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DIGITAL ETHICS

Textbook on the general educational discipline "Philosophy"
for students of all specialties

E-learning material

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The textbook complements the lecture material on philosophy with topical issues of digital ethics. The material belongs to the section "Philosophy in the professional activity of a specialist." The features of digital etiquette and ethics of software engineering, as well as technological trends in the evolution of convergent structures of information ethics are described. The evolution of the system normative characteristics of the information society is analyzed.

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INTRODUCTION

The subject of philosophy was the institutional environment of the modern economy and the institutions of the digital economy emerging in it, as well as the peculiarities of the legal regulation of the status of these new institutions. The manual presents the results of the analysis of the conceptual self-determination of digitalization as the modernization of an industrial society. In this context, the features of the formation of the institutional environment of the digital economy in the Republic of Belarus are described.

The subject of philosophy

In Greek, philosophy means love of wisdom. The term was introduced by the famous ancient mathematician Pythagoras. For two thousand years, the subject of philosophy has been formed. They are the patterns of functioning and development of nature, society and human thinking. Philosophy is distinguished from other sciences by a systematic approach to objective (nature, man, society) and subjective (culture, consciousness) reality.

Like any science, philosophy is structured by fundamental and applied sections. Let us first characterize the fundamental sections. They are collectively referred to as metaphysics. The section in which philosophy reflects the results of the study of its own history is called the "history of philosophy". The section in which philosophy reflects the results of a comparative analysis of the intellectual and spiritual cultures of the East and West is called "philosophical comparative studies". General issues of being in the forms of matter, space and time, as well as its self-organization and evolution (dialectics and synergetics) are considered in the "ontology" section. Close to this section is the theme of the philosophy of nature, which deals with natural-philosophical research consonant with the topics of modern astronomy, biology, chemistry, physics and ecology,

Philosophical anthropology studies a complex of issues related to man. Visual, cybernetic and digital anthropology have become modern modifications of philosophical anthropology. Visual anthropology studies the role of photography, video information in human life.

Cybernetic anthropology studies the technological possibilities of interfacing the human body, in particular, its brain, with neural interfaces and chips. Such technological interfacing of a person with special devices is relevant in medicine for restoring movement coordination in people suffering from

Alzheimer's disease. Digital anthropology uses sociological and ethnographic methods to study the influence of the digital environment on the indi-

vidual. For this purpose, the digital trace technique is used. The philosophy of cyborgs also developed.

Philosophical anthropology is close to the philosophy of consciousness, since the human brain has the function of consciousness. The philosophy of mind is closely related to neurophilosophy, neurobiology, neurophysiology and other cognitive sciences that study the connection between thinking and language (cognitive linguistics), the human psyche in the context of cognitive functions (cognitive psychology), and the formal structures of thought (logic). The philosophy of mind is relevant to the theory of artificial intelligence, which is faced with the difficult problem of consciousness.

Man is considered by philosophy not only as an individual and personality, but also as humanity. As a result, a number of issues of social topics are explored by the section "Philosophy of Society". Basically, these are questions related to the structure of society (society), ensuring its sustainable development, taking into account the contradictions that take place in its dynamics. These aspects are studied by the philosophy of conflict, which is closely related to the methodology of management. The digitalization of modern society is studied on the basis of a systematic approach through the analysis of the fourth industrial revolution, industry 4.0, society 5.0, digital generations, new normality and new sociality.

Social reality is in dynamics, so there are a number of issues that are studied by the section "Philosophy of History". Futurology is closely related to this section. The formational and civilizational concepts of the linear development of mankind, as well as the non-linear concept of the historical process, which involves the study of the causes of the death of civilizations, are considered. One of the key topics is scientific and technological progress, as well as the prospects for solving the environmental problems of mankind.

The subject of fundamental philosophy is the problem of cognition. These problems form the content of the section called "epistemology". Along with this

term, the terms "epistemology" and "cognitive philosophy" are also used. They represent educational topics. The subject matter of the philosophy of science is close to these sections.

Let us now characterize the applied branches of philosophy. The section "logic" studies the features of human thinking. On the basis of this section, in particular, mathematical logic, computer science and the logic of algebra were formed. They became the basis for the development of Internet technologies. The credit for this belongs to the representatives of analytical philosophy and philosophy of mind. "Ethics" studies morality and morality in the structure of public and individual consciousness of people. It contains a normative part in the form of recommendations on business ethics, etiquette, engineering ethics and software engineering ethics.

"Aesthetics" studies the categories that characterize the aesthetic and design needs of people, which is important in the design of social space, technical devices and technological processes. Good functional design contributes to marketing (sales growth) and the formation of the image of the manufacturer. Aesthetics plays an important role in architecture, landscape design and applied arts.

"Sociology" is an applied modification of social philosophy. It focuses on the study of the social structure of society, social groups and social management. "Political Science" is an applied modification of social philosophy. It studies the features of the formation and functioning of such an institution of society as the state and related forms of political dialogue and political representation in public authorities.

"Philosophy of Law", as an applied modification of social philosophy, studies the features of legal consciousness, law-making and the application of law in the social tradition. "Economic Philosophy" studies the impact of economic determinism on society. The features of the economic activity of mankind in different civilizations and formations are taken into account, which is relevant in the context of accelerating social dynamics.

Since man does not live by bread alone, the applied section "Philosophy of Religion" studies the role of national and world religions in social dynamics and the evolution of society. These are important issues of religious tolerance and tolerance. At the same time, state law clearly stipulates the norms within which the activities of religious organizations should be carried out.

The Philosophy of Technology looks at the growing role of technology in today's society and examines the risks associated with this growing role. The methodological part of the philosophy of technology is focused on the development of effective methods of search and management activities. A striking example of such a technique was the brainstorming technique.

The methodology of scientific research is focused on the reconstruction of the main stages and components that accompany the writing of term papers, graduation projects, master's and candidate's dissertations.

Thus, philosophy performs a number of applied functions. It is integrated into the structure of the professional activity of a modern specialist. In this context, the philosophy of resolving conflict situations in the system of corporate relations plays an important role.

Philosophy and worldview

Philosophy, unlike other sciences, studies not only a specific subject area, but also how people think in the social space of civilization, state, economy and culture. This is a question about how they find ways of dialogue and understanding between cultures. The content of the public consciousness of the citizens of civilization and the state is designated as a worldview. It has general and individual historical features. The general features of communication are actively shaping the digital technologies that have created the social networking environment. The historical features of the content of the worldview of people of different cultures and civilizations formed such forms of social consciousness as mythology and religion.

Mythology has historically formed in the public mind as a special institution for conducting a dialogue between a person and the outside world. To facilitate the dialogue with natural phenomena and spiritual forces, the practices of endowing the elements with humanoid forms were used. Hybrid forms of conjugation of the human body with the forms of the bodies of creatures of natural and artistic design were also used.

They are presented by texts of a certain subject. The most famous are the myths created by ancient mythology. After the transition of the worldview of mankind to the substantive foundations of religion in the forms of polytheism (polytheism) and monotheism (monotheism), mythology lost its influence and transformed into such forms of culture as epic, legend, fairy tale, legend. Plots taken from ancient myths are actively filmed.

Gradually, the institution of religion began to play the main role in traditional societies. It focuses not only on the dialogue of a person with external natural forces, but also on the problems of the inner world of the person himself. At the initial historical stage of religion, represented by polytheism, the dialogue of man with external natural forces dominated.

These forces and elements were endowed with the appearance of a person and his way of life. But the gods lived separately from people. In ancient Greece, it was Mount Olympus. There were mediators between gods and people. They were called titans. One of the gods - Hermes conveyed the messages of the gods to people. Subsequently, this practice of dialogue became known as hermeneutics.

Polytheism was also historically characteristic of the culture of Belarus. Natural elements had specific names, and the dialogue of the local population with them was carried out through special sanctuaries. Most of all, people were worried about issues related to the harvest, the change of seasons and relations with ancestors. But the interests of a person were increasingly focused on their own inner world and questions that could only be answered by a single God or,

as in Buddhism, a special spiritual teaching about the universe and ways for a person to achieve peace of mind.

The population of the Mediterranean chose the path of monotheism. Within the framework of this new historical modification, each person had the opportunity to conduct a dialogue with the creator of the world and himself. The ascent to Golgotha and the resurrection of Christ from the dead testified to the disposition of God towards the fate of man. Thus, a new chronology began in the Christian world, which many countries, including Belarus, adhere to this day. Christianity was adopted by the population of Belarus in the 10th century. It is confessed by Eastern and Western rites.

