouraging women or minority entrepreneurship, identifying potential spin-in or spin-out business opportunities, or community revitalization.

About one-third of business incubation programs are sponsored by economic development organizations. Government entities account for 21% of program sponsors. Another 20% are sponsored by academic in-stitutions, including two- and four-year colleges, universities, and tech-nical colleges. In many countries, incubation programs are funded by regional or national governments as part of an overall economic devel-opment strategy. In the United States, however, most incubation pro-grams are independent, community-based and resourced projects. The U.S. Economic Development Administration is a frequent source of funds for developing incubation programs, but once a program is open and operational it typically receives no federal funding; few states offer centralized incubator funding. Rents and/or client fees account for 59% of incubator revenues, followed by service contracts or grants and cash operating subsidies.

As part of a major effort to address the ongoing economic crisis of the US, legislation was introduced to "reconstitute Project Socrates". The updated version of Socrates supports incubators by enabling users with technology-based

facts about the marketplace, competitor maneu-vers, potential partners, and technology paths to achieve competitive advantage. Michael Sekora, the original creator and director of Socrates says that a key purpose of Socrates is to assist government economic planners in addressing the economic and socioeconomic issues with unprecedented speed, efficiency and agility.

Many for-profit or "private" incubation programs were launched in the late 1990s by investors and other for-profit operators seeking to hatch businesses quickly and bring in big payoffs. At the time, NBIA estimated that nearly 30% of all incubation programs were for-profit ventures. In the wake of the dot-com bust, however, many of those pro-grams closed. In NBIA's 2002 State of the Business Incubation survey, only 16% of responding incubators were for-profit programs. By the 2006 SOI, just 6% of respondents were for-profit. Although some incu-bation programs (regardless of nonprofit or for-profit status) take eq-uity in client companies, most do not. Only 25% of incubation programs re-port that they take equity in some or all of their clients. Incubators often aggregate themselves into networks which are used to share good prac-tices and new methodologies. Europe's European Business and Innova-tion Centre Network association federates more than 250 European Business and Innovation Centres throughout Europe. France has its own national network of technopoles, pre-incubators, and EU|BICs, called RETIS Innovation. This network focuses on in-ternationalizing startups.

The Startup Federation is an international incubator network that in-cludes incubators such as Washington, D.C.'s 1776, New York City's General Assem-bly, Boston's Cambridge Innovation Center, London's Warner Yard, Berlin's Be-tahaus, Chicago's 1871, and others. The net-work allows collaboration between members of each incubator. Of 1000 incubators across Europe, 500 are situated in Germany. Many of them are organized federally within the ADT.

Business plan is a formal statement of business goals, reasons they are at-tainable, and plans for reaching them. It may also contain back-ground infor-mation about the organization or team attempting to reach those goals. Business plans may target changes in perception and brand-ing by the customer, client, taxpayer, or larger community. When the existing business is to assume a major change or when planning a new venture, a 3 to 5 year business plan is required, since investors will look for their investment return in that timeframe. Business plans may be in-ternally or externally focused. Externally focused plans target goals that are important to external stakeholders, particularly financial stake-hold-ers. They typically have detailed information about the organization or team attempting to reach the goals. With for-profit entities, external stakeholders include investors and customers. External stake-holders of non-profits include donors and the clients of the non-profit's services. For government agencies, ex-ternal stakeholders include tax-payers, higher-level government agencies, and international lending bodies such as the International Monetary Fund, the World Bank, various economic agencies of the United Nations, and development banks.

Internally focused business plans target intermediate goals required to reach the external goals. They may cover the development of a new product, a new service, a new IT system, a restructuring of finance, the refurbishing of a factory or a restructuring of the organization. An inter-nal business plan is often developed in conjunction with a balanced scorecard or a list of critical success factors. This allows success of the plan to be measured using non-financial measures. Business plans that identify and target internal goals, but provide only general guidance on how they will be met are called strategic plans.

Operational plans describe the goals of an internal organization, working group or department. Project plans, sometimes known as pro-ject frameworks, describe the goals of a particular project. They may also address the project's place within the organization's larger strategic goals.

Business plans are decision-making tools. The content and format of the business plan is determined by the goals and audience. For example, a business plan for a non-profit might discuss the fit between the busi-ness plan and the or-ganization‘s mission. Banks are quite concerned about defaults, so a business plan for a bank loan will build a convincing case for the organization‘s ability to repay the loan. Venture capitalists are primarily concerned about initial invest-ment, feasibility, and exit valuation. A business plan for a project requiring equi-ty financing will need to explain why current resources, upcoming growth op-portunities, and sustainable competitive advantage will lead to a high exit valua-tion.

Preparing a business plan draws on a wide range of knowledge from many different business disciplines: finance, human resource manage-ment, intellectu-al property management, supply chain management, op-erations management, and marketing, among others. It can be helpful to view the business plan as a collection of sub-plans, one for each of the main business disciplines. The for-mat of a business plan depends on its presentation context. It is common for businesses, especially start-ups, to have three or four formats for the same busi-ness plan.

An "elevator pitch" is a short summary of the plan's executive sum-mary. This is often used as a teaser to awaken the interest of potential investors, cus-tomers, or strategic partners. It is called an elevator pitch as it is supposed to be content that can be explained to someone else quickly in an elevator. The eleva-tor pitch should be between 30 and 60 seconds. A pitch deck is a slide show and oral presentation that is meant to trigger discussion and interest potential inves-tors in reading the writ-ten presentation. The content of the presentation is usual-ly limited to the executive summary and a few key graphs showing financial trends and key decision making benchmarks. If a new product is being proposed and time permits, a demonstration of the product may be included.

A written presentation for external stakeholders is a detailed, well written, and pleasingly formatted plan targeted at external stakeholders. An internal op-erational plan is a detailed plan describing planning de-tails that are needed by management but may not be of interest to exter-nal stakeholders. Such plans

have a somewhat higher degree of candor and informality than the version targeted at external stakeholders and others. Typical structure for a business plan for a start up venture

- cover page and table of contents
- executive summary
- mission statement
- business description
- business environment analysis
- SWOT analysis
- industry background
- competitor analysis
- market analysis
- marketing plan
- operations plan
- management summary
- financial plan
- attachments and milestones

Typical questions addressed by a business plan for a start up venture

- What problem does the company's product or service solve? What niche will it fill?
- What is the company's solution to the problem?
- Who are the company's customers, and how will the company market and sell its products to them?
- What is the size of the market for this solution?
- What is the business model for the business (how will it make money)?
- Who are the competitors and how will the company maintain a competitive advantage?
- How does the company plan to manage its operations as it grows?
- Who will run the company and what makes them qualified to do so?
- What are the risks and threats confronting the business, and what can be done to mitigate them?
- What are the company's capital and resource requirements?
- What are the company's historical and projected financial state-ments?

Cost and revenue estimates are central to any business plan for de-ciding the viability of the planned venture. But costs are often underes-timated and rev-enues overestimated resulting in later cost overruns, rev-enue shortfalls, and possibly non-viability. During the dot-com bubble 1997-2001 this was a problem for many technology start-ups. Reference class forecastinghas been developed to reduce the risks of cost overruns and revenue shortfalls and thus generate more accurate business plans.

An externally targeted business plan should list all legal concerns and financial liabilities that might negatively affect investors. Depend-ing on the

amount of funds being raised and the audience to whom the plan is presented failure to do this may have severe legal consequences. Non disclosure agreements with third parties, non - compet agreements, conflicts of interest, privacy concerns, and the protection of one's trade secrets may severely limit the audience to which one might show the business plan. Alternatively, they may require each party receiving the business plan to sign a contract accepting special clauses and conditions.

This situation is complicated by the fact that many venture capitalists will refuse to sign an NDA before looking at a business plan, lest it put them in the untenable position of looking at two independently devel-oped look-alike business plans, both claiming originality. In such situa-tions one may need to develop two versions of the business plan: a stripped down plan that can be used to develop a relationship and a de-tail plan that is only shown when investors have sufficient interest and trust to sign an NDA.

Traditionally business plans have been highly confidential and quite limited in audience. The business plan itself is generally regarded as secret. An open business plan is a business plan with unlimited audi-ence. The business plan is typically web published and made available to all. In the free software and open source business model, trade se-crets, copyright and patents can no longer be used as effective locking mechanisms to provide sustainable advantages to a particular business and therefore a secret business plan is less relevant in those models.

- Education
- Business plans are used in some primary and secondary programs to teach economic principles.
- Wikiversity has a Lunar Boom Town project where students of all ages can collaborate with designing and revising business models and practice evaluating them to learn practical business planning techniques and methodology
- Fundraising
- Fundraising is the primary purpose for many business plans, since they are related to the inherent probable success/failure of the company risk.
- Angel investors
- Business loans
- Grants
- Startup company funding
- Venture capital
- Internal use
- Management by objectives is a process of agreeing upon objec-tives within an organization so that management and employees agree to the objectives and understand what they are in the organization.
- Strategic planning is an organization's process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strat-

egy, including its capital and people. Business plans can help decision makers see how specific projects relate to the organi-zation's strategic plan.

- Total quality management is a business management strategy aimed at embedding awareness of quality in all organizational process-es. TQM has been widely used in manufacturing, education, call centers, government, and service industries, as well as NASA space and science programs.

The business goals may be defined both for non-profit or for-profit organizations. For-profit business plans typically focus on financial goals, such as profit or creation of wealth. Non-profit, as well as gov-ernment agency business plans tend to focus on the "organizational mis-sion" which is the basis for their governmental status or their non-profit, tax-exempt status, respectively – although non-profits may also focus on optimizing revenue. The primary difference between profit and non-profit organizations is that "for-profit" organizations look to maximize wealth versus non-profit organizations, which look to provide a greater good to society. In non-profit organizations, creative tensions may de-velop in the effort to balance mission with "margin".

European Technology Platforms are industry-led stakeholder fora recognised by the European Commission as key actors in driving inno-vation, knowledge transfer and European competitiveness. ETPs devel-op research and innovation agendas and roadmaps for action at EU and national level to be supported by both private and public funding. They mobilise stakeholders to deliver on agreed priorities and share infor-mation across the EU. By working effectively together, they also help deliver solutions to major challenges of key concern to citizens such as the ageing society, the environment and food and energy security.

ETPs are independent and self-financing entities. They conduct their activities in a transparent manner and are open to new members. ETPs have a strategy, mobilisation and dissemination function. In order to fulfil their role, their main activities encompass:

- developing industry-focused strategic research and innovation agendas including technology roadmaps and implementation plans;
- encouraging industry participation in Horizon 2020, the EU‘s framework programme for research and innovation, and cooperating with networks in Member States;
- fostering networking opportunities with other ETPs and other partners along the value chain to address cross-sectoral challenges and promote the move towards more open models of innovation;
- identifying opportunities for international cooperation;
- actin as one of the channels of external advice for the pro-gramming and implementation of Horizon 2020; notably, ETPs have been a key driving force behind the launch of high profile public-private partnerships under the programme.

Commission engagement with the ETPs takes a number of forms:

- provision of a central contact point with overall coordination re-sponsibility in DG Research and Innovation
- a dedicated contact point for individual ETPs in the relevant Di-rectorate-General
- participation in ETP-organised events
- consultation on implementation aspects of Horizon 2020
- organisation of cross-ETP workshops

The China–Belarus Great Stone Industrial Park offers easy access to International Highways M1/E30 and M4, International Airport (included into the Park territory), International Railways and the capital of Belarus with its scientific potential. Great Stone Industrial Park is designated for high-tech industrial and business activities, including research and development, manufacturing and assembly, warehousing and logistic facilities.