Seven hundred years after the emergence of Christianity in the Arabian Peninsula, the formation of such a world religion as Islam began. This religion is monotheistic. It spread through the Arab Caliphate and in India. This religion retains its influence in many countries of the world today. Christianity (more than 2 billion believers), Islam (about 2 billion believers) and Buddhism (about one billion believers) have a particularly great influence on the worldview of mankind. Influential in terms of the number of believers is Hinduism.

In addition to the religious component, the worldview of the population of many states contains secular components. Whatever differences accompany the worldview of people on the planet there are common components in its structure. They are represented by values, traditions, ideals, needs, ideas. And also - interests, norms, mentality, identity, archetypes. Values are the subject of study of axiology. Values reflect in the worldview the significance of someone or something for people. Since different spheres of life and the people themselves are significant for people, they distinguish material, artistic and spiritual values, as well as a value attitude towards friends, loved ones, parents, native places and the country, the natural and social environment.

The manifestations of the value attitude are value perception and value representation. From the value attitude follows the assessment of people and the

products of their creativity and activities. Professional assessment is called expertise. It is used when receiving objects, identifying original works of art.

Values that are passed down from generation to generation are called traditions. At the initial stages of human history, the status of values was not questioned, so civilizations on the planet were traditional. In industrial civilizations, the status of traditions is not so stable. There are supporters of the traditional way of life, faith, holidays, family. These are conservatives and neoconservatives.

But there are those who oppose tradition. They are called nihilists and marginal. Nihilists are belligerent and destroy traditional values. Nihilism has become widespread in the Western world, undermining the values of the traditional family and marriage.

Ideals play an important role in the worldview of people. These are standards that reflect ideas about the state, the family, the beautiful and the sublime, the economy, happiness, fashion (the ideal of high fashion). In relation to engineering activities, the ideal is a perpetual motion machine. Individuals may be regarded by others as ideals, as role models in their personal lives.

At the level of individual consciousness there is an I-ideal. Ideals can be so disproportionate to the capabilities of the individual that this disproportion can lead the person to internal crises. Folk wisdom in this case says that a bird in the hands is better than an eagle in the sky.

Needs in the worldview reflect the ratio of primary and secondary intentions (motives) of the individual. Primary needs are formed by the physiological characteristics of the human body (eat, drink, dress, have their own family). Secondary needs are updated when the primary needs are satisfied. These are the needs of self-actualization in communication, professional activity. One of the models of human needs was developed by A. Maslow. It is associated with the concept of the pyramid of needs.

Ideas are born in the worldview of people under the influence of values, traditions, ideals and needs. They have a creative (heuristic), political and economic specialization. The idea contains a strategy and action plan to achieve specific goals and includes a description of how to achieve these goals. In political science, there is such a section as “the ideology of the Belarusian statehood”. This section reveals the constructive role of the state ideology in various spheres of life of the Belarusian society.

Interests reflect the direction of the individual and social outlook on specific areas of society. In this context, economic and political interests are distinguished. Part of the interests belongs to the category of creative hobbies and hobbies with which they fill their free time.

Norms in the worldview perform the regulatory function of self-organization and self-control of the individual. If an individual wants to use all the possibilities of a social space, then he must comply with the legal and moral traditions characteristic of this space, as well as technical norms. Otherwise, he will limit his possibilities himself. So, violation of the rules of the road can deprive you of the right to drive. By illegal activity, an individual will limit his personal freedom. Norms play an important role in the professional activities of civil and industrial engineers, as well as economists. This is a whole area of metrology associated with standardization and certification, as well as diagnostics of technical systems and devices.

In the field of management (management), quality management systems (QMS) are actively used. The term "mentality" in the content of the worldview denotes the features of the national psychology and thinking of the nation (territorial community of people within the state). The key features of the mentality of the Belarusian nation include tolerance, peacefulness and diligence love for the native nature. Identity reflects the degree of stability of the worldview of the individual and society to possible changes formed by external factors of infor-

mation impact, migration and military threat. By the criterion of military threat Belarusians have been tested by history for many centuries.

At the same time, they retain their national identity and have developed ways to counter military threats. One of these methods was the mass partisan and underground movement during the Great Patriotic War. This partisan and underground movement was directed against the German invaders, who carried out the genocide of the Belarusian people.

Archetypes constitute the cumulative resource of traditions. This resource is stored in the worldview of people and manifests itself in special forms of dialogue, temperament, and character. Archetypes became the subject of study by K.G. Cabin boy. In the structure of the worldview of people, the levels of attitude, worldview and world development are distinguished. The worldview of people is characterized by pragmatism. This means that people transform information and knowledge into actions that contribute to the realization of their ideas about life in a particular community.

In the structure of the worldview, an important role is played by the features of the psychological make-up (character, temperament, emotions, feelings, memory, mentality), as well as ideological components in the form of the ideology of the Belarusian statehood. This means that people think in terms of national interests, which are implemented by their nation-state.

Among these national interests are ensuring sovereignty, favorable conditions for national producers, and good neighborly relations with states. For the population of the Republic of Belarus, this is a priority, since the country was the battlefield of two world wars only in the 20th century.

The armies of different European states invaded the territory of Belarus. Moreover, the German invaders in 1941-1944 carried out the genocide of the Belarusian people. German invaders burned thousands of Belarusian villages. Many civilians died in concentration camps. In the context of global turbulence in the first half of the 21st century, the Republic of Belarus, through the symbol-

ism of 2023, as the Year of Peace and Creation, calls on humanity to change the practices of modern geopolitics towards dialogue and peaceful negotiations.

In terms of content, the worldview of individuals cannot be mechanically summed up, since each individual is formed according to a separate social program, in which factors of family, school, temperament, character, religion, secular lifestyle and historical memory play an important role. It is important to take into account age and gender characteristics, as well as the impact of social networks on modern digital generations. Traditionally, mankind has been socialized by the cultures of the East and West. Therefore, it is important to consider the features of these philosophical cultures.

Philosophy of man

The section that studies human problems is called "philosophical anthropology". Historically, it took shape in the philosophical traditions of India, China and the Mediterranean. In Indian philosophy, man is the main subject of study. The main goal of philosophy is seen in suggesting to a person ways to maximize the use of the body's resources (yoga). Also, a person is offered ways of spiritual life in harmony with nature (Jainism) and through Nirvana (the eightfold path) – Buddhism.

In Chinese philosophy, the spiritual balance of an individual is associated with the observance of cultural tradition (Confucianism), non-action (Taoism) and strict laws (Legalism). An important role is given to the identity of the male and female principles (yin and yang). The philosophical anthropology of Buddhism acquired new cultural forms in China. Through China, it spread to Korea and Japan. In ancient philosophy, Protagoras was one of the first to focus on man. The turn to the problems of man is also associated with Socrates.

Christian anthropology proceeds from the principle of anthropocentrism. According to this principle, God completed the creation of the world with man. Secular anthropocentrism is called humanism. It was formed during the Renais-

sance. It manifested itself in the visual arts and poetry, as well as in the social utopias of T. Campanella and T. Mora. Applied orientation to humanism was given by natural law.

I. Kant in the 18th century formulated a number of questions about man. He answered them in such writings as the Critique of Pure Reason, the Critique of Practical Reason, and the Critique of the Aesthetic Judgment. L. Feuerbach adhered to the positions of philosophical anthropologism. Under his influence were representatives of Marxism (K. Marx, F. Engels). They consider a person as the totality of all social relations, as a person.

Based on the theory of Charles Darwin, Marxism developed the doctrine of the origin of man in an evolutionary way from higher primates. The decisive factor in this evolution was tool activity and social forms of organization of people's life. This hypothesis is consistent with the data of anthropology and archeology. Most of all, F. Engels paid attention to the issues of human evolution, who wrote the essay "The Role of Labor in the Process of Transforming Apes into Humans".

Representatives of the philosophy of life (F. Nietzsche) consider a person on the basis of the teachings of Ch. Darwin. Representatives of existentialism (S. Kierkegaard, A. Camus, J. P. Sartre) are focused on the existence of the individual in borderline situations of choice between life and death. Existentialism actually formed the basis of Russian literature of the golden age. These are the works of F. Dostoevsky, N. Ostrovsky, L. Tolstoy. Pragmatism has concentrated on the pragmatic aspects of the life of a modern person (C. Pierce). Personalism (N. Berdyaev) connected the essence of man with his special spiritual status. This status contains guarantees of a sustainable life, but subject to the observance of Christian commandments.

Psychoanalysis (Z. Freud, C. G. Jung) concentrated on a person in aspects of his psyche and consciousness. Philosophical anthropology (M. Scheler) generalized the classical period of philosophical reflection on the theme of man.

Feminism and gender issues play an active role in modern philosophical anthropology. Another aspect of research is related to the theory of artificial intelligence and transhumanism. The prospects of human evolution in conjunction with technical devices are discussed.

Applied human philosophy is connected with medical ethics, which proceeds from the principle of medical practice “Do no harm”. In this context, the legal aspects of euthanasia (the right to voluntary death due to an incurable disease) are being actively discussed. The verdict on the incurability of the patient is made by the attending physician. But there must be a legal basis for euthanasia. Otherwise, a doctor who has given a lethal injection to a patient falls under an article that interprets his actions as premeditated murder.

The theme of natural human death is the subject of thanatology. This topic is associated with biomedical research. The legal component also plays an important role here, since police officers (police) must establish the causes of death in each specific case. For this purpose, anatomical diagnostics can be carried out by means of an autopsy in the morgue and the issuance of a conclusion on the causes of death. Similar practices are used in the investigation of the causes of death in industrial accidents, traffic accidents, air crashes, shipwrecks, as well as in the process of investigating murders and terrorist crimes.

In the philosophical tradition of industrial civilizations, the theme of man retains a special semantics, since these civilizations are local in space and time, despite the appeal of philosophers to ancient and oriental heritage. When considering the phenomenon of man in these civilizations, in addition to religious determinism, Darwin's evolutionary theory, the values of humanism and human rights, technological determinism are taken into account.

Consciousness and artificial intelligence

Artificial intelligence is an engineering development that aims to create an analogue of human consciousness in the format of thinking (intelligence). Why

was this format chosen, because it is formalized through logic into the language of mathematical logic and inference rules, as well as into logical operations, which became the basis for information technology and computer science (information theory). The development of computer programs with signs of artificial intelligence is based on the principle of feedback and dialogue between a computer program and social network clients.

The digital language of a computer program is associated with the syntax, semantics and pragmatics of natural languages due to the achievements of semiotics (the science of sign systems). One of the hallmarks of artificial intelligence is feedback. It shows how a particular computer program adequately conducts a dialogue in the form of a question and answer and whether it is capable of independent learning.

Computer programs with the functions of weak and strong artificial intelligence are integrated into technical devices and technical complexes. It can be a machine with numerical software. It can be robots, autonomous aircraft, driverless taxis. As part of a systematic approach, the strategy of the Internet of things and such areas as big data and machine learning are being implemented.

In this context, automated systems for collecting, processing, storing data and making decisions have been developed and implemented in the energy and industry. Man is present in these systems as an operator. Features of human-machine interaction in professional conditions are studied by ergonomics and engineering psychology. Centers for data processing and control of technical parameters of systems, as well as timely payment by customers for services (single centers for calculating and controlling payments for utilities, electricity, water) have been created. For this purpose, digital peripherals of sensors and counters are used.

In digital logistics, marketing and management, voice assistants, consultants, virtual influencers are used to carry out a dialogue with current and poten-

tial customers, prepare decision-making through data and information processing, and implement advertising strategies in the field of trade.

For these purposes, neural networks, deep machine learning, pattern recognition, expert systems are used. The trend has been the convergence of classical and digital devices and technologies. This can be seen in the technological evolution of mobile phones. They have become multifunctional devices for communication, banking, photography, television, libraries, show industry, quick access to transport, logistics and tourism services, search engines.

There is a special direction in the use of artificial intelligence in systems engineering. It is associated with the strategies of the fourth industrial revolution called "Industry 4.0", "Industry 5.0" and "smart industry". Digital transformations are taking place in logistics and marketing, as well as in corporate structures. Their result was the economy of digital platforms, digital ecosystems and metaverses.

Another direction in the development of artificial intelligence technologies has become the development of invasive and non-invasive neural interfaces. These devices play an important role in restoring the coordination of patients after a stroke, and they are also important for people whose brains are affected by Alzheimer's disease. Neural interfaces are used by managers to quickly respond to business information.

Whatever characteristics are used under the term "artificial intelligence" in the strict sense of the word, while we are talking about computer programs that can imitate individual signs of human consciousness, mainly in the aspect of logical thinking. The real risks for humans will come from artificial intelligence when developers reach the technological singularity. This is the point of no return to the old models of human-machine interaction.

At present, the developers of artificial intelligence are focused on modernizing its digital periphery not only in the form of sensors, but also in the form of computer vision, as well as virtual and augmented reality. These technologies

are especially in demand in the game industry and in the space of the metaverses. Artificial intelligence technology involves hardware in the form of special equipment that creates conditions for communication, an operating system and a software system. These systems make the computer a functional device integrated with server center hardware and digital ecosystems.

Public and individual consciousness

Public consciousness functions in the form of a historically emerging semantics, which reflects the peculiarities of people's perception of the surrounding reality, the essence of being, the search for forms of dialogue with the fundamental foundations of being through mythology, astrology, and religion. People also historically came to certain normative institutions of social consciousness, represented by taboo, religion, morality, law, technical norms. Together, all these components of the semantics of social consciousness function as a worldview. In its structure, logical and psychological components are distinguished. The local features of these components are reflected in the concepts of mentality and identity.

The bearer of individual consciousness is a separate person. This consciousness is formed in the process of socialization under the influence of the communicative environment of family institutions, education, social networks and historical memory. In the process of socialization, individual consciousness is integrated into the space of a specific social consciousness and falls under the influence of its institutions, but only if it is sane. Carriers of individual consciousness who do not meet the sanity criteria are treated in special medical centers. But even a sane state does not guarantee complete identity of individual and social consciousness. An example is deviant behavior. It may contradict the deeds and actions of the norms of morality and law. Since the rules of law imply a legal sanction, the acts of deviant behavior receive a legal assessment in ac-

cordance with national legislation. Actions such as terrorism and drug trafficking are subject not only to national legislation, but also to international law.

Important for the individual consciousness is the statement that says that ignorance of the laws does not exempt from responsibility. Violation of technical norms, as well as norms of scientific ethics and ethics of business relations, has a legal reference to the legislation relating to labor protection, intellectual property, the fulfillment of tax obligations, and the resolution of economic disputes. From a legal point of view, the relations of public and individual consciousness are regulated in the Constitution of the state through the concept of the rights and obligations of individual consciousness, as well as through the obligation of the national legal system to monitor their observance.

An important role in the structure of public consciousness is played by the spiritual component of the collective life of people, which exists in the form of tradition. Christian traditions play an important role in Belarusian society. Globalization and the migration of the population connected with it actualized the theme of preserving spiritual traditions.

In North America, the beginning of the spiritual tradition was laid by the Protestant and Catholic communities who arrived on the continent. As M. Weber showed, Protestants in their understanding of man were guided by the Bible and work ethics, which performed the normative function of shaping their way of life. The Protestant work ethic manifested itself in pragmatism. C. Pierce became the founder of this philosophy. It focuses on the conditions for success. These include benefit, belief in success, usefulness. From pragmatism it follows that the individual must be integrated into the activity. He is given recommendations on how to succeed and shape a lifestyle.

The Belarusian industrial model of public consciousness is focused on the efficient use of agricultural and industrial infrastructure based on strict adherence to technological discipline and building logistics. This orientation towards economic independence is based on the pragmatism of national interests.

Features of individual and social consciousness have become the subject of study of behavioral economics, which forms the basis for the development of marketing strategies.

Arguments in favor of digital ethics

The digital space of communication and professional activity has been technologically formed faster than the institutional environment of this space with the normative part corresponding to its characteristics. In this vacuum, various forms of digital evil have become actual. His categorical apparatus was formed. It contains such concepts as fake, phishing, deep fake and cybernetic bullying. Fake is a modification of deception. Deception has a technological form of implementation. It has a social and individual order. The fight against fake involves methods and measures that can protect a certain living space from the invasion of fakes that threaten its existence.

The modern media industry, whose representatives are fighting to develop principles to counter the production of fakes, is in a situation of paradox, a clash of positions. Fake news is a particular example of a larger problem of information verification quality. In addition, objectivity constantly coexists with the production of illusions. Specific tools for the production of meanings become a source of excessively high-quality content that people are not able to interpret as constructed. There is a system of precedents for underestimating the ability of digital algorithms to program, assemble and create reality. Mockumentary, as a way of creating an ironic, often mocking narrative towards an unsuspecting viewer, is an example of deliberate forgery. The best examples of mockumentary are considered a kind of terrorist act against the audience.

And how else is it worth evaluating films, television and radio programs, where any cultural norms, agreements and even heroes are viciously, surreptitiously and at the same time not always obviously ridiculed. Technologies do not just construct an illusion, but create pictures or any other objects that are

more real and naturalistic than the consumer can imagine. The problem of distinguishing between the real and the virtual remains relevant. The simplest tools for creating and editing digital images are being replaced by machine learning technologies, the results of which are changing the photography industry. Any photograph easily acquires a look more suitable for a conventional work of art.