The China–Singapore Suzhou Industrial Park has become the prototype of the Great Stone Industrial Park. In 2010, the Ministry of Economy of the Republic of Belarus and the «Chinese Engineering Corporation CAMC (CAMCE) » agreed to cooperate on the creation of China–Belarus Industrial Park in the territory of Belarus. In November 2011, it was also discussed at the meeting of the China-Belarus intergovernmental commission. For the initial creation of the park the following documents were signed:

Decree of the President of the Republic of Belarus № 253 «On the China–Belarus Great Stone Industrial Park», dated June 5, 2012 .

On May 12, 2017 new Decree of the President of the Republic of Belarus "On the improvement of the special legal regime of the China-Belarus Great Stone Industrial Park" was signed. It created unique legal and regulatory environment for Industrial Park residents and investors.

Great Stone Industrial Park is a territorial unit of Belarus with the status of special economic zone and special regime for doing business. Park offers easy access to International Highways M1/E30 and M4, International Airport (included into the Park territory), International Railways and the capital of Belarus with its labour and scientific potential. Great Stone Park is designated for high-tech industrial and business activities, including research and development, manufacturing and assembly, warehousing and logistic facilities.

Park is focused on innovative manufacture with high export potential. Currently, Park development is based on high-tech manufactures in the spheres of mechanical engineering, electronics & telecommunication, fine chemistry, biotechnology, pharmaceuticals, new materials, logistics, e-commerce. The list is not limited. It is possible to say that any eco-friendly and innovative manufacture is welcome to Great Stone Industrial Park. This area has a special legal regime and incentives unique not only for Belarus, but also for EAEU. For instance, company-resident is free from tax on profit for 10 years since first profit is generated. Then 50% discount from the existing rate for up to 2062. The companies are free from land tax and real estate tax. Income tax for Park employees

is 9% compared to 13% for the rest of the country. An investor can get land plots on the Park territory for up to 99 years or take it into a private ownership.

At the very beginning, logistics was Great Stone growth engine. The project on the construction of logistic sub-park is implementing by the largest owner of ports and vessels in the world - China Merchants Group. Nevertheless, Great Stone is not only industrial and logistic area. It is going to be eco-city with comfortable living conditions for up to 150,000 citizens. Later on, kindergartens, schools, hospitals, shopping malls, sport and recreation centers will be built there. China–Belarus Industrial Park is the largest industrial park in Europe among the parks established by China.

44. Social philosophy

Social philosophy may be at the center of the broader interest in philosophy. It is thus above all concerned with phenomena that can only be understood in the context of human social life: with the state, law, economy, religion – in short, with the entire material and intellectual culture of humanity.

Understood in this way, social philosophy grew into a decisive philosophical task in the course of the development of classical German idealism. The most compelling aspects of the Hegelian system are the supreme achievements of that type of social philosophy. This is not to say that philosophy before Hegel had not been concerned with matters of social philosophy; to the contrary, Kant's major works contain philosophical theories concerning the knowledge of law, of art, and of religion. But this social philosophy was rooted in the philosophy of the isolated subject; those spheres of being were understood as projections of the autonomous person.

Kant made the closed unity of the rational subject into the exclusive source of the constitutive principles of each cultural sphere; the essence and the organization of culture were to be made comprehensible solely on the basis of the dynamics of the individual, the fundamental modes of activity of the spontaneous ego. Even if the autonomous subject could hardly be equated with the empirical individual in Kant's philosophy, one was nonetheless supposed to be able to investigate all possible culturally creative factors in the mind of each individual rational being.

Overarching structures of being which could only belong to a supraindividual whole, which could only be discovered in the social totality, and to which we must subordinate ourselves, do not exist in this conception. To assert their existence would be considered dogmatic, and action oriented to them would be considered heteronomous. In the Metaphysical Principles of Virtue, Kant writes of the moral subject that a person "is subject to no laws other than those that it gives to itself (either alone or at least together with others)."

For Hegel, the structure of objective Spirit, which realizes in history the cultural substance of absolute Spirit – that is, art, religion, philosophy – no longer derives from the critical analysis of the subject, but rather from universal dia-

lectical logic. Its course and its works originate not from the free decisions of the subject, but from the spirit of the dominant nations as they succeed each other in the struggles of history.

The destiny of the particular is fulfilled in the fate of the universal; the essence or substantive form of the individual manifests itself not in its personal acts, but in the life of the whole to which it belongs. In its essential aspects, idealism thus became social philosophy with Hegel: the philosophical understanding of the collective whole in which we live – and which constitutes the foundation for the creations of absolute culture – is now also the insight into the meaning of our own existence according to its true value and content.

From the cautious theory of Marburg neo-Kantianism that human beings are not mere individuals, but stand "in various pluralities in rank and file" and "first complete the circle of their being in the larger totality," to the contemporary philosophies according to which (as with Hegel) the meaning of human existence fulfills itself only in the supraindividual unities of history, whether these be class, state, or nation – from Hermann Cohen to Othmar Spann, philosophy in recent decades has brought forth the most variegated social-philosophical systems. The newer philosophical attempts to ground moral and legal philosophy anew, against positivism, are almost entirely at one in the effort to demonstrate – above the level of actual empirical events – the existence of a higher, autonomous realm of being, or at least a realm of value or normativity in which transitory human beings have a share, but which is itself not reducible to mundane events. Thus these, too, lead to a new philosophy of objective Spirit.

Now it is precisely in this dilemma of social philosophy – this inability to speak of its object, namely the cultural life of humanity, other than in ideological, sectarian, and confessional terms, the inclination to see in the social theories of Auguste Comte, Karl Marx, Max Weber, and Max Scheler differences in articles of faith rather than differences in true, false, or at least problematic theories – it is in this dilemma that we find the difficulty that must be overcome. Of course, the simultaneous existence and validity of various concepts of reality is an indication of the contemporary intellectual situation as a whole. But this variety is rooted in different areas of knowledge and spheres of life, not in one and the same object domain.

Thus, for instance, the constitutive categories of philology and of physics may diverge today so greatly that it appears difficult to bring them under one hat. But within physics itself, indeed within the sciences of inorganic nature as a whole, no such tendency exists to develop irreconcilable concepts of reality; the opposite is the case. Here, the corrective is supplied by concrete research on the object.

One might be tempted to object that social philosophy is not an individual discipline, and that it is material sociology which must investigate the specific forms of sociation. This sort of sociology investigates the various concrete ways in which human beings live together, surveying all kinds of associations: from the family to economic groups and political associations to the state and humani-

ty. Like political economy, such a sociology is capable of objective judgment, but it has nothing to say about the degree of reality or about the value of these phenomena. Such issues are rather matters for social philosophy, and in those fundamental questions with which it deals, there can be ultimate positions but no generally valid truths that are woven into broad and variegated investigations.

This view is rooted in a no longer tenable concept of philosophy. However one may draw the boundary between social philosophy and the specialized discipline of sociology – and I believe a great deal of arbitrariness would be unavoidable in any such attempt – one thing is certain. If social-philosophical thought concerning the relationship of individual and society, the meaning of culture, the foundation of the development of community, the overall structure of social life – in short, concerning the great and fundamental questions – is left behind as (so to speak) the dregs that remain in the reservoir of social-scientific problems after taking out those questions that can be advanced in concrete investigations, social philosophy may well perform social functions (such as that of transfiguring and mystifying reality), but its intellectual fruitfulness would have been forfeited.

The relation between philosophical and corresponding specialized scientific disciplines cannot be conceived as though philosophy deals with the really decisive problems – in the process constructing theories beyond the reach of the empirical sciences, its own concepts of reality, and systems comprehending the totality – while on the other side empirical research carries out its long, boring, individual studies that split up into a thousand partial questions, culminating in a chaos of countless enclaves of specialists.

This conception – according to which the individual researcher must view philosophy as a perhaps pleasant but scientifically fruitless enterprise (because not subject to experimental control), while philosophers, by contrast, are emancipated from the individual researcher because they think they cannot wait for the latter before announcing their wide-ranging conclusions – is currently being supplanted by the idea of a continuous, dialectical penetration and development of philosophical theory and specialized scientific praxis.

45. Structure society

Studies of social structure attempt to explain such matters as integration and trends in inequality. This approach, sometimes called formal sociology, does not refer directly to individual behaviour or interpersonal interaction. Therefore, the study of social structure is not considered a behavioral science; at this level, the analysis is too abstract. It is a step removed from the consideration of concrete human behaviour, even though the phenomena studied in social structure result from humans responding to each other and to their environments. Those who study social structure do, however, follow an empirical (observational) approach to research, methodology, and epistemology.

Social structure is sometimes defined simply as patterned social relations—those regular and repetitive aspects of the interactions between the members of a given social entity. Even on this descriptive level, the concept is highly abstract: it selects only certain elements from ongoing social activities. The larger the social entity considered, the more abstract the concept tends to be. For this reason, the social structure of a small group is generally more closely related to the daily activities of its individual members than is the social structure of a larger society. In the study of larger social groups, the problem of selection is acute: much depends on what is included as components of the social structure. Various theories offer different solutions to this problem of determining the primary characteristics of a social group.

SIMILAR TOPICS

- political system
- social science
- law
- social change

Before these different theoretical views can be discussed, however, some remarks must be made on the general aspects of the social structure of any society. Social life is structured along the dimensions of time and space. Specific social activities take place at specific times, and time is divided into periods that are connected with the rhythms of social life—the routines of the day, the month, and the year. Specific social activities are also organized at specific places; particular places, for instance, are designated for such activities as working, worshiping, eating, and sleeping. Territorial boundaries delineate these places and are defined by rules of property that determine the use and possession of scarce goods. Additionally, in any society there is a more or less regular division of labour.

Yet another universal structural characteristic of human societies is the regulation of violence. All violence is a potentially disruptive force; at the same time, it is a means of coercion and coordination of activities. Human beings have formed political units, such as nations, within which the use of violence is strictly regulated and which, at the same time, are organized for the use of violence against outside groups.

Furthermore, in any society there are arrangements within the structure for sexual reproduction and the care and education of the young. These arrangements take the form partly of kinship and marriage relations. Finally, systems of symbolic communication, particularly language, structure the interactions between the members of any society.

46 Philosophy of economics

Philosophy and economics, also philosophy of economics, studies topics such as rational choice, the appraisal of economic outcomes, institutions and

processes, and the ontology of economic phenomena and the possibilities of acquiring knowledge of them.

Although these inquiries overlap in many ways, it is useful to divide philosophy of economics in this way into three subject matters which can be regarded respectively as branches of action theory, ethics (or normative social and political philosophy), and philosophy of science. Economic theories of rationality, welfare, and social choice defend substantive philosophical theses often informed by relevant philosophical literature and of evident interest to those interested in action theory, philosophical psychology, and social and political philosophy. Economics is of particular interest to those interested in epistemology and philosophy of science both because of its detailed peculiarities and because it possesses many of the overt features of the natural sciences, while its object consists of social phenomena.

The question usually addressed in any subfield of philosophy (the philosophy of X) is "what is X?" A philosophical approach to the question "what is economics?" is less likely to produce an answer than it is to produce a survey of the definitional and territorial difficulties and controversies. Similar considerations apply as a prologue to further discussion of methodology in a subject.

Definitions of economics have varied over time from the modern origins of the subject, reflecting programmatic concerns and distinctions of expositors. Ontological questions continue with further "what is" questions addressed at fundamental economic phenomena, such as "what is (economic) value?" or "what is a market? While it is possible to respond to such questions with real verbal definitions, the philosophical value of posing such questions actually aims at shifting entire perspectives as to the nature of the foundations of economics. In the rare cases that attempts at ontological shifts gain wide acceptance, their ripple effects can spread throughout the entire field of economics

An epistemology deals with how we know things. In the philosophy of economics this means asking questions such as: what kind of a "truth claim" is made by economic theories – for example, are we claiming that the theories relate to reality or perceptions? How can or should we prove economic theories – for example, must every economic theory be empirically verifiable? How exact are economic theories and can they lay claim to the status of an exact science – for example, are economic predictions as reliable as predictions in the natural sciences, and why or why not? Another way of expressing this issue is to ask whether economic theories can state "laws". Philosophers of science and economists have explored these issues intensively since the work of Alexander Rosenberg and Daniel Hausman dating to 3 decades ago.

Philosophical approaches in decision theory focus on foundational concepts in decision theory – for example, on the natures of choice or preference, rationality, risk and uncertainty, economic agents. Game theory is shared between a number of disciplines, but especially mathematics, economics and philosophy. Game theory is still extensively discussed within the field of the philosophy of

economics. Game theory is closely related to and builds on decision theory and is likewise very strongly interdisciplinary.

The ethics of economic systems deals with the issues such as how it is right (just, fair) to keep or distribute economic goods. Economic systems as a product of collective activity allow examination of their ethical consequences for all of their participants. Ethics and economics relate ethical studies to welfare economics. It has been argued that a closer relation between welfare economics and modern ethical studies may enrich both areas, even including predictive and descriptive economics as to rationality of behavior, given social interdependence.

Ethics and justice overlap disciplines in different ways. Approaches are regarded as more philosophical when they study the fundamentals – for example, John Rawls' A Theory of Justice (1971) and Robert Nozick's Anarchy, State and Utopia (1974). 'Justice' in economics is a subcategory of welfare economics with models frequently representing the ethical-social requirements of a given theory. "Practical" matters include such subjects as law and cost–benefit analysis. Utilitarianism, one of the ethical methodologies, has its origins inextricably interwoven with the emergence of modern economic thought. Today utilitarianism has spread throughout applied ethics as one of a number of approaches.

Non-utilitarian approaches in applied ethics are also now used when questioning the ethics of economic systems – e.g. rights-based (deontological) approaches. Many political ideologies have been an immediate outgrowth of reflection on the ethics of economic systems. Marx, for example, is generally regarded primarily as a philosopher, his most notable work being on the philosophy of economics. However, Marx's economic critique of capitalism did not depend on ethics, justice, or any form of morality, instead focusing on the inherent contradictions of capitalism through the lens of a process which is today called dialectical materialism.

The philosophy of economics defines itself as including the questioning of foundations or assumptions of economics. The foundations and assumption of economics have been questioned from the perspective of noteworthy but typically under-represented groups. These areas are therefore to be included within the philosophy of economics. Cross-cultural perspectives on economics: an example is the Buddhist-inspired Bhutanese "Gross National Happiness" concept (suggested as a better development measure than GNI/GDP). Amartya Sen is a renowned advocate for the integration of cross-cultural phenomena into economic thinking. Related area: economic anthropology.

47. Philosophy of technology

Environmental philosophy and philosophy of technology have taken divergent paths despite their common interest in examining human modification of the natural world. Yet philosophers from each field have a lot to contribute to the other. Environmental issues inevitably involve technologies, and technolo-

gies inevitably have environmental impacts. In this book, prominent scholars from both fields illuminate the intersections of environmental philosophy and philosophy of technology, offering the beginnings of a rich new hybrid discourse.

All the contributors share the intuition that technology and the environment overlap in ways that are relevant in both philosophical and practical terms. They consider such issues as the limits of technological interventions in the natural world, whether a concern for the environment can be designed into things, how consumerism relates us to artifacts and environments, and how food and animal agriculture raise questions about both culture and nature. They discuss, among other topics, the pessimism and dystopianism shared by environmentalists, environmental philosophers, and philosophers of technology; the ethics of geoengineering and climate change; the biological analogy at the heart of industrial ecology; green products and sustainable design; and agriculture as a bridge between technology and the environment.

An important role in preserving Belarusian science in the European intellectual space was played by B. Kit (Keith). He was born on April 6, 1910 in St. Petersburg in the family of an employee of the Ministry of Posts and Telegraphs, a Belorussian by nationality. In 1918, together with his parents, he moved to Belarus, to his father’s homeland in the village of Ogorodniki. Now it has become part of the urban village Korelichi, Grodno region. In 1924, B. Kit entered the 4th grade of a local Polish school, and in September 1926 - into the 6th grade of the Novogrudok Belarusian gymnasium, which he graduated in 1928.

In September 1928, B. Keith was enrolled in the Faculty of Physics and Mathematics at Vilnius University. Stefan Batory. He graduated in 1933 with a master's degree in mathematics. While still in his 3rd year at the university, he began to teach mathematics at the Vilnius Belarusian Gymnasium. In 1939, B. Kit was appointed director of this gymnasium.

After at the end of 1939 the territory of Vilnius moved to Lithuania, B. Kit returned to his native places. He made a lot of efforts, trying to resume the activity of the Novogrudok Belarusian gymnasium, which was closed in 1934 by the Polish authorities. He managed to resume the activities of the gymnasium, whose director B. Kit was appointed. Organizational abilities of B. Kita, ability to work with people were noticed and appreciated. He was appointed a school inspector of the Baranavichy district. During the year, with his direct participation, hundreds of elementary and several dozens of secondary schools were opened. At the same time, B. Keith taught mathematics at the Baranavichy Institute of Teachers. However, this fruitful work was interrupted by the Great Patriotic War that began in 1941.

During the years of German occupation, B. Kit, despite all the difficulties and hardships, did not leave the educational field. At this time, he taught at a school in the village of Lebedevo near Molodechno, worked as the director of the teacher's seminary in Pastavy. On suspicion of having links with partisans, B. Keith was arrested by German punitive authorities (SD). He spent more than

a month in prison. From execution he was saved by former students. In 1943, he became the director of a trading school in Molodechno, permission to open which was obtained from the German authorities. Students in it received not only vocational training, but also knowledge on the history and culture of Belarus. B. Keith did everything possible to raise the status of the school and transform it into an administrative-commercial institution. The training was conducted under the institute program.

In 1944, B. Keith and his family left for Germany, first to Bavaria in the city of Offenbach-Lindau, and then to Munich. The Ukrainian national gymnasium worked in Munich, where B. Keith taught mathematics for three years. At the same time, he studied at the medical faculty of the University of Munich in1945-1948. At the end of 1948, B. Keith arrived in the USA, in the South River, where he got a job in a pharmaceutical company. In 1950, B. Keith moved to Los Angeles, where he worked as a chemist in various companies.

For 25 years, B. Keith worked in the field of space research in the United States, as a mathematician and systems analyst, participated in the development of the most important programs for the development of intercontinental rocket systems. B. Keith worked at North American Aviation. The company created almost all of the most famous American space projects, from the first strategic intercontinental systems, such as Navaho, to the most outstanding Apollo project of the 20th century and Shuttle shuttle spacecraft.

Since 1958, B. Keith worked in the US Department of the Air Force, in the cosmonautics department. He was entrusted with the duties of a state adviser, an expert in the development of international cosmonautics, mainly Soviet. In 1964, the book “History and Current State of Soviet Astronautics”, written by B. Keith in collaboration with F. Ordway, was published. In 1960, the first textbook on fuel for rocket systems appeared in the history of science, authored by B. Keith. The book quickly spread throughout the world and had many positive reviews.

Since 1963, B. Keith worked in the cosmonautics department of the International Telephone and Telegraph Corporation. This was the period of preparation for the flight of American astronauts to the moon. He became an adviser to the president of the company, made a significant contribution to the mathematical development of technical elements of communication with the Moon. Subsequently, B. Keith worked at the National Bureau of Standardization, the US Department of Communications, where he studied the methods of increasing the efficiency of administrative activities using mathematics. Along with research, he taught mathematics at the University of Maryland at the evening faculty.

In 1972, B. Keith moved to Germany, settled in Frankfurt. He worked as a professor of mathematics at the European Department of the University of Maryland. During this period, B. Keith began work on his doctoral dissertation. Her theme is the life and work of one of the outstanding mathematicians of the 20th century, Anton Sigmund. In 1982, B. Keith was awarded the Ph.D. degree in

mathematics and the history of science at the academic council of the University of Regensburg. The dissertation came out as a separate book.

Despite his preoccupation with teaching and preparing a dissertation, B. Keith published in the journals of America and Germany more than 30 scientific articles on various topics. Since 1958, he was a permanent delegate to all the International Congresses on Astronautics, where he made presentations and reports. Another prominent representative of Belarus in European science was Alexander Leonidovich Chizhevsky. He was born in the Grodno province in the family of a career artillery officer. In 1913 the family moved to Kaluga. Here he fell under the strong influence of astronomy. A. Chizhevsky shared his ideas of space biology, the probability of the influence of galactic fields, solar activity on the world of plants, animals, humans with K.E. Tsiolkovsky.

The scientist began to study the riddle of the impact on living organisms of negatively charged air ions. He hypothesized the healing properties of negatively charged oxygen ions. The laboratory became an experimental laboratory. According to the results of experiments, the idea of an apparatus for artificial aeroionification was born - saturation of air with negatively charged oxygen ions. In practice, it was embodied in a device called the “Chizhevsky chandelier”.

Studying the influence of cosmic physical factors on processes in living nature, A. Chizhevsky established a relationship between the cycles of solar activity and many phenomena in the biosphere. He showed that the physical fields of the Earth and its environment should be taken into account among the main reasons affecting the state of the biosphere. In 1935, he discovered bacterial metachromasia (the "Chizhevsky-Velhover effect"). It allows you to predict solar emissions that are dangerous to humans, both on Earth and in space. Years of imprisonment followed. According to article 58 of the Criminal Code of the RSFSR, he was sentenced to 8 years in prison. Then another 8 years of exile followed. The camp administration of Karaganda allowed the scientist to conduct research.

The result of the camp research was the monograph "Biophysical mechanisms of the reaction of erythrocyte sedimentation." A. Chizhevsky for the first time experimentally established the fact of the opposite physiological effect of negative and positive ions in the air on living organisms. He discovered the pathological effect of deionized air and the stimulating effect on living organisms of negative air ions. He applied artificial aeroionization in medicine, agriculture, animal husbandry.

In the 90s in the twentieth century, many Belarusian scientists in the field of physics, chemistry and biology continued to participate in European research programs. Similar programs are available to students. Belarusian youth are educated in educational institutions of the European Union.

48. Philosophy of engineering activity

The philosophy of engineering is an emerging discipline that considers what engineering is, what engineers do, and how their work affects society, and thus includes aspects of ethics and aesthetics, as well as the ontology, epistemology, etc. that might be studied in, for example, the philosophy of science. Engineering is the profession aimed at modifying the natural environment, through the design, manufacture and maintenance of artifacts and technological systems. It might then be contrasted with science, the aim of which is to understand nature.

Engineering at its core is about causing change, and therefore management of change is central to engineering practice. The philosophy of engineering is then the consideration of philosophical issues as they apply to engineering. Such issues might include the objectivity of experiments, the ethics of engineering activity in the workplace and in society, the aesthetics of engineered artifacts, etc.