Modern children and teenagers live in a mixed reality, combining different ethical systems that exist online and offline, using the capabilities of artificial intelligence, and they are aware of this. They not only consume content, but also create it they themselves form the rules of communication. For example, you cannot call strangers; you can't record voice messages if you can write. You cannot use someone else's content without a link to a photo with filters. It is necessary to put a mark on the use of the filter. Being in a digital environment is strongly associated with emotions. Children worry, fight for justice, proves their point of view. The Internet environment dictates a fairly strict policy of security, privacy and social support. At the same time, online mechanisms designed to control and predict human thinking and behavior, including the rules of ethics were not created by child psychologists. The digital world is practically not described by anyone. To harmonize it, new laws and rules are needed that will form the boundaries of what is permissible. The generation of digital children is at risk. If there is a lockdown in the network, they will be left alone. Without an understanding of real life lost in almost all areas: education, family, communication, friends or even leisure.

New norms are not only emerging, but are already being institutionalized. The peculiarity of digital ethics is that it must be woven into a new product, adapted for society and the younger generation. The emergence of bloggers, hackers and other representatives of the emerging industry dictates a set of ethical standards. The social sphere (family, education, military operations) is changing with digital reality and its new ethics. Large businesses are rapidly increasing the amount of data that users transfer in exchange for convenient ser-

vices, and often sign a personal data agreement automatically, allowing the owners of the service or application to use it at their discretion. Private companies are trying to personalize their digital products as much as possible, while they themselves are in a situation of legislative uncertainty.

Another side of the issue when discussing the ethics of digital technologies involves the transparency of decision-making by artificial intelligence systems, including their possible use in public services. When making erroneous decisions, the most vulnerable social groups (residents of remote settlements, people with low digital literacy, pensioners) are likely to suffer, for whom it will be technically difficult to challenge the decisions made by the robot.

Ethical issues in the field of artificial intelligence have moved into the field of technical regulation and standardization. Technical standards are being developed that will define the properties of the system that must make decisions. Such systems cannot be a black box and must be able to explain why a decision was made in a certain way. The ethics of such systems will depend on what imperatives will be invested in them by the developer.

People are concerned about omnipresence (the inability to hide from surveillance systems), the problem of identification (it is impossible to determine whether you are currently being observed or not), unpredictable behavior (lack of warning about video filming and other data collection systems in public spaces). For young people, the word "Internet" is not operational. She uses platform names. Generation Z is already in the virtual universe. NFT technologies, personalized avatars, 3D avatars, Web3 are available to him. Often, services and resources are abused by the fact that the user is on their site and tries to either impose some kind of service or product, or force them to spend more time on their services. These are dark patterns.

These are manipulative measures that are created using the design, interfaces, navigation of various applications in order for the user to make the necessary commercial action for the site, for the digital resource: how to buy, spend

more money, spend more time or get more data. The commercialization of influencers becomes a barrier because it reduces the level of trust in the influencers themselves. In the flow of information, it is difficult to isolate the information that is verified. It is important to come to an understanding that for every word in social networks, they are responsible, as they are responsible for words in physical life. But technology support is needed.

Developers are focused on neural network technologies, computer vision, to detect and anticipate, to predict that this or that content will potentially be malicious or toxic. It is important to create clear clear rules of operation, and these rules should be based on respect for the digital rights of users. Among them is the right of a citizen to freely seek information. The goal is a comfortable digital environment. Knowledge of the ethical dilemmas that arise in connection with digitalization, of the emerging rules of ethics for digital technologies, is especially important for public servants and managers.

To obtain a positive effect, decision makers must be aware of the development of technologies, understand what economic and social consequences their application will cause. Attention to the ethical side will help to make the decision more fair and thereby avoid conflicts in society between stakeholders. Public administration and interaction with citizens are being digitized.

The effectiveness of such interaction depends on whether ethical risks have been taken into account. This is useful for those responsible for the development of digital services, products and systems aimed at citizens as service recipients and consumers or as workers. Possible conflicts and risks associated with the ethical side of the use of technology can be prevented if attention is paid to this when designing a service or product. From the variety of digital technologies, digital data; artificial intelligence (AI); Internet of things (IoT) are of interest.

The main directions of the formation of digital ethics

Digital ethics can be defined as a science that generalizes, systematizes the principles and norms of human morality that operate in a digital society. Fundamental for the issues of digital ethics are the works of the professor of the Massachusetts Institute of Technology N. Wiener, who developed the methodology and strategy for the ethical use of automata and computing systems, put forward the key ethical principles and values of our time. The scientist predicted that after the Second World War there would come an automated age with huge potentials for evil and good, which would produce many new ethical problems.

Among them are computers, security, unemployment, responsibility, computers for the disabled, the synthesis of machines and the human body, ethical issues of robotization and artificial intelligence. An important direction in the formation of new ethical principles is the work of D. B. Parker and D. Gotterbarn, who formulated the foundations of computer ethics and developed a code of professional conduct for the Association for Computing Machinery (ACM). Scientists are the founders of computer security. These ethical principles are of a professional nature, restraining voluntarism in the field of information and communication technologies.

A special role in the formation of digital ethics belongs to the scientist of the Massachusetts Institute of Technology J. Weizenbaum, who stated that many of the problems in the development of computer technology are of an exclusively ethical nature. An acute issue is the issue of replacing a person in certain areas of activity with computer systems. This is not only a matter of technical capability, but also of ethical legitimacy.

A special direction in the development and formation of digital ethics was set by the works of H. Nissenbaum, devoted to the problems of copyright, copying, privacy, and anonymity on the network. The increase in the volume of information, the accumulation of artifacts raises the question of their preservation. L. Floridi, considering digital ethical relations, shows that any information ob-

ject has the right to remain in its status, has the right to flourish, entropy is unacceptable, it is ethical to protect this right.

According to M. McLuhan, rethinking ethical principles and describing the vectors for the development of future morality is especially important for the development of digital ethics. The speed of technological development is so high that in a digital society it is possible to quickly adopt a new moral principle both at the level of an individual and at the level of the whole community, and a person no longer experiences moral conflicts. The morality of modern man is situational and eclectic.

R. Capurro sees the solution of ethical dilemmas in the interdisciplinary and multicultural understanding of digital ethics. He elevates the digital contradictions of our time to a number of the most important ethical problems that require attention. Actual directions in the formation and development of digital ethics are the solution of moral dilemmas that arise in connection with the development and application of information technologies, consideration of alternatives for the formation of ethics of personal and social life in a digital society, overcoming problems and finding sustainable solutions necessary for adequate responses to the technological challenges of the digital age.

Real world defenses are down, society is radicalizing into echo chambers, and the tech industry is suffering from a loss of confidence. The negative effects of the global platform economy cannot be hidden: Anonymization of labor, job losses due to automation, prequalification due to the exploitation of working conditions and the formation of an oligopoly create new challenges for politics and business. Fears and fears are circulating about a transhumanist future that wants to make human labor and the individual in general superfluous and create a feudalism 2.0 in which moneyed elites undermine the democratic constitutional state. Internet consumers are being disenfranchised as private experiences are defined by tech companies as freely available material and turned into products. Tim Berners-Lee and Tristan Harris call for new rules for web technology.

The ethicist examines contemporary conventions about human action for their individual and social compatibility. There are many questions: How is digital enlightenment changing the understanding of privacy? How to ensure the autonomy, and not the exploitation of man? To what extent is the user willing to allow the transfer of privacy data?

There is a lack of value-based digital literacy in education and business, ethics for design business models, and mandatory codes for Big Data and AI. Lists of trend-setting values exist in the IT industry, academia, and at the political level. For example, the Institute of Electrical and Electronics Engineers (IEEE), Alphabet (Google), and the German Society for Informatics have codes that emphasize issues such as security, transparency, social obligations, respectful and competent development of technology, and general accountability. The EU Guidelines for Trusted Artificial Intelligence emphasize human oversight, technical soundness and legal compliance.

The ten commandments of the German Institute for Digital Ethics emphasize the self-protection of the individual, who must reveal himself as little as possible in the screening spaces of data-hungry networks and criticize the temptations of technology. This requires digital maturity. It is a lifelong process of self-discovery and self-control in order to develop in the digital space with self-determination and knowledge of one's own abilities, but also with limitations. It is the will to master digital competencies in practice, and the ability to adopt not one's own views on digital communication. In addition to the technical skills required to use hardware and software with confidence, social, psychological and cultural skills are also important. Broad general knowledge, a high degree of abstraction in thinking and a holistic approach are needed. This meta-learning, in turn, develops personal identity and enables more informed judgment.