While engineering seems historically to have meant devising, the distinction between art, craft and technology isn't clearcut. The Latin root ars, the Germanic root kraft and the Greek root techne all originally meant the skill or ability to produce something, as opposed to, say, athletic ability. The something might be tangible, like a sculpture or a building, or less tangible, like a work of literature.

Nowadays, art is commonly applied to the visual, performing or literary fields, especially the so-called fine arts ('the art of writing'), craft usually applies to the manual skill involved in the manufacture of an object, whether embroidery or aircraft ('the craft of typesetting') and technology tends to mean the products and processes currently used in an industry ('the technology of printing'). In contrast, engineering is the activity of effecting change through the design and manufacture of artifacts ('the engineering of print technology').

What distinguishes engineering design from artistic design is the requirement for the engineer to make quantitative predictions of the behavior and effect of the artifact prior to its manufacture. Such predictions may be more or less accurate but usually includes the effects on individuals and/or society. In this sense, engineering can be considered a social as well a technological discipline and judged not just by whether its artifacts work, in a narrow sense, but also by how they influence and serve social values. What engineers do is subject to moral evaluation.

Socio-technical systems, such as transport, utilities and their related infrastructures comprise human elements as well as artifacts. Traditional mathematical and physical modeling techniques may not take adequate account of the effects of engineering on people, and culture. The Civil Engineering discipline makes elaborate attempts to ensure that a structure meets its specifications and other requirements prior to its actual construction. The methods employed are well known as Analysis and Design. Systems Modelling and Description makes

an effort to extract the generic unstated principles behind the engineering approach.

The traditional engineering disciplines seem discrete but the engineering of artifact has implications that extend beyond such disciplines into areas that might include psychology, finance and sociology. The design of any artifact will then take account of the conditions under which it will be manufactured, the conditions under which it will be used, and the conditions under which it will be disposed. Engineers can consider such "life cycle" issues without losing the precision and rigor necessary to design functional systems.

49. Convergence natural and technical science

Earlier stages of technological convergence, starting from combining scientific knowledge with the technical activities at the beginning of the industrial revolution, and ending with the most important technological convergence of the XX century - the emergence of information and communication networks - have created miracle expectations in the minds of scientists, a breakthrough that has incalculable social consequences.

However, despite the widespread diffusion of the new technologies in human life and a significant increase of social wellbeing in the 20th century, its eco-factor is still determined by the boundaries of the application of the basic technologies. In other words, technological convergence hasn't allowed overcoming the limitations of nature yet other than reinforcing a devastating effect on the environment by the industry - the main achievement of modern Ecology. Under such conditions, social wellbeing, raised by industrial technologies on previously unattainable level, cannot be truly continuous, since it depends on the balance of nature-destructive and environment-saving technologies. As until now this balance is disturbed in favor of irreparable damage to the environment, the social wellbeing, even during the human's life, cannot be continuous.

One of the possible ways out of the "vicious circle" of technological, environmental and social problems is the development of NBIC-convergence technologies. Material and Method Many scientists say that nature is "wrong" too often, so we could not unconditionally rely on it. Features of this approach can be found in technological convergence studies. For example, one of the reports of the US National Science Foundation was named "Converged technologies for improving human performance". Its authors suggested that the use of appropriate technologies will contribute to the world peace and the development of fruitful cooperation between people and machines, which will result in the reduction of environmental damage brining human wellbeing growth to a minimum. Nevertheless, the impact of technological development on the continuous wellbeing of mankind is positively evaluated by not all scientists.

So, after a successful start of the process of convergence, when Feynmanas early as in 1959 described possibility of manipulation of matter at the molecular level, and Swiss researchers Heinrich Rohrer and Gerd Binnig created a scan-

ning tunneling microscope that could show individual atoms and move them, a number of authors stated the danger that the new technology could bring to the world. For example, Eric Drexler warned of the apocalyptic scenario of progress in nano-technology, thanks to which humans can lose ecological niche, and R. Smalley, John. Whitesides, R. Kurzweil initiated the discussion about the prospects of the impact of new molecular electronics, nanobiology, algorithmization of the human mind on ecology of the human environment.

However, the significant number of scientists, mainly in the fields of humanitarian knowledge was the proponents of the use of new technologies for the growth of social wellbeing. A number of researchers analyzing wellbeing emphasize the possibilities of new technologies in provision of individuals with wealth and maintenance of social and economic stability of society. Other authors give priority to the perception by the individual, community, and even a certain nation of objective living conditions.

50. Culture and civilization

Firstly, civilization in theory is bigger than culture in which an entire civilization can encompass one single unit of culture. Civilization is a bigger unit than culture because it is a complex aggregate of the society that dwells within a certain area, along with its forms of government, norms, and even culture. Thus, culture is just a spec or a portion of an entire civilization. For example, the Egyptian civilization has an Egyptian culture in the same way as the Greek civilization has their Greek culture. A culture ordinarily exists within a civilization. In this regard, each civilization can contain not only one but several cultures. Comparing culture and civilization is like showing the difference between language and the country to which it is being used.

Culture can exist in itself whereas civilization cannot be called a civilization if it does not possess a certain culture. It’s just like asking how a nation can exist on its own without the use of a medium of communication. Hence, a civilization will become empty if it does not have its culture, no matter how little it is.

- Culture refers to the cumulative deposit of knowledge, experience, beliefs, values, attitudes, meanings, hierarchies, religion, notions of time, roles, spatial relations, concepts of the universe, and material objects and possessions acquired by a group of people in the course of generations through individual and group striving.
- Culture is the systems of knowledge shared by a relatively large group of people.
- Culture is communication, communication is culture.
- Culture in its broadest sense is cultivated behavior; that is the totality of a person's learned, accumulated experience which is socially transmitted, or more briefly, behavior through social learning.
- A culture is a way of life of a group of people--the behaviors, beliefs, values, and symbols that they accept, generally without thinking about them, and

that are passed along by communication and imitation from one generation to the next.

- Culture is symbolic communication. Some of its symbols include a group's skills, knowledge, attitudes, values, and motives. The meanings of the symbols are learned and deliberately perpetuated in a society through its institutions.
- Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other hand, as conditioning influences upon further action.
- Culture is the sum of total of the learned behavior of a group of people that are generally considered to be the tradition of that people and are transmitted from generation to generation.
- Culture is a collective programming of the mind that distinguishes the members of one group or category of people from another.
- The position that the ideas, meanings, beliefs and values people learn as members of society determines human nature. People are what they learn. Optimistic version of cultural determinism, place no limits on the abilities of human beings to do or to be whatever they want. Some anthropologists suggest that there is no universal "right way" of being human. "Right way" is almost always "our way"; that "our way" in one society almost never corresponds to "our way" in any other society. Proper attitude of an informed human being could only be that of tolerance.
- The optimistic version of this theory postulates that human nature being infinitely malleable human being can choose the ways of life they prefer.
- The pessimistic version maintains that people are what they are conditioned to be; this is something over which they have no control. Human beings are passive creatures and do whatever their culture tells them to do. This explanation leads to behaviorism that locates the causes of human behavior in a realm that is totally beyond human control.
- Different cultural groups think, feel, and act differently. There is no scientific standard for considering one group as intrinsically superior or inferior to another. Studying differences in culture among groups and societies presupposes a position of cultural relativism. It does not imply normalcy for oneself, no for one's society. It, however, calls for judgment when dealing with groups or societies different from one's own. Information about the nature of cultural differences between societies, their roots, and their consequences should precede judgment and action. Negotiation is more likely to succeed when the parties concerned understand the reasons for the differences in viewpoints.

51. Philosophy of value

The term “value theory” is used in at least three different ways in philosophy. In its broadest sense, “value theory” is a catch-all label used to encompass all branches of moral philosophy, social and political philosophy, aesthetics, and sometimes feminist philosophy and the philosophy of religion — whatever areas of philosophy are deemed to encompass some “evaluative” aspect.

In its narrowest sense, “value theory” is used for a relatively narrow area of normative ethical theory particularly, but not exclusively, of concern to consequentialists. In this narrow sense “value theory” is roughly synonymous with “axiology”. Axiology can be thought of as primarily concerned with classifying what things are good, and how good they are. For instance, a traditional question of axiology concerns whether the objects of value are subjective psychological states, or objective states of the world.

But in a more useful sense, “value theory” designates the area of moral philosophy that is concerned with theoretical questions about value and goodness of all varieties — the theory of value. The theory of value, so construed, encompasses axiology, but also includes many other questions about the nature of value and its relation to other moral categories. The division of moral theory into the theory of value, as contrasting with other areas of investigation, cross-cuts the traditional classification of moral theory into normative and metaethical inquiry, but is a worthy distinction in its own right; theoretical questions about value constitute a core domain of interest in moral theory, often cross the boundaries between the normative and the metaethical, and have a distinguished history of investigation.

This article surveys a range of the questions which come up in the theory of value, and attempts to impose some structure on the terrain by including some observations about how they are related to one another. The theory of value begins with a subject matter. It is hard to specify in some general way exactly what counts, but it certainly includes what we are talking about when we say any of the following sorts of things

52. Ethics, Aestetics and philosophy of law

Value theory (or axiology) is the major branch of philosophy that addresses topics such as goodness, beauty and justice. Value theory includes ethics, aesthetics, political philosophy, feminist philosophy, philosophy of law and more.

Ethics, or "moral philosophy", studies and considers what is good and bad conduct, right and wrong values, and good and evil. Its primary investigations include how to live a good life and identifying standards of morality. It also includes meta-investigations about whether a best way to live or related standards exists. The main branches of ethics are normative ethics, meta-ethics and applied ethics.

A major point of debate revolves around consequentialism, where actions are judged by the potential results of the act, such as to maximize happiness, called utilitarianism, and deontology, where actions are judged by how they adhere to principles, irrespective of negative ends.

Aesthetics is the "critical reflection on art, culture and nature." It addresses the nature of art, beauty and taste, enjoyment, emotional values, perception and with the creation and appreciation of beauty. It is more precisely defined as the study of sensory or sensori-emotional values, sometimes called judgments of sentiment and taste. It divides into art theory, literary theory, film theory and music theory. An example from art theory is to discern the set of principles underlying the work of a particular artist or artistic movement such as the Cubist aesthetic. The philosophy of film analyzes films and filmmakers for their philosophical content and explores film (images, cinema, etc.) as a medium for philosophical reflection and expressionPolitical philosophy is the study of government and the relationship of individuals (or families and clans) to communities including the state. It includes questions about justice, law, property and the rights and obligations of the citizen. Politics and ethics are traditionally linked subjects, as both discuss the question of how people should live together. Other branches of value theory:

There are a variety of branches of value theory.

- Philosophy of law (often called jurisprudence) explores the varying theories explaining the nature and interpretation of laws.
- Philosophy of education analyzes the definition and content of education, as well as the goals and challenges of educators.
- Feminist philosophy explores questions surrounding gender, sexuality and the body including the nature of feminism itself as a social and philosophical movement.
- Philosophy of sport analyzes sports, games and other forms of play as sociological and uniquely human activities.

53. Philosophy of identity

The identity theory of mind holds that states and processes of the mind are identical to states and processes of the brain. Strictly speaking, it need not hold that the mind is identical to the brain. Idiomatically we do use ‘She has a good mind’ and ‘She has a good brain’ interchangeably but we would hardly say ‘Her mind weighs fifty ounces’. Here I take identifying mind and brain as being a matter of identifying processes and perhaps states of the mind and brain. Consider an experience of pain, or of seeing something, or of having a mental image. The identity theory of mind is to the effect that these experiences just are brain processes, not merely correlated with brain processes.

Some philosophers hold that though experiences are brain processes they nevertheless have fundamentally non-physical, psychical, properties, sometimes called ‘qualia’. Here I shall take the identity theory as denying the existence of

such irreducible non-physical properties. Some identity theorists give a behaviouristic analysis of mental states, such as beliefs and desires, but others, sometimes called ‘central state materialists’, say that mental states are actual brain states. Identity theorists often describe themselves as ‘materialists’ but ‘physicalists’ may be a better word. That is, one might be a materialist about mind but nevertheless hold that there are entities referred to in physics that are not happily described as ‘material’.

In taking the identity theory (in its various forms) as a species of physicalism, I should say that this is an ontological, not a translational physicalism. It would be absurd to try to translate sentences containing the word ‘brain’ or the word ‘sensation’ into sentences about electrons, protons and so on. Nor can we so translate sentences containing the word ‘tree’. After all ‘tree’ is largely learned ostensively, and is not even part of botanical classification. If we were small enough a dandelion might count as a tree. Nevertheless a physicalist could say that trees are complicated physical mechanisms. The physicalist will deny strong emergence in the sense of some philosophers, such as Samuel Alexander and possibly C.D. Broad. The latter remarked (Broad 1937) that as far as was known at that time the properties of common salt cannot be deduced from the properties of sodium in isolation and of chlorine in isolation. Of course the physicalist will not deny the harmless sense of "emergence" in which an apparatus is not just a jumble of its parts (Smart 1981).

The identity theory as I understand it here goes back to U.T. Place and Herbert Feigl in the 1950s. Historically philosophers and scientists, for example Leucippus, Hobbes, La Mettrie, and d'Holbach, as well as Karl Vogt who, following Pierre-Jean-Georges Cabanis, made the preposterous remark (perhaps not meant to be taken too seriously) that the brain secretes thought as the liver secretes bile, have embraced materialism. However, here I shall date interest in the identity theory from the pioneering papers ‘Is Consciousness a Brain Process?’ by U.T. Place (Place 1956) and H. Feigl ‘The "Mental" and the "Physical"’ (Feigl 1958). Nevertheless mention should be made of suggestions by Rudolf Carnap (1932, p. 127), H. Reichenbach (1938) and M. Schlick (1935).

Reichenbach said that mental events can be identified by the corresponding stimuli and responses much as the (possibly unknown) internal state of a photoelectric cell can be identified by the stimulus (light falling on it) and response (electric current flowing) from it. In both cases the internal states can be physical states. However Carnap did regard the identity as a linguistic recommendation rather than as asserting a question of fact. See his ‘Herbert Feigl on Physicalism’ in Schilpp (1963), especially p. 886. The psychologist E.G. Boring (1933) may well have been the first to use the term ‘identity theory’ See Place (1990).

Place's very original and pioneering paper was written after discussions at the University of Adelaide with J.J.C. Smart and C.B. Martin. For recollections of Martin's contributions to the discussion see Place (1989) ‘Low Claim Assertions’ in Heil (1989). Smart at the time argued for a behaviourist position in

which mental events were elucidated purely in terms of hypothetical propositions about behaviour, as well as first person reports of experiences which Gilbert Ryle regarded as ‘avowals’.

Avowals were thought of as mere pieces of behaviour, as if saying that one had a pain was just doing a sophisticated sort of wince. Smart saw Ryle's theory as friendly to physicalism though that was not part of Ryle's motivation. Smart hoped that the hypotheticals would ultimately be explained by neuroscience and cybernetics. Being unable to refute Place, and recognizing the unsatisfactoriness of Ryle's treatment of inner experience, to some extent recognized by Ryle himself (Ryle 1949, p. 240), Smart soon became converted to Place's view (Smart 1959). In this he was also encouraged and influenced by Feigl's ‘"The Mental" and the "Physical" ’ (Feigl 1958, 1967).

Feigl's wide ranging contribution covered many problems, including those connected with intentionality, and he introduced the useful term ‘nomological danglers’ for the dualists' supposed mental-physical correlations. They would dangle from the nomological net of physical science and should strike one as implausible excrescences on the fair face of science. Feigl (1967) contains a valuable ‘Postscript’.

54. Philosophy of history.

The concept of history plays a fundamental role in human thought. It invokes notions of human agency, change, the role of material circumstances in human affairs, and the putative meaning of historical events. It raises the possibility of “learning from history.” And it suggests the possibility of better understanding ourselves in the present, by understanding the forces, choices, and circumstances that brought us to our current situation. It is therefore unsurprising that philosophers have sometimes turned their attention to efforts to examine history itself and the nature of historical knowledge.

These reflections can be grouped together into a body of work called “philosophy of history.” This work is heterogeneous, comprising analyses and arguments of idealists, positivists, logicians, theologians, and others, and moving back and forth over the divides between European and Anglo-American philosophy, and between hermeneutics and positivism.

Given the plurality of voices within the “philosophy of history,” it is impossible to give one definition of the field that suits all these approaches. In fact, it is misleading to imagine that we refer to a single philosophical tradition when we invoke the phrase, “philosophy of history,” because the strands of research characterized here rarely engage in dialogue with each other. Still, we can usefully think of philosophers' writings about history as clustering around several large questions, involving metaphysics, hermeneutics, epistemology, and historicism: (1) What does history consist of—individual actions, social structures, periods and regions, civilizations, large causal processes, divine intervention? (2) Does history as a whole have meaning, structure, or direction, beyond the indi-

vidual events and actions that make it up? (3) What is involved in our knowing, representing, and explaining history? (4) To what extent is human history constitutive of the human present?

What are the intellectual tasks that define the historian's work? In a sense, this question is best answered on the basis of a careful reading of some good historians. But it will be useful to offer several simple answers to this foundational question as a sort of conceptual map of the nature of historical knowing.

First, historians are interested in providing conceptualizations and factual descriptions of events and circumstances in the past. This effort is an answer to questions like these: "What happened? What was it like? What were some of the circumstances and happenings that took place during this period in the past?" Sometimes this means simply reconstructing a complicated story from scattered historical sources—for example, in constructing a narrative of the Spanish Civil War or attempting to sort out the series of events that culminated in the Detroit race riot / uprising of 1967. But sometimes it means engaging in substantial conceptual work in order to arrive at a vocabulary in terms of which to characterize "what happened." Concerning the disorders of 1967 in Detroit: was this a riot or an uprising? How did participants and contemporaries think about it?

Second, historians often want to answer "why" questions: "Why did this event occur? What were the conditions and forces that brought it about?" This body of questions invites the historian to provide an explanation of the event or pattern he or she describes: the rise of fascism in Spain, the collapse of the Ottoman Empire, the great global financial crisis of 2008. And providing an explanation requires, most basically, an account of the causal mechanisms, background circumstances, and human choices that brought the outcome about. We explain an historical outcome when we identify the social causes, forces, and actions that brought it about, or made it more likely.

Third, and related to the previous point, historians are sometimes interested in answering a "how" question: "How did this outcome come to pass? What were the processes through which the outcome occurred?" How did the Prussian Army succeed in defeating the superior French Army in 1870? How did Truman manage to defeat Dewey in the 1948 US election? Here the pragmatic interest of the historian's account derives from the antecedent unlikelihood of the event in question: how was this outcome possible? This too is an explanation; but it is an answer to a "how possible" question rather than a "why necessary" question.

Fourth, often historians are interested in piecing together the human meanings and intentions that underlie a given complex series of historical actions. They want to help the reader make sense of the historical events and actions, in terms of the thoughts, motives, and states of mind of the participants. For example: Why did Napoleon III carelessly provoke Prussia into war in 1870? Why has the Burmese junta dictatorship been so intransigent in its treatment of democracy activist Aung San Suu Kyi? Why did northern cities in the United States develop such profound patterns of racial segregation after World War II? Answers to questions like these require interpretation of actions, meanings, and

intentions—of individual actors and of cultures that characterize whole populations. This aspect of historical thinking is "hermeneutic," interpretive, and ethnographic.

And, of course, the historian faces an even more basic intellectual task: that of discovering and making sense of the archival information that exists about a given event or time in the past. Historical data do not speak for themselves; archives are incomplete, ambiguous, contradictory, and confusing. The historian needs to interpret individual pieces of evidence; and he or she needs to be able to somehow fit the mass of evidence into a coherent and truthful story. So complex events like the Spanish Civil War present the historian with an ocean of historical traces in repositories and archives all over the world; these collections sometimes reflect specific efforts at concealment by the powerful (for example, Franco's efforts to conceal all evidence of mass killings of Republicans after the end of fighting); and the historian's task is to find ways of using this body of evidence to discern some of the truth about the past.

In short, historians conceptualize, describe, contextualize, explain, and interpret events and circumstances of the past. They sketch out ways of representing the complex activities and events of the past; they explain and interpret significant outcomes; and they base their findings on evidence in the present that bears upon facts about the past. Their accounts need to be grounded on the evidence of the available historical record; and their explanations and interpretations require that the historian arrive at hypotheses about social causes and cultural meanings.

Historians can turn to the best available theories in the social and behavioral sciences to arrive at theories about causal mechanisms and human behavior; so historical statements depend ultimately upon factual inquiry and theoretical reasoning. Ultimately, the historian's task is to shed light on the what, why, and how of the past, based on inferences from the evidence of the present.

Two preliminary issues are relevant to almost all discussions of history and the philosophy of history. These are issues having to do with the constitution of history and the levels at which we choose to characterize historical events and processes. The first issue concerns the relationship between actors and causes in history: is history a sequence of causal relations, or is it the outcome of an interlocking series of human actions? The second issue concerns the question of scale of historical processes in space and time: how should historians seek to reconcile micro-, meso-, and macro-perspectives on history? Both issues can be illustrated in the history of France. Should we imagine that twentieth-century France is the end result of a number of major causes in its past—the collapse of the Roman order in the territory, the military successes of Charlemagne, the occurrence of the French Revolution, and defeat in the Franco-Prussian War?

Or should we acknowledge that France at any point in time was the object of action and contest among individuals, groups, and organizations, and that the interplay of strategic actors is a more fertile way of thinking about French history than the idea of a series of causal events? Scale is equally controversial.

Should we think of France as a single comprehensive region, or as the agglomeration of separate regions and cultures with their own historical dynamics (Alsace, Brittany and Burgundy)? Further, is it useful to consider the long expanse of human activity in the territory of what is now France, or are historians better advised to focus their attention on shorter periods of time? The following two sections will briefly consider these issues.

55. East and West: dialog culture

Cross-cultural studies usually involve (a) applying measures derived from Western cultural traditions and (b) comparing results from different nations within a priori Western theoretical frameworks. There is a danger, therefore, of twisting non-Western cultures to create psychological equivalence (Brislin, Lonner, & Thorndike, 1973). The word happiness did not appear in the Chinese language until recently. Fu, or fu-qi, is perhaps the closest equivalent of happiness in Chinese ancient writings. However, its definition, which is extremely vague, usually means "anything positive and good in life." Wu (1991) pointed out that longevity, prosperity, health, peace, virtue, and a comfortable death are among the best values in life (i.e., fu-qi).

Thus, according to folklore, Chinese people's conception of happiness roughly includes material abundance, physical health, a virtuous and peaceful life, and relief of anxiety about death. In the Book of Change, one of the oldest and most influential philosophical works in China, everything from the cosmos to human life is viewed as a neverending and cyclic process of change—between good and bad, happiness and misery, well-being and ill-being. According to the ancient Yin–Yang theory, the universe consists of two basic opposing principles or natures, Yin and Yang.