Digital technologies have become systemically relevant and are used at the state level, in critical security infrastructure, and in almost every aspect of everyday life. The Internet and the real world are no longer separate parallel

worlds with the Internet of Things. But the algorithms that decide good and evil are in many cases unknown to users. There is a problem with software being prone to bugs, which leads to security flaws, diagnostic errors, and biases such as racial profiling. Problematic is the inadequate documentation of technological development processes. This means that even development teams don't understand their systems 100%.

Digital maturity means understanding that there is no answer to all questions. We must learn to live with growing uncertainty in an increasingly complex world. The realization that each person is involved in a potentially manipulative system and sovereign exercise of one's own agency need not be mutually exclusive. The more knowledge a person has about the psychological insights of algorithmic logic, the better he can be outwitted. Empowerment gives users back a sense of responsibility for making sure everything happens within their own decision-making space.

Good digitization should focus on the duty to create value in a distanced and humane manner based on proportionality. In relation to the Internet and Big Data, this means that only through the greatest possible autonomy (data sovereignty) and the proper use of human resources (data savings) can clients restore trust in the long term that digitalization contributes to sustainable well-being.

Selling a product does not require psychological manipulation. Creating sustainable value, rather than generating rapid growth and short-term profits, not only makes people happy, but also ensures the long-term survival of the company. To achieve true integrity, autonomy must be modeled, not forced by command and control. Progress should keep people in their positive self-awareness, not confuse them. For developers of technological systems, this means that they must offer increased performance subject to controlled entropy minimization.

Compliance focuses not only on legal aspects, but also on the social responsibility of their own products or services. Ethical Design adheres to legal requirements to protect the user, such as Privacy by Design of the GDPR. It also

focuses on promoting the deeper social needs of the customer (sharing, information, entertainment, education, recreation, etc.) rather than focusing solely on marketing specifications that drive sales.

Clarity, simplicity and intuitive controls make it easy to navigate web interfaces. But often the focus on user impulses to action (call to action) is confused with guided action and digital nudge. Excessive feedback in the form of rewards creates false incentives. Addictive design encourages repeated consumption, which can lead to attention gaps, information overload, and addiction. It makes sense to promote the balance and focus of the consumer through intrinsic motivation in order to preserve his freedom of choice.

A calm, safe environment encourages mindfulness and creates emotional security so that the user can build trust. Rhythmic processes, including pauses and an authentic learning environment, contribute to the reduction of disruption, which favors concentration and individual mobilization. The user is not distracted from their actual motivation and may experience long-term satisfaction instead of satisfying short-term affects. This also applies to group dynamics. Instead of creating pressure for conformity through status-oriented self-representation, a sense of shared and harmonious community should be conveyed through clearly structured and well-managed communication spaces.

An important factor is the adaptation of web interfaces, applications or online stores to regional and cultural characteristics. In this case, the emphasis is on a stronger orientation of design and product development towards the diversity of communities, rather than an artificial homogenization that does not reflect the real world. Framing one's own culture is the deciding factor in whether a customer buys a product.

The variety of designs helps to avoid customer misunderstandings due to translation problems and achieve a stronger emotional attachment to the product. Intercultural learning within the organization also contributes to product development and understanding of foreign markets.

Ethics of digital technologies in education

The introduction of digital technologies not only transforms the process itself, but also forms new requirements for the results of education, for the competencies and skills necessary for life in a new, digital world. These changes come with specific ethical concerns. It is important that the ethical basis of digital solutions be understood not only by designers, but also by the citizens who will use these solutions. It is desirable to teach the basics of ethics of digital technologies already at school.

Then the student will understand both the risks that are possible in the digital environment and their rights in relation to technologies (for example, the rights to privacy and protection of personal data), as well as the ethical standards of various professions. The most significant are personalization and adaptive approach, remote technologies, predictive analytics.

Distance technologies increase the accessibility of education. For people with visual impairments, people living in remote areas, citizens who want to get an education in another country, distance technologies open up access to learning at a qualitatively new level. In terms of demand, distance education is inferior to full-time education. Until the problem of motivation is solved: an adult who is interested in obtaining the necessary competencies is likely to complete the program completely, but school-age children are less likely to do so.

The development of distance learning for schoolchildren and preschoolers exacerbates the risk of their dependence on gadgets. Early and prolonged use of mobile phones leads to cognitive impairment: increased irritability, reduced long-term memory, mental performance and attention, which can affect the mental and physical development of the child. An underprivileged person who does not have the money to pay for an in-person lecture by a teacher will be forced to watch online courses designed for the widest possible range of listeners, and will no longer be able to count on a high level of education.

Personalization and an adaptive approach when using digital technologies make it possible to analyze the psychological characteristics of the listener and offer educational material in the format that best suits him. This not only improves the quality of education many times over, but also reduces the risk of discrimination. The AI-based educational system offers the student tasks that are appropriate for their level, ensure smooth progress and maintain their self-confidence. So far, blended learning, a combination of offline and online elements, dominates. The student independently works through the material before the lesson: reads, watches videos, passes tests. He comes to the lesson in order for the teacher to explain to him what remained incomprehensible.

The teacher acts as a unique carrier of knowledge, which provides an individual approach to everyone. An ethical issue is the collection and processing of student data in order to create an individualized learning profile. The problem is not unique to the education sector, but occurs in all industries where digital technologies are used. In international law and practice, the data of children and students have traditionally been subject to special protection, as they are seen as a vulnerable group.

It is with such data that educational institutions usually work. In order to offer the most effective solutions for adapting education and creating a personalized course of study, you need to collect data about students and use it in a certain way. So, in some schools in China, cameras located above the blackboard monitor the class. The computer distinguishes seven different emotional expressions on the face, for example, happy, sad, disappointed, scared. If the student's facial expression has changed, the system can recognize this as a weakening of attention and immediately sends a message to the teacher. The degree of concentration of the student affects his rating.

Completeness of information about a schoolboy or student is achieved, which allows to provide the content and format of training that is most suitable for him. At the same time, the accumulation of sensitive data about the student

in the educational institution is carried out. This refers to cognitive abilities, attitudes towards learning, social connections, the results of the analysis of his progress, up to forecasts about his possible career. The student and/or their legal guardians have the right not to share this data with the school or institution, but in this case, personalized learning is not possible. In any case, the ability to opt out of data collection and awareness of all aspects of data collection, including the consequences of such an refusal, is important.

Predictive analytics in education is associated both with the creation of personalized educational trajectories and with recommendations about which specialty and career is more suitable for which person. Long-term forecasts, like any recommendations for choosing a profession, are associated with certain ethical problems. On the one hand, difficulties arise due to the fact that a lot of time passes between training and testing its effectiveness. For example, a junior schoolchild can be identified as having or lacking some abilities and choosing an appropriate educational trajectory for him. Over the years, these abilities may develop or fade, and the requirements for the profession will change, but the child has already received a narrower and more specialized education than he could in a different situation.

A situation may arise when algorithms and digital technologies push the user to certain behavior, limiting his free will. With regard to learning, this is aggravated by the fact that the forecast can affect the self-esteem and motivation of a schoolchild or student, worsen the development of volitional qualities: the student does not decide for himself what he wants and what he will study, but is forced to follow the instructions of the analytical system. However, student digital footprint assessment services are being created.

This is a data service about his academic performance, behavior and participation in public life. The AI system will offer recommendations to the university management: to expel a student with poor academic performance or to send them to additional courses. The data can get to the employer, who uses it

when searching for an employee for a vacancy. Some owners of educational courses with mass interactive participation, using e-learning technologies and open access through the Internet, are ready to sell information about persons enrolled in the course.

Predictive analytics should not be labeled. If a person did not study well at school, this does not mean that he does not have the right to get a higher education or a good job. Over time, a person can change, and the digital trail that has been stretching since childhood is not an obstacle. By testing a person's abilities, the education system should help improve them, balance the balance, give even more opportunities, and not limit development.

Thus, the digital economy poses complex ethical problems for education related to the use of digital technologies in the learning process, as well as their impact on the development of abilities and a person's career. Most of these problems do not yet have an unambiguous solution.

Ethics of artificial intelligence

There is a formation of a set of ethical rules for human interaction with artificial intelligence. The ethics of AI are considered in two main aspects: the ethical principles underlying the decisions made by AI, and the ethical behavior of AI in a situation that directly affects people. The second aspect fundamentally distinguishes the ethics of AI from the ethics of other digital technologies. Artificial intelligence methods penetrate into related fields of knowledge, contributing to technological innovation.

The widespread use of artificial intelligence takes place in education, health and medicine, social management, environmental protection, urban and spatial planning, judicial and law enforcement agencies. Artificial intelligence technologies can accurately identify, predict and provide early warning of critical situations for infrastructure and social welfare facilities; timely predict group behavior and psychological changes in the mood of people, including large

masses and certain groups of the population, thereby effectively maintaining social stability.