The change of relationships between those two forces formed all creations, which are still constantly changing. The ultimate aspiration of the Chinese conception of well-being is a state of homeostasis in nature, human societies, and individual human beings, brought about by the harmonious relationships between Yin and Yang. The ancient Chinese thinking of Taoism echoed such a philosophy of submission to, rather than control over, over the environment. Lao Tzu warned against the endless striving for material accumulation and worldly hedonism and pointed out that good things are inevitably followed by bad things; similarly, misfortune is replaced by blessing. Instead, he preached the natural way of life, which is simple, spontaneous, tranquil, weak, and—most important—inactive (wu-wei)—that is, taking no action that is contrary to nature. In other words, one should let nature take its own course.

However, ancient Chinese philosophy is marked by dualism. Two systems represent the wisdom of the laboring masses and the wisdom of the educated elite (i.e., ethics for ordinary people vs. ethics for scholars). The aforementioned folk- Lu, Gilmour, & Kao 479 lore about fu, or fu-qi, exemplifies the former system (i.e., ethics for ordinary people), whereas the Taoism founded by Lao

Tzu belongs to the latter system (i.e., ethics for the educated elite), which assumes a cultural and moral higher ground over the former.

Adherents of Taoism regard goals and principles such as inactivity (wu-wei) as ideals in human life that only a worthy few can achieve through endless introspection and self-cultivation. In contrast, ideals like fu, or fu-qi, are guidelines for the masses in everyday life. Because researchers of happiness aim to understand the subjective experiences of the general population, the wisdom of the masses and the ethics of ordinary people should be at the forefront, whereas the ethics of the elite and scholars should be regarded as background. The more worldly Confucian philosophy has teachings for both the scholars and lay people and, hence, is undoubtedly the dominant value system in Chinese societies.

It has been the most powerful influence shaping the Chinese culture and the conceptions of Chinese people for thousands of years. Confucian philosophy presupposes that the life of each individual is only a link in that person's family lineage and that each individual is a continuation of his or her ancestors. One can apply the same reasoning to the person's offspring. Although such teaching does not necessarily take the form of belief in reincarnation, it puts the family or clan in the center of one's entire life.

Unlike Western cultures dominated by Christianity, Chinese culture does not proclaim the pursuit of salvation in the next life as the ultimate concern; rather, it advocates striving to expand and preserve the prosperity and vitality of one's family: A person must work hard and be frugal to accumulate material resources, to obtain respectable social status, to suppress selfish desires, to lead a virtuous life, and to fulfill social duties. Emphasizing the importance of social interaction, Wu (1992) asserted that one can achieve Confucian-style happiness through.

Confucian philosophy stresses the collective welfare of the family or clan (extending to society and the entire human race) more than individual welfare; it emphasizes integration and harmony among man, society, and nature. Confucianism thus provides the most comprehensive framework for understanding the Chinese conception of happiness. Yang and Cheng (1987) conceptualized the Confucian values preserved in Taiwan as four groups. Family variables include family and clan responsibilities and obedience to one's elders. Group variables include acceptance of the hierarchical structure of society; trust in and obedience to authority; and a commitment to the solidarity, harmony, and norms of the group. Job-orientation variables include education, skills, hard work, and frugality.

Disposition variables include austerity, calmness, humility, and self-control. In a similar vein, a group of scholars (The Chinese Culture Connection, 1987) developed the Chinese Value Survey (CVS), which consists of four dimensions of cultural values: social integration, human-heartedness, Confucian work dynamism, and moral discipline. These not only were akin to the Chinese culture but also proved valid in subsequent large-scale cross-cultural studies (Bond, 480 The Journal of Social Psychology 1988; The Chinese Culture Con-

nection). People in non-Chinese societies also experienced those salient Chinese cultural values.

Thus, conceiving and developing such an instrument outside a Western cultural tradition has opened up new theoretical possibilities. At the very least, cross-cultural researchers can benefit substantially from the triangulation offered by the simultaneous use of instruments, perspectives, or both from different cultures. As scholars have observed, the Chinese philosophies have a theme parallel to the underlying theme in Western philosophies. The major issues of concern for Western philosophers are "knowledge" and "truth," whereas those for Chinese philosophers are "action" and "practice" (Hwang, 1995). Chinese philosophy is, in fact, a practical philosophy—the "philosophy of happiness".

Of course, happiness here does not mean narrow sensual hedonism; rather, it refers to a tranquil state of mind achieved through harmony with other people, with society, and with nature. As implied in the foregoing review of Chinese philosophical thought, philosophers of every school have prescribed and preached paths to happiness, although they have not clearly defined happiness. In short, the way to happiness is to practice various important cultural values advocated by the philosophers, especially by Confucian philosophers; practicing those values should, then, lead to happiness in life.

Cultural values can be a major force in determining the conception of happiness and, consequently, in constricting its subjective experiences. In a qualitative study of sources of happiness among Chinese in Taiwan, researchers found evidence of the distinctive features of the Chinese conception of happiness described earlier—in particular, harmony of interpersonal relationships, achievement at work, and contentment with life (Lu & Shih, 1997b). An alternative approach to the East–West connection (or disconnection) is to examine directly the relationships between cultural values and happiness in different nations. Existing cross-cultural comparisons suggest that individualism is the only persistent correlate of SWB when other predictors are controlled (Diener, Diener, et al., 1995).

However, the measures of both cultural values and SWB were, once again, culture bound and Western; not surprisingly, therefore, Western happiness was correlated consistently with the Western value of individualism. To counter this cultural bias, one must incorporate Eastern as well as Western perspectives into cross-cultural studies.

56. Globalization

Globalization (or globalisation; see spelling differences) refers to the free movement of goods, capital, services, people, technology and information. It is the action or procedure of international integration of countries arising from the conversion of world views, products, ideas, and other aspects of culture.

Advances in transportation (such as the steam locomotive, steamship, jet engine, and container ships) and in telecommunications infrastructure (including

the rise of the telegraph and its modern offspring, the Internet and mobile phones) have been major factors in globalization, generating further interdependence of economic and cultural activities. Though many scholars place the origins of globalization in modern times, others trace its history long before the European Age of Discovery and voyages to the New World, some even to the third millennium BC Large-scale globalization began in the 1820s. In the late 19th century and early 20th century, the connectivity of the world's economies and cultures grew very quickly. The term globalization is recent, only establishing its current meaning in the 1970s. In 2000, the International Monetary Fund (IMF) identified four basic aspects of globalition: trade and transactions, capital and investment movements, migration and movement of people, and the dissemination of knowledge.

Further, environmental challenges such as global warming, cross-boundary water and air pollution, and overfishingm of the ocean are linked with globalization. Globalizing processes affect and are affected by business and work organization, economics, socio-cultural resources, and the natural environment. Academic literature commonly subdivides globalization into three major areas: economic globalization, cultural globalization, and political globalization.

This caused shifts in population for third world countries, it took away their healthy men and unmarried women leaving wives, children, and the elderly to struggle which in return, lowered their health dramatically. The people that had left these countries also soon found out that the factory owners they started working for cut corners and worked the people extra hard, and did not care about health or safety.

57. Philosophy of safety

Philosophy is about the study of existence, beliefs and ideas. The word ‘philosophy’ actually means the ‘love of wisdom’ and has been ascribed to the work of Pythagoras. The word ‘wisdom’ is not a word one hears very much in the safety industry that is far more consumed by absolutes, indoctrination and authoritarianism.

The educator Sternberg (also author of the Triarchic Mind) wrote a great work on Wisdom, something that should be foundational for any safety person. So, if one is to develop a philosophy of safety one would develop a ‘love’ for wisdom in safety. The intent of the development of wisdom is the humanization and education of people, the opposite is the preoccupation of self, the foundation of narcissim. For the philosopher, the first step to wisdom is kno the reality of paradox. In this regard, the work of Raynor (The Strategy Paradox, Why Committing to Success Leads to failure) is an important read.

For the safety person the challenge of paradox arises from the commitment to safety in the face of uncertainty, fallibility, change, randomness and risk. Despite the nonsense rhetoric of ‘all accidents are preventable’ and perfectionism in zero, a philosophy of safety must acknowledge the reality of randomness in

human living. So, the safety person must ‘commit’ (lock in trajectory) to a collision with uncertainty (the unknown). A commitment to something lessens the possibilities for adaptability, because if a commitment can be changed easily it wasn’t much of a commitment. Commitments rarely adapt until predictions prove incorrect and predictions are rarely verifiably correct. So here is the conundrum or paradox, commitment tends to anchor people to securities in the face of what is unknown. In the light of this paradox, a safety person would do well to understand the nature of cognitive dissonance.

In many organisations a philosophy of safety is declared in values statements or a ‘safety philosophy’ statement. These are often little more than a wish list of populist statements that have no real connection to a foundational ethic or anthropomorphic understanding of personhood. There is generally no understanding that the illogical language ‘all accidents are preventable’ must lead to blaming and perfectionism. The anthropology of such language denies fallibility and the natural logic of learning. So, if such organisations really believe all accidents are preventable, will they bet on their predictions? What do they do when an accident occurs?

The safety industry needs to talk much more about wisdom. The neglect of wisdom is also the neglect of adaptability. This is why the rigidity of binary opposition is so dangerous. There is no wisdom in zero no wisdom in intolerance, no wisdom in no compromise and no learning in absolutes yet, this is the language of so many companies about their safety philosophy. I read this week of one company bragging about being ‘beyond zero’ and yet sprouting words about no compromise and caring for people.

So, if one wants to develop a philosophy of safety first, it must be person-centred. Second, it must have a culture focused on the development of maturity rather than the semiotics of zero. Third, a philosophy of safety must be committed to the wisdom of adaptability (and resilience) and finally, understand that the paradox of safety is the beginning of wisdom.

58. Multicultural philosophy

Due to its lack of the status of a unitary state formation, Belarus has delegated most of its creative resources to the European intellectual space. There was a situation when artists, scientists, philosophers are practically not associated with Belarus. They, who were born on the territory of Belarus, were registered as intellectual property by Russia, Israel, Poland, and Lithuania. Ethnic Belarusians themselves did not have time to create a database of intellectual resources of their own country. They were dominated by the desire to create a nation on the basis of economic, political criteria of independence. This desire was due to the fact that ethnic Belarusians and their country Belarus were in state formations of a federal and confederal composition. In such a situation, there was a competitive environment in the linguistic and cultural space. As a result,

the Belarusian language was supplanted into the ethnographic sphere by Polish, and then Russian.

The carrier of the Belarusian language was the peasantry. It was it that generated the rural intelligentsia, which formed the new Belarusian culture of literature, the political movement for the creation of a national state. During the collapse of the Russian Empire, national political organizations tried to proclaim an independent state - the Belarusian People's Republic. But this state did not manage to receive international recognition. It did not manage to create an army. The Russian Communists (V. Lenin) proposed an alternative in the form of the BSSR, which became one of the republics of the USSR. Russian within Belarus remained the main language of communication. Along with it, the status of official languages was Belorussian, Jewish and Polish.

In the second half XX century the official languages are Russian and Belarusian. After the collapse of the USSR, the independent Republic of Belarus was proclaimed, which initially focused on integration into the political space of Europe. However, then political forces focused on integration with the Russian Federation came to power.

The Union State was created with a budget for joint economic projects. Due to intensive urbanization, the Belarusian language has almost completely lost its social base in the face of the peasantry. The Belarusian authorities have to constantly clarify the prospects for maintaining independence and sovereignty in the light of integration processes. A similar situation took place in the Commonwealth. The territorial part of this confederation was Belarus. Knowing this historical scenario of Belarus, A. Abdziralovich wrote at the beginning of the twentieth century a small volume of text, but a fundamental work. In it, he writes that Belarus will no longer be a territorial part of neighboring states - Lithuania, Poland and Russia. But such a position needs arguments in the form of an independent policy and economy.