The uncertainty of many issues in the development of artificial intelligence creates a number of problems. One of the problematic areas is ethics in the digital space, cybernetic ethics, digital ethics, especially in light of the increasing use of artificial intelligence technologies. Cyber ethics is a philosophical field of ethics related to computers, covering user behavior, what computers are programmed to do and how it affects individuals and society as a whole. The sphere of cybernetic ethics includes the correctness of broadcasting personal data of people on the Internet, the protection of users from knowingly false information, the availability of information resources, intellectual digital rights, the possession of digital data and their protection.

Due to the proliferation of digital technologies and the specific ethical challenges they present, organizations increasingly need to consider ethical obligations, social responsibility and organizational values as guidelines for what digital opportunities to use and how to implement them. Experts expressed the view that digital services should be fair and equitable, promote physical and mental health, encourage inclusion and be oriented towards socially useful use.

Digital technologies must build stakeholder confidence. Organizations view digital trust as a brand value and market factor. Companies are creating a culture of digital ethics and accountability by educating employees on practices such as integrating fairness, ethics and safety into the life cycle of a product or service, and encouraging desired behaviors through supportive performance management systems.

Digital ethics as a field of study studies how technology shapes and will shape the political, social and moral existence of people. Digital ethics or information ethics in a broader sense deals with the impact of digital information and communication technologies (ICTs) on society and the environment in general.

The ethics of artificial intelligence contains a set of values, principles, and practices that use widely accepted ethical standards to guide moral behavior in the development and deployment of artificial intelligence technologies. Robot ethics, also known as robot ethics or machine ethics, is about what rules should be applied to ensure that robots behave ethically, as well as how to design ethical robots. Robotics deals with issues and moral dilemmas, such as whether robots will pose a threat to humans in the long run. Roboticists must ensure that autonomous systems can exhibit ethically acceptable behavior in situations where robots, AI systems, and other autonomous systems such as self-driving cars interact with humans.

Digital algorithms have become the underlying social infrastructure that shapes environments and experiences at both the individual and group levels. As data volumes continue to grow and computational methods continue to improve, algorithms are becoming more valuable tools for collecting and analyzing data to extract information. The potential of digital algorithms to improve individual and societal well-being comes with significant ethical risks because the algorithms are not ethically neutral. A major socio-technological phenomenon has been the rise of digital platforms that support flexible working.

The use of complex artificial intelligence algorithms is possible in a wide range of areas: agriculture and agro-industrial complex, healthcare, robotics, marketing and logistics, and business intelligence. Of paramount importance is the application of the principles of AI ethics in the development and implementation of algorithmic or intelligent systems and artificial intelligence projects in the public sector, city and regional management (smart city, smart region). The ethics of artificial intelligence must guarantee safety and ultimate responsibility to citizens and society.

Digital ethics prescribes how two people should behave when communicating online, how two corporations should conduct online commerce responsibly, and how companies should treat their users. Consider the digital ethics of

the individual and the digital ethics of the corporation. Personal digital ethics encompasses how individual users respect each other's right to self-determination on the Internet. Users' primary responsibility is to act in a manner that preserves other users' choices regarding their own privacy and security.

The corporate digital platform cultivates practices for collecting sensitive information about users. This fee is often necessary for platforms to provide their product experience, but there is no common expectation of what can and should be done with this information. Companies are generally of the opinion that if their user agreement, however secret, allows the sale of user data, no there is nothing wrong with selling any data to any partner for any reason. When privacy advocates dispute this, companies usually counter that providing a service for free must generate revenue in some way, and that users should know better than to expect something for nothing.

The problem is further complicated by the fact that the sale of user data by private platforms allows the government to circumvent legal restrictions on the information it can collect about citizens. In many cases, government agencies can get the same information they could get with a search warrant, but with a legal order that imposes far fewer judicial restrictions. Government agencies in most jurisdictions are not prohibited from buying data from digital platforms, as other private companies are.

Corporate digital ethics has its own dialogue on how to achieve fairer outcomes. Data policies should be clearly marked, not hidden in terms of service. The principle is gaining momentum, but has not yet been widely adopted due to the lack of laws to enforce it. The question is whether premium options, where services promise to accept payment, should be more common in order to completely opt out of selling that user's data. Few online platforms offer premium tiers, and those that do rarely guarantee it as a complete alternative to selling data. When communicating with other people through an online service, it's important to be mindful of how choices affect other people. The situation will be-

come more complicated when robots become participants in communication. A. Azimov formulated laws for this case.

A robot cannot harm a person or, by its inaction, allow harm to a person. A robot must obey all orders given by a person, except in cases where these orders are contrary to the first law. A robot must take care of its safety to the extent that it does not contradict the first or second law. These laws are addressed to robot designers. The laws of robotics do not help AI solve dilemmas. These are situations where all choices are negative. And this is one of the most subtle places in robotics, because it is almost impossible to predict how a robot with artificial intelligence will behave.

The commercial structure cannot allow the robot to function in dilemma mode. This is especially true in the presence of the practice of giving the robot the status of an individual. In 2017, the robot Sophia received honorary citizenship of Saudi Arabia.

Digital etiquette

Compliance with the rules of digital etiquette is difficult. It lies in the lack of codification of digital moral norms. They depend on the opinion of the majority and become collective rules on how to act and communicate. Digital etiquette involves the rules of communication in the digital space, communication without prejudice to yourself and other people. There is a classical structure of communication. The goal answers the question why it is necessary to convey information to the interlocutor and what it gives to both sides of the conversation.

The intent of the message matters. The choice of the form of conveying thoughts to the interlocutor also plays an important role. It also takes into account how the interlocutor might react. The answer is difficult to predict, but you need to think in advance which phrases can be perceived ambiguously, and decide how to reduce the risk of misunderstanding.

Prepare for video conference calls. Regulation is taken into account. It will allow you to build a constructive conversation. Checking the technical settings and communication will help to avoid failures and breakdowns in the conversation, which will subsequently have to be rescheduled due to communication problems. It is important to make sure that the microphone and camera are working properly.

You should think about charging in advance so that the conversation does not suddenly end. You also need to decide in advance on the rules. The interlocutor must be warned about the recording of the conversation and immediately explain for what purposes the recording will be used. If someone is against it, it is worth agreeing with him on a different communication option. Punctuality is important. It is also important to choose a meeting moderator.

In the home-office, you need to choose a quiet place with a neutral background so that nothing distracts from the conversation. In a conversation, you need to ask questions and hear the answers. Asking the right questions will help structure the conversation, and the ability to hear allows you to capture the essence. It is important to convey the essence first, then the details, also to remain calm. The microphone is only turned on when speaking. In other cases, external sounds can interfere with the speaking person. To establish contact with the interlocutor, it is better to look into the camera: it will be clearer that you are not distracted and are referring to him.

Follow the rules and try not to delay others. If you understand that you need a little more than the allotted time, apologize and warn about it, or offer an alternative option to send some of the materials by mail.

People didn't flood work chats, send videos, memes, or stickers. By the end of the self-isolation regime, this principle ceased to work. Now it is recommended to send jokes and emojis directly to the chat, because a positive attitude with a lack of communication will not hurt anyone. The same, for example, with the Zoom platform. During a zoom conference, people experience a lot of stress.

First, because they see themselves on the screen. Secondly, during video communication, a person constantly thinks about how he looks. Thirdly, there is a delay in video calls and sometimes it seems that people are not listening if the reaction from them does not come immediately.

In different communities, social groups, digital etiquette is arranged differently. Schoolchildren, for example, send each other audio messages, stickers. In a business environment in Japan, people send huge e-mails because for the first half of the e-mail they apologize for disturbing the other person and ask for some time. Minimize the use of your phone or tablet in person. You can learn this from people who are in sales. The person with whom the contact is now taking place is more important than who can call or write at this moment.

Learn the rules for setting a secure password, set up two-factor authentication. Do not cause inconvenience to others (sound, vibration, light). According to the norms of business etiquette, it is believed that the phone call should be neutral. It's best to turn off your phone at work. Do not create inconvenience for others, minimize the use of gadgets during personal communication with a person. E-mail should not contain nicknames, diminutive names, obscene and offensive words. It is undesirable to add the year of birth to the mail address. Each letter must contain a subject. Read the letter before sending. In digital etiquette, people are most annoyed by errors in messages and letters.

Agree on when you can write in the evening hours. If there is no specific agreement, then do not write before 9:00 and after 22:00. Minimize uninformative messages. Send emoticons, gifs and stickers only if you are sure that the interlocutors understand them in the same way. Send voice messages only by agreement with the interlocutor. Enter rules for group communication. It is important that the administrator monitors the order in the chat. Since it is impossible to hide information, do not publish materials (photos, pictures, texts) that will compromise you. Any information can be used against you.

Separate private and public. Re-read posts through the eyes of others. This will help filter content before posting it to the public. First impressions are just as important as digital footprints. Fact-checking requires you to check what you post. The culture of virtual communication implies a plastic soft skill necessary for a successful career.

In the office, you can always see which of your colleagues is busy and who you can contact with a question. From a distance, this is completely incomprehensible. So don't text or tag the person in group chats until you check the status and calendar. If a colleague has an important meeting, day off or vacation, it is better not to disturb him.

Do not send voice messages or use stickers if this is an unusual communication format for you and a particular interlocutor.

Follow the evolution of the language. A period at the end of a sentence can now be perceived as rudeness or emotional coldness, and an ellipsis as irony. A parenthesis usually means benevolence, but when there are many of them, the text takes on a passive-aggressive tone.

Digital etiquette, also known as online etiquette, is defined in the Merriam-Webster Dictionary as "Rules about the correct and polite way to communicate with other people when using the Internet." Many principles of digital etiquette are the same as everyday etiquette, Distance, mediation of communication; freedom, lack of restrictions; anonymity makes netiquette unique.

For the first time, the rules of behavior on the Web were formulated by Virginia Shea in the book *Netiquet*. The book was published in 1994 in San Francisco and contains 10 commandments on how to behave in cyberspace. Remember that you are talking to a person, not a computer, and you can injure him. Adhere to the same rules and standards of behavior that you adhere to in real life. Keep in mind where you are in cyberspace: Netiquette varies from place to place.

Respect other people's time and traffic: don't force anyone to waste it. Take care of how you look: write well about what you understand, and be polite. Share your experience and knowledge. Keep conflicts under control. Respect other people's privacy and do not read other people's correspondence. Do not abuse your power. Forgive people for mistakes: once you were a beginner too.

The rules are formulated compactly and are based, firstly, on the principle of the need to comply with the traditional rules of speech etiquette on the Web, and secondly, following the laws of cyberspace. Such as respect for other people's privacy, for private cybernetic cultures, assistance in access to information. Compliance with the rules of network etiquette is more advisory than mandatory and depends on the moral position of the user. Users on the Internet have ceased to be anonymous and have gained the ability to create their own virtual identity. This affected the behavior of users on the Web and ideas about politeness.

The level of netiquette proficiency is reflected in the digital footprint. It is a unique set of digital activities and communications that leave a trail of data on the Internet, computer, or other digital device. The digital footprint is created by an action on the device; especially on the Internet. Some of them are more personal, such as browsing history on a computer, including websites visited, e-mails or messages sent. These actions are considered more personal. They are part of the digital footprint. Other digital activities include social media interactions such as Facebook, Twitter, YouTube. These are blog posts or comments.

Digital etiquette direct communication on the network (e-mail, instant messengers); practices of user interaction with gadgets; self-presentation in the network (video communication, Internet conferences, personal and corporate self-presentation). The virtual space is a dynamic system, which dictates the need, on the one hand, to constantly update the private rules of speech web etiquette, and on the other hand, to develop up-to-date conditions for maintaining fundamental norms.

When communicating online, be polite, even if the answers of the interlocutor feel that he is not very kind. It is better to address a stranger with “you”, even if it is clear from the profile picture or date of birth that this is your age or a person who is younger than you.

Try to minimize and shorten the text of the letter. Each letter must contain a subject. This will help you find the email in your inbox in a week, month, or year. Be sure to indicate the last name so that the message does not look impersonal in the general flow of documents. In business correspondence, try to use emoji in moderation. Messages should not be full of emoticons. At the same time, it is acceptable to use them if your interlocutor is familiar to you and it is important to convey intonation in the text.

A person in the digital space for more convenient accounting and interaction is deprived of personality traits. First, it is about simplifying the biography, created according to a template that does not provide for bright individual differences. What follows is the requirement to match several predefined patterns.

The cultural environment suffers especially strongly, where the quality of performance has always depended on the personal data of the performer. The mechanical reproduction (or production) of a cultural product ceases to be art as a reflection of the height of the human spirit, an object of admiration for a skill that is inaccessible to an observer or listener. The limit of depersonalization is not defined.

Information about a person's personal life has always been of interest either to the public (in the form of a discussion of the lives of neighbors or material for writing tabloid novels, etc.), or to blackmailers who made money by threatening to reveal other people's secrets. In a digital society, personal life is in plain sight, and a person's personal data can fall into the hands of people guided by any goals, and in view of the prospects for the degradation of ethical principles, the carriers of these goals will hardly be guided by the ideas of helping their neighbor. And if the methods of storing valuables (from family heirlooms

to legal documents) were clear to those who use these methods, then in the digital environment people turned out to be defenseless. The modern problem of theft and the use of someone else's electronic signature is known,

The ethical system, no longer taken for granted, makes theft less and less condemned. The situation is aggravated by the centralization of processes. The information of not one person, but a large number of people falls into the hands of malefactors.

An increasing number of services provided involve the signing of an act of consent to the processing of personal data. On the one hand, this seems to be the right thing to do, as it defines the areas of responsibility for their storage, use and disposal. On the other hand, refusal to sign such consent leads to a refusal to provide the service. The ban on anonymity does not mean emphasizing the personal component in a person's participation in socio-economic relations. It gives only the possibility of additional influence on a person. At the same time, the nature of the transmitted personal information is determined not by its owner, but by the one who requests it.

Techno ethics

The field of technoethical research concerns the relationship of technology to the human mind. A virtual agent describes any type of technology that is designed to act as an agent, either on its own initiative or on behalf of another agent. An artificial agent may be trying to advance its own goals or the goals of another agent. Information and communication technoethics deals with the ethical issues and responsibilities that arise when working with information and communication technologies in the field of communication. It is associated with rational and ethical decision-making models. The area of interest is shaped by technology convergence: as technologies become interdependent and provide people with multiple ways to access the same information. They transform society and create new ethical dilemmas.

Technoethical research in education explores how technology influences the roles and values of education in society. This area addresses changes in student values and behaviors related to technology, including access to inappropriate materials in schools, online plagiarism using materials copied from the web, or purchasing work from online resources and giving it to a student.

Technoethics also explores the digital divide that exists between educational institutions in developed and developing countries, as well as between institutions with uneven funding within the same country. For example, some schools offer students access to online materials, while others do not. Professional technoethics focuses on the issue of the ethical responsibility of those who work with technology in a professional environment, including engineers, medical professionals. The ethical study of engineering involves ideas from philosophy and the social sciences.

Technoethical design refers to the process of developing technologies in an ethical manner. It reveals hidden or implicit technological connections and explores technologies. Systems theory suggests that complex ideas can be studied as systems with common constructs and properties that can be explained using systems methodology. The field of technoethics views technologies as self-producing systems that rely on external resources and sustain themselves through the creation of knowledge.

These systems, of which humans are a part, are constantly in motion as the relationship between technology, nature and society changes. Ethics attempts to reveal the knowledge, goals, inputs and outputs that make up technological systems. It allows designers to recognize the complexity of technology, incorporate facts and values into their designs, and contextualize technology in terms of what it makes possible and what makes it possible.

The introduction of technology in the workplace raises various ethical issues and requires further analysis of technology in organizations. As a result of

this growing trend, a subset of technoethics has emerged known as organizational technoethics.

The ethical aspect of the development and implementation of artificial intelligence technologies is extremely important for understanding the development of modern civilization and the place of man in it. The philosophical questions that arise in this regard are relevant to artificial intelligence as a research space. What is intelligence, how does artificial intelligence differ from natural intelligence? How can artificial intelligence affect human consciousness and what is consciousness? How to preserve human dignity and human rights in a rapidly changing environment of changing one innovation to another? Can a machine think and can it be a moral agent? In addition to epistemological, anthropological, ontological questions, ethical questions arise, forcing us to comprehend the boundaries of what is permissible and determine what is due.

Already, there are technologies that can be used for illegal actions. For example, deepfake is the substitution of the image in the video of one person with the image of another. New tools can carry new communication risks, pose a threat to human identity, the safety of personal data.

Cybernetic ethics

Cybernetic ethics focuses on the behavior of people using a computer. Even simple human-machine interactions, such as computational tasks, raise a number of questions. Is it possible to interfere with the work of other users if the network is open to everyone? Who should think about the possible negative consequences of programs - the developer or the customer? The solution could be a code for professionals and ordinary users whose work is related to the use of computer technology; protection of digital rights: copyright, the right to privacy and freedom of speech. Legal issues related to computer crimes should be the subject of consideration.