By the criterion of politics, the Republic of Belarus achieved results in the form of a peacekeeping mission on the boundary line of the conflict in Ukraine. Belarus, within the framework of the Norman Four format, provided the conflicting parties with a negotiation platform in Minsk. The renaissance process has begun in political relations with the states of the European Union. According to the criterion of economics, achievements are formed by the digital economy and technological modernization of production. But there remains a factor of strong dependence on the consumer market of the Russian Federation, on the prices of energy raw materials purchased in this state.

Historically and geographically, Belarus is a European state, located in the zone of intersection of geopolitical interests of the West and Russia. These intersections require jewelry policy, since none of the parties to the geopolitical confrontation will abandon the balance of interests between them.

As a nation, Belarus generated outstanding representatives of European Western culture. They found their creative realization in the intellectual and creative space of Europe. In these conditions, it is important for the Republic of

Belarus to integrate into geobranding. Multiculturalism can become one of the resources. Significant growth trends play a special role in it.

In Belarus, the first Tatar-Muslim communities appeared near Grodno. There was a settlement of Auls. This was the first Tatar aul. Then the Tatar communities formed in Lida, Lososno, Sandykovschizna, Novogrudok and Lovchitsy. Material traces of the ancient Tatar settlement were found in the village of Ogorodniki, Korelichi district. Slonim, Lyakhovichi, Molodechno, Kletsk, Ivye after 1506 became places of compact settlement of Crimean Tatars. They began to live in many cities of Belarus. Among them are Nesvizh, Ivanovo, Osmolovo, Horde and Minsk.

Belarusian Tatars created a description of their life within Belarus under the name «Risale-i-Tatar-i-leh» ("Risale-i-Tatar-iLech"). The treatise was written for the vizier of the Ottoman Empire Suleiman in 1588. The author of the treatise is unknown. In the XIX century, the manuscript of the treatise was delivered from Istanbul to an orientalist of Tatar origin, a professor at St. Petersburg University, and a representative of the Belarusian gentry, Anton Osipovich Mukhlinsky. The manuscript was published in Vilna in 1858. A.O. Mukhlinsky made a translation of the manuscript from Turkish into Polish, supplemented by historical materials. The publication is called "Report (characterization) of the Lithuanian Tatars, given by one of these Tatars to Sultan Suleiman in 1558". It was posted in the magazine Teka Wilenska, published in Vilna.

In order to replenish the treasury of Belarusian cities, the ON authorities gave permission to move Jewish communities from Germany. The first written mention of Jews in the territory of modern Belarus is a letter of 1383 from Prince Vitovt to Brest Jews granting them special privileges. In the XIV and XV centuries, there was a massive migration of Jews from German cities to Poland and on. Communities that brought capital to Belarus, centuries-old habits of trading activity, a kagal system, German-Jewish dialect (Yiddish), religious traditions and the Talmudic education system moved to Belarus.

Jews who settled in the spaces of Lithuania, Belarus, the western regions of modern Bryansk, Smolensk and southern regions of the Pskov region were called Litvaks by association with the borders of the Grand Duchy of Lithuania. They differed from other Jewish ethnographic groups in their northeastern dialect of Yiddish, special signs of life and customs.

Over the centuries, the Jewish population in Belarus has changed, which was due to various migration factors. By the end of the 15th century, more than 20 thousand Jews lived in Poland and the Grand Duchy of Lithuania

At the end of the 15th century, Jews lived in Brest, Grodno. In the XVI century, they settled in other settlements of Belarus - Bobruisk, Vitebsk, Glubokoe, Drogichin, Minsk, Mogilev, Polotsk, Pruzhany and Radoshkovichi.

In the history of Jewish communities, the period of exile in 1495 and the return of the people in 1503 by the will of the Grand Duke of Lithuania and then King of Poland Alexander Jagiellon was difficult. Entangled in debt to Jewish creditors, he decided by his decree to expel the Jews. Those moved to neighbor-

ing Poland. This action did not bring profit to the treasury. Eight years later, Alexander allowed the Jews to return to the Grand Duchy of Lithuania and returned their property. The Grand Duke and King of the Commonwealth, Zhigimont I Old, took the Jews under their protection. He strengthened their legal status by legislative acts: freed them from the obligation to put out a thousand horsemen for war, equalized them in taxation with the bourgeoisie, granted freedom of trade and craft, and protected the governor and elders who judged the Jews from "tyranny". Needing money for a war with Moscow, Zhigimont, in fiscal interests, centralized power over the Jews. In 1514, he appointed Michel Jezefovich, the customs foreman of all the Jews of the Grand Duchy of Lithuania, as general foreman.

Everyday life of the Jewish population of Belarus was traditional. Jews created communities on the basis of self-government. They had the right to elect rabbis and resolve litigations by Jewish courts on the basis of Jewish law. The highest body of Jewish self-government was the Vaadas - congresses of rabbis and kagal representatives. Vaadas existed until the middle of the 18th century. Jewish communities were united under the name "Lithuanian Vaad." The Brest rabbi Meir Val became the chairman (marshal) of the first congress in 1623 in Brest. In places of Belarus, Jews formed a local way of life. They spoke the Yiddish language that arose in Central and Eastern Europe in the X – XIV centuries. He is the Hebrew language of the German group. It is a product of intercultural interaction.

In 1551, Jews in Belarus received the right to elect rabbis. Brest rabbi Mendel Frank was titled a royal official, and the Jew Shloimo Izrailovich was appointed deputy at the Vilnius Voivodeship. Noble Jews in official documents were usually titled Panas. Like the gentry, they carried sabers with them.

An important place in the life of Belarusian Jews was occupied by synagogues. Over several centuries, Belarus has become a major center for Jewish scholarship. In the XVI century, the first yeshivas appeared in Brest, Grodno and Minsk - religious educational institutions in which the Talmud was studied.

A special role is played by growth trends in the importance of nostalgic tourism. Jews from all over the world began to come to Belarusian cities, where their relatives lived and where many of them became victims of the German occupation in 1941-1944. Among such places are Dyatlovo, Radun, Novogrudok and Shklov.

Before the Second World War, there was a significant Jewish community in Dyatlovo. She was engaged in economic and educational activities. Such bright representatives of the spiritual culture of the Jewish people as Yaakov from Dubno and Khafets Khaim were born in the town. In 1942, the German occupation authorities shot 2,800 ethnic Jews. In 2006, a memorial to the victims of the Holocaust was erected at the site of the tragedy.

A special role in the geobranding of small towns of Belarus was played by Hafets Khaim (Pupko). He was born in Dyatlovo, Grodno province in 1839. In 1869, he created a yeshiva in Raduni called “Khafets Khaim”. Among the ye-

shiva teachers, Rabbi Shimon Shkor and Rabbi Moshe Londinsky stood out. Hafets Chaim died in Radun in 1933. He wrote a number of works on spiritual topics. Hafets-Chaim books are respected in all Jewish communities in the world. They were reprinted many times in a different format. They are divided into annual study cycles by day of the week. New comments have been written to them. After a long break, pilgrims from all over the world rushed to Radun. Their number has grown so much that the trend has attracted the attention of large investors. One of the Israeli companies plans to invest about ten million dollars in the development of small town infrastructure.

In addition to spiritual reasons, Radun attracts with the tragic history of the Great Patriotic War. In the local ghetto, German occupants shot about two thousand Jews. Another place of nostalgic pilgrimage to their native places was Novogrudok. The local Jewish community fell victim to the Holocaust. A memorial was created at the site of the tragic event. It is dedicated to the victims of the Holocaust and Jewish resistance. It consists of the Museum of Jewish Resistance, the Garden of Justice and Mercy, the Wall of Remembrance and continues to be built at the expense of local and foreign investors, including representatives of large US businesses.

For the construction of the Wall of Memory, the Kushner family foundation, of which the president's son-in-law Jared Kushner is a member, allocated 36 thousand dollars. The family was prompted by a memory of their native places to take such a step. Among those who survived from the Novogrudok ghetto was Seidel Kushner and his daughters, Paradise and Leey. Seidel was nicknamed the Hatter. He sewed fur coats and hats. He lived in a stone house in the city center. He was considered a rich man. Raisa and her husband Josef Berkovich had a son, Charles Kushner. At the time of marriage, Joseph took his wife's last name. He became the father of Jared Kushner, the husband of the daughter of Donald Trump Ivanka. Charles Kushner has reached the status of a billionaire in income. The source of income was housing. Charles Kushner came to Navahrudak several times. His son - Jared is engaged in business in the real estate market of New York. Jared Kushner inherited the business from his father. He is the owner of the New York Observer.

Shklov's geobranding is shaped by his historical role in the distribution of Haskala in Russia. In 1772, following the results of the first partition of the Commonwealth, Shklov was annexed to the Russian Empire and became part of the Mogilev province. In 1777, Catherine II presented Shklov to her favorite S.G. Zorichu. He settled in Shklov in 1778. In the city he founded a magnificent courtyard with a theater and a Noble School for the children of the local aristocracy. About 10 industrial enterprises were built in the city. Shklov became both the center of rabbinical scholarship and the center for the dissemination of scientific knowledge and ideas of Haskala in Russia.

Famous students and followers of Eliyahu bin Shlomo Zalman lived in Shklov. Among them - Rabbi Benjamin bin Shlomo Zalman Zalman Riveles, who founded the Yeshiva in Shklov in 1772, as well as Rabbi Avraham bin

Shlomo Zalman, Rabbi Simha Bunem bin Baruch Bendet, Rabbi Menachem Mendl bin Baruch Bendet. They were called Shklov sages. In 1808–1809 The majority of Gaon's students in Shklov, led by Rabbi Menachem Mendl and Rabbi Israel bin Shmuel of Shklov, organized the Prushim community in Safed and Jerusalem, the first of the Ashkenazi non-Hasidim communities.

Shklovsky merchant and farmer I. Tseitlin established a home academy in his estate Ustye near the city of Cherikov. Many prominent scholars lived at his expense: Rabbi Eliezer of Slonim, Rabbi B. Riveles, Rabbi Nachum of House, author of the book "Tosefet Bikkurim"; Rabbi Baruch ben Yaakov Shik (Shklover), son of a local rabbi. He is author of essays on anatomy, astronomy, geometry, hygiene. He lived for some time in Berlin and London. In Berlin, he entered the circle of the Haskala theorists - M. Mendelssohn.

The representative of Haskala, M. Satanover, wrote in Shklov his book "Heshbon ha-Nefesh" (in Russian translation - "Ethics", 1811). Rabbi Yehuda Leib Margaliot lived in Shklov. He is the author of the ethical treatise Beth Middot (The Abode of Morality) and the essay on natural science Or Olam (The Eternal Light, 1785–1786).

Yaakov Hirsch from Breslau proposed to the Russian government a project to improve primary Jewish education.

Naftali Herz Schulman in 1803 tried to organize the publication of a Jewish newspaper in Hebrew in Shklov. In 1783, a Jewish printing house was opened in Shklov. Until 1835, more than 200 titles of books were published in Shklov. Famous philanthropists Michl Eisenstadt and Iom-Tov Lipman Zeltser lived in Shklov. During the Great Patriotic War, most of the Jews of Shklov, along with Jews from other nearby towns in the amount of about three thousand people, were shot by the Nazis in September 1941.