The Code of Computer Ethics was developed in 1979 with the participation of the Institute of Electrical and Electronics Engineers. How ethical is it to interfere in the user's personal space, and most importantly - who should answer this question? Corporations are too subjective, as they pursue marketing goals. Hopes are pinned on independent organizations that study questions of cybernetic ethics. These are the questions confronting cyberethicists. Should I post personal information about other people online, such as online statuses or current location? Should users be protected from misinformation? Who owns the digital data (music, movies, books, web pages) and what can users do with it? How accessible can online gambling and pornography be? Is Internet access a basic right for everyone?

Forming ethical principles in the digital world, the actor takes responsibility for his actions, and secondly, he takes into account the actions of third-party participants in the process. Another aspect of cybernetic ethics is related to the cyborg phenomenon. This is due to the breakthrough made by scientists in the field of creating neural interfaces. These are data exchange systems based on computer programs that make it possible to connect cybernetic limbs, artificial eyes and sense organs to the brain of humans and animals, which have no analogues in nature.

The symbiosis of man and machine has begun, as people perceive their smartphones with their technical capabilities and huge memory as an extension of themselves. A smartphone with a special program based on a neural network can become an innovative tool for helping patients with severe brain disease. Developers have begun to create smart clothes for athletes that read various indicators and for the metaverses.

Any person, even the creator of artificial neural networks, cannot fully understand their work, but he can study the behavior of the machines subordinate to them and their impact on man and society from the point of view of sociology and anthropology.

Ethics of software engineering

Ethical aspects can play a significant role in software quality assurance. For any engineering product, there are many interpretations of quality, depending on the particular “coordinate system”. Many of these points of view need to be discussed and defined at the stage of developing requirements for a software product. Quality characteristics may be required to varying degrees, may be absent or may impose certain requirements, all this may be the result of a certain compromise.

The driving force behind software projects is the desire to create software of value. The value of software may or may not be expressed in terms of cost. The customer usually has his own idea of the maximum cost investment, the return of which is expected if the main goals of software development are achieved. The customer may also have certain expectations regarding the quality of the software. Sometimes, customers do not think about quality issues and the associated cost. Are the quality features purely decorative, or is it an integral part of the software?

The answer probably lies somewhere in the middle, as almost always happens in such cases, and is a matter of discussion of the extent to which the customer is involved in the decision-making process and the customer fully understands the cost and benefits associated with achieving a particular level of quality. Ideally, most of these decisions should be made during the requirements process, but these issues can come up throughout the lifecycle of the software. There are no standard rules for how such decisions should be made. However, engineers must be able to present various alternatives and their costs.

First of all, engineers must determine the goals of creating software. It is important to remember that customer requirements are primary and contain requirements for quality, and not just functionality. Engineers are responsible for extracting quality requirements that are not always explicitly presented, as well as discussing their importance and how difficult it is to achieve them. All pro-

cesses associated with quality (eg, assembly, testing, and quality improvement) must be designed with these requirements in mind and bear the brunt of the incremental costs as an important part of software cost.

Although the term quality is used in relation to the final product and the behavior of the system during operation, it is good engineering practice to require that conformity to the specified quality characteristics be assessed for life cycle intermediate products as well as within all software engineering processes.

The quality of software can be improved through an iterative process of continuous improvement. An important role is played by the prevention and early diagnosis of errors, continuous improvement and attention to customer requirements, which constitute the “building in quality” principle. These concepts are based on the work of quality experts who have come to believe that the quality of a product is directly related to the quality of the processes used to create it.

Planning, acting, checking, correcting are the tools for achieving quality objectives. Management support helps in the execution of processes, evaluation of products and obtaining all necessary data. The developed improvement program is usually targeted and covers the work of the unit or organization as a whole. Identifies in detail all actions and projects to improve certain aspects of the activity within a certain period of time for which such projects can be carried out with the successful solution of the corresponding tasks. Management support means that all improvement projects have sufficient resources to achieve their goals. Management support is closely related to the implementation of active interaction in the team, and should prevent the occurrence of potential problems.

Quality management processes contain many activities. Some of them allow you to directly find defects, while others help you determine exactly where it may be important to conduct more detailed research, after which work is carried out to directly detect errors. Many actions can also be carried out with the aim of achieving both goals.

Quality management processes should address how well the product will meet customer and stakeholder needs, deliver value to the customer and stakeholders, and have the quality needed to meet the stated software requirements.

Risk management can also play a significant role in delivering quality software. Such a view implies a clear and precise formulation of the problem, as well as the fact that the requirements for the corresponding software solution are defined and clearly expressed, complete and unambiguously interpretable. Quality objectives should be clearly defined and understood, as well as unambiguously interpreted. This is a prerequisite for any goals and related requirements. This should be reflected in the appropriate project management, development and maintenance plans.

Specific activities and tasks for quality assurance are structured, detailing the requirements for their cost and associated resources, goals from a management point of view and the corresponding schedule in the context of the goals set by the management, development and maintenance plans. The plan identifies the documents, standards, practices and conventions applied in the control of the project, and how these aspects will be tested and monitored to ensure sufficiency and conformity with the given plan. The plan identifies metrics, statistical techniques, problem reporting and corrective action procedures, tools, techniques and methodologies, physical media security issues, training, and reporting and documentation.

Efforts made in the framework of verification and validation work are aimed at ensuring quality as an integral characteristic of the software and meeting user requirements.

Verification is intended to ensure that the product is designed correctly (the product is built in the right way; usually for intermediates, sometimes for the final product), in the sense that the product obtained within the corresponding activity meets the specifications given in the previous activity. Validation is

designed to ensure that the right product is built (the right product is built; usually in the context of the final product) in terms of achieving the goal.

They provide an examination of the key capabilities of the product both in the context of the immediate antecedents (intermediate products) and in terms of meeting the relevant specifications. The plan also addresses management, communication (interaction), policies and procedures aspects of verification and qualification activities and their interaction. It may reflect the issues of reporting on defects and documenting requirements.

The purpose of management evaluations is to track product development, determine the status of plans and schedules, approve requirements and allocate resources, or evaluate the effectiveness of management approaches used to achieve established goals.

Management evaluations support decisions to make changes and take corrective actions as needed during the execution of a software project. Management evaluations determine the adequacy of plans, schedules and requirements, while at the same time monitoring their progress or inconsistency. These evaluations can be performed on the product, being recorded in the form of audit reports, status (development) reports.

The purpose of technical evaluations is to examine a software product to determine its suitability for its intended use. The goal is to identify discrepancies with approved specifications and standards. To ensure technical assessments, the distribution of the following roles is necessary: decision maker; assessment leader; registrar; and technical staff supporting (directly executing) the assessment activities.

Software inspections always involve the authors of the intermediate or final product, unlike evaluations, which do not necessarily require this. Inspections (as temporary organizational units - groups, teams) include a leader, a registrar, a reviewer and several inspectors. Members of the inspection team may specialize in different areas of expertise (have different areas of expertise), eg

subject area, design methods, language. At a given point in time, inspections are conducted on a single, small piece of a product (in most cases, focusing on individual functional or other characteristics; often, based on individual business rules, functional requirements, or quality attributes, author's note).

Each team member should review the software product and other inputs prior to the review meeting. Applying certain analytical techniques to product fragments or to the product as a whole, considering in the latter case only one of its aspects, for example, interfaces. Any found anomaly should be documented and the information passed to the inspection leader. During the inspection process, the leader leads the inspection session and checks that all team members are prepared for the inspection.

A common inspection tool is a checklist containing anomalies and questions related to aspects of the software product of interest. The resulting sheet often categorizes anomalies and is evaluated by the team for its completeness and accuracy. A sweep is similar to an inspection, however, it is usually conducted in a less formal manner. Basically, a run is organized by engineers for other team members in order to get feedback from them on their work, as one of the elements (techniques) of quality assurance.

An audit is an independent assessment of software products and processes for their compliance with applicable regulations, standards, guidelines, plans and procedures. An audit is a formally organized activity in which the participants perform certain roles, such as the chief auditor, second auditor, registrar and initiator. A representative of the assessed organization/organizational unit takes part in the audit. As a result of the audit, cases of non-compliance of processes are identified, and a report is generated that the development team needs to take corrective actions.

In cases where a system failure can lead to extremely serious consequences, the overall (cumulative) system reliability (as a combination of hardware,

software and a person) is the main and priority quality requirement, in relation to the main functionality of the system.

Software warrantability includes features such as fault-tolerance, security of use, information security or security, and usability. Reliability is also a criterion that can be defined in terms of dependability.

The software integrity level is determined based on the possible consequences