Another city of Jewish scholarship was Ruzhany. A well-known yeshiva existed famous rabbis lived in the years 1855-1888. The rabbi was Mordecai Gimple Jaffe (years of life 1820–1891).

In Ruzhany, the famous writer I.M. Pines, Prime Minister of the State of Israel I. Shamir, Jewish writer and poet A. Lyuboshitsky. Near Ruzhani are Pruzhany. Yosef Dov-ber ha-Levi Soloveitchik was born here, one of the largest halakhists and Jewish thinkers of the 20th century.

The Republic of Belarus pursues a policy of historical memory that is in tune with global trends in perpetuating the names of civilians. In these lists of names and surnames there are many those whose relatives live in dozens of countries of the modern world. Globalization and simplification of the visa regime contribute to the formation of the international image of the Republic of Belarus as a state on the territory of which there are spiritual centers of many cultures. An image of the Belarusian nation is formed on a multi-ethnic historical basis. In this image there is no place for nationalism, chauvinism.

A study of Belarusian intellectual history within the borders of the European region showed the important role of regional factors in the formation of the educational space of a particular country. This is the undoubted merit of the lo-

gistics of the Great Silk Road, Renaissance and Reformation. Migration flows were multidirectional.

Within the territory of Belarus, many representatives of the Reformation, Counter-Reformation and European science were engaged in educational and educational activities. During the Reformation and Counter-Reformation, a system of European education was created on the territory of Belarus. It included the level of the university (academy). Education was carried out on the basis of the multilingual culture of Greek, Latin, English, French, German and Polish.

Graduates of educational institutions of Belarus did not encounter, as a result, language barriers. They continued their education at universities in Europe, and also took internships there. They moved freely within Europe. The favorite city of their residence and work was Paris. The historical period of the USSR did not isolate Belarus from Europe, since its western part was part of the Polish state until 1939. Even if the natives of Belarus could not leave the USSR, their intellectual works became the foundation of world science. An example was the scientific heritage of L. Vygotsky, M. Bakhtin, A. Chizhevsky.

An important role in realizing the creative potential of Belarus was played by the historical permission to resettle Jewish communities from Germany within Belarus and the subsequent Haskala, which opened up the possibility for Jewish youth to integrate into the European culture of science and fine arts. Among the representatives of the Jewish youth of Belarus S. Maimon, B. Shik, L. Bakst, M. Chagall, H. Sutin, N. Minsky, L. Vygotsky.

59. Futurology and philosophy

Futurists or futurologists are scientists and social scientists whose specialty is futurology or the attempt to systematically explore predictions and possibilities about the future and how they can emerge from the present, whether that of human society in particular or of life on Earth in general.

The term "futurist" most commonly refers to people who attempt to predict the future (sometimes called trend analysis) such as authors, consultants, thinkers, organizational leaders and others who engage in interdisciplinary and systems thinking to advise private and public organizations on such matters as diverse global trends, possible scenarios, emerging market opportunities and risk management. Futurist is not in the sense of the art movement futurism. The Oxford English Dictionary identifies the earliest use of the term futurism in English as 1842, to refer, in a theological context, to the Christian eschatological tendency of that time.

The next recorded use is the label adopted by the Italian and Russian futurists, the artistic, literary and political movements of the 1920s and 1930s which sought to reject the past and fervently embrace speed, technology and, often violent, change. There are a number of organizations that specialize in this field including the World Future Society.

Visionary writers such as Jules Verne, Edward Bellamy, and H. G. Wells were not in their day characterized as futurists. The term futurology in its contemporary sense was first coined in the mid-1940s by the German Professor Ossip K. Flechtheim, who proposed a new science of probability. Flechtheim argued that even if systematic forecasting did no more than unveil the subset of statistically highly probable processes of change and charted their advance it would still be of crucial social value. In the mid-1940s the first professional "futurist" consulting institutions like RAND and SRI began to engage in long-range planning, systematic trend watching, scenario development, and visioning, at first under World War II military and government contract and, beginning in the 1950s, for private institutions and corporations.

The period from the late 1940s to the mid-1960s laid the conceptual and methodological foundations of the modern futures studies field. Bertrand de Jouvenel's The Art of Conjecture in 1969 the Future in 1964 are considered key early works, and the first U.S. university course devoted entirely to the future was taught by the late Alvin Toffler at the The New School in 1966.

More generally, the label includes such disparate lay, professional, and academic groups as visionaries, foresight consultants, corporate strategists, policy analysts, cultural critics, planners, marketers, forecasters, prediction market developers, roadmappers, operations researchers, investment managers, actuaries, and other risk analyzers, and future-oriented individuals educated in every academic discipline, including anthropology, complexity studies, computer science, economics, engineering, Urban design, evolutionary biology, history, management, mathematics, philosophy, physical sciences, political science, psychology, sociology, systems theory, technology studies, trend analysis, and other disciplines.

"Futures studies"—sometimes referred to as futurology, futures research, and foresight—can be summarized as being concerned with "three P's and a W", i.e. "possible, probable, and preferable" futures, plus "wildcards", which are low-probability, high-impact events, should they occur. Even with high-profile, probable events, such as the fall of telecommunications costs, the growth of the internet, or the aging demographics of particular countries, there is often significant uncertainty in the rate or continuation of a trend. Thus, a key part of futures analysis is the managing of uncertainty and risk. Not all futurists engage in the practice of futurology as generally defined. Pre-conventional futurists (see below) would generally not. And while religious futurists, astrologers, occultists, New Age divinists, etc. use methodologies that include study, none of their personal revelation or belief-based work would fall within a consensus definition of futurology as used in academics or by futures studies professionals.

Several authors have become recognized as futurists. They research trends, particularly in technology, and write their observations, conclusions, and predictions. In earlier eras, many futurists were at academic institutions. John McHale, author of The Future of the Future, published a 'Futures Directory', and directed a think tank called The Centre For Integrative Studies at a university. Futurists

have started consulting groups or earn money as speakers, with examples including Alvin Toffler, John Naisbitt and Patrick Dixon. Frank Feather is a business speaker that presents himself as a pragmatic futurist. Some futurists have commonalities with science fiction, and some science-fiction writers, such as Arthur C. Clarke, are known as futurists. In the introduction to The Left Hand of Darkness, Ursula K. Le Guin distinguished futurists from novelists, writing of the study as the business of prophets, clairvoyants, and futurists. In her words, "a novelist's business is lying".

A survey found the following shared assumptions:

1. We are in the midst of a historical transformation. Current times are not just part of normal history.
2. Multiple perspectives are at heart of futures studies, including unconventional thinking, internal critique, and cross-cultural comparison.
3. Consideration of alternatives. Futurists do not see themselves as value-free forecasters, but instead aware of multiple possibilities.
4. Participatory futures. Futurists generally see their role as liberating the future in each person, and creating enhanced public ownership of the future.
5. Long-term policy transformation. While some are more policy-oriented than others, almost all believe that the work of futures studies is to shape public policy, so it consciously and explicitly takes into account the long term.
6. Part of the process of creating alternative futures and of influencing public policy is internal transformation. At international meetings, structural and individual factors are considered equally important.
7. Complexity. Futurists believe that a simple one-dimensional or single-discipline orientation is not satisfactory. Trans-disciplinary approaches that take complexity seriously are necessary. Futurists are motivated by change. They are not content merely to describe or forecast. They desire an active role in world transformation.
8. They are hopeful for a better future as a "strange attractor".
9. Most believe they are pragmatists in this world, even as they imagine and work for another. Futurists have a long term perspective.
10. Sustainable futures, understood as making decisions that do not reduce future options that include policies on nature, gender, and other accepted paradigms. This applies to corporate futurists and other non-governmental organizations. Environmental sustainability is reconciled with the technological, spiritual, and post-structural ideals. Sustainability is not a "back to nature" ideal, but rather inclusive of technology and culture.

60. Philosophy o forecast

The future is what will happen in the time after the present. Its arrival is considered inevitable due to the existence of time and the laws of physics. Due to the apparent nature of reality and the unavoidability of the future, everything that currently exists and will exist can be categorized as either permanent, mean-

ing that it will exist forever, or temporary, meaning that it will end. The future and the concept of eternity have been major subjects of philosophy, religion, and science, and defining them non-controversially has consistently eluded the greatest of minds. In the Occidental view, which uses a linear conception of time, the future is the portion of the projected time line that is anticipated to occur.

In special relativity, the future is considered absolute future, or the future light cone. In the philosophy of time, presentism is the belief that only the present exists and the future and the past are unreal. Religions consider the future when they address issues such as karma, life after death, and eschatologies that study what the end of time and the end of the world will be. Religious figures such as prophets and diviners have claimed to see into the future. Organized efforts to predict or forecast the future may have derived from observations by early men of heavenly objects. Future studies, or futurology, are the science, art and practice of postulating possible futures. Modern practitioners stress the importance of alternative and plural futures, rather than one monolithic future, and the limitations of prediction and probability, versus the creation of possible and preferable futures.

The concept of the future has been explored extensively in cultural production, including art movements and genres devoted entirely to its elucidation, such as the 20th century movement futurism. Forecasting is the process of estimating outcomes in uncontrolled situations. Forecasting is applied in many areas, such as weather forecasting, earthquake prediction, transport planning, and labour market planning. Due to the element of the unknown, risk and uncertainty are central to forecasting.

Statistically based forecasting employs time series with cross-sectional or longitudinal data. Econometric forecasting methods use the assumption that it is possible to identify the underlying factors that might influence the variable that is being forecast. If the causes are understood, projections of the influencing variables can be made and used in the forecast. Judgmental forecasting methods incorporate intuitive judgments, opinions and probability estimates, as in the case of the Delphi method, scenario building, and simulations.

Prediction is similar to forecasting but is used more generally, for instance to also include baseless claims on the future. Organized efforts to predict the future began with practices like astrology, haruspicy, and augury. These are all considered to be pseudoscience today, evolving from the human desire to know the future in advance.

Modern efforts such as future studies attempt to predict technological and societal trends, while more ancient practices, such as weather forecasting, have benefited from scientific and causal modelling. Despite the development of cognitive instruments for the comprehension of future, the stochastic and chaotic nature of many natural and social processes has made precise forecasting of the future elusive. Future studies or futurology is the science, art and

practice of postulating possible, probable, and preferable futures and the worldviews and myths that underlie them.

Futures is an interdisciplinary field, studying yesterday's and today's changes, and aggregating and analyzing both lay and professional strategies, and opinions with respect to tomorrow. It includes analyzing the sources, patterns, and causes of change and stability in the attempt to develop foresight and to map possible futures. Modern practitioners stress the importance of alternative and plural futures, rather than one monolithic future, and the limitations of prediction and probability, versus the creation of possible and preferable futures.

Three factors usually distinguish futures studies from the research conducted by other disciplines (although all disciplines overlap, to differing degrees). First, futures studies often examines not only possible but also probable, preferable, and "wild card" futures. Second, futures studies typically attempts to gain a holistic or systemic view based on insights from a range of different disciplines.

The future thus is not empty but fraught with hidden assumptions. Futures studit does not generally include the work of economists who forecast movements of interest rates over the next business cycle, or of managers or investors with short-term time horizons. Most strategic planning, which develops operational plans for preferred futures with time horizons of one to three years, is also not considered futures. But plans and strategies with longer time horizons that specifically attempt to anticipate and be robust to possible future events are part of a major subdiscipline of futures studies called strategic foresight. The futures field also excludes those who make future predictions through professed supernatural means. At the same time, it does seek to understand the models such groups use and the interpretations they give to these models.

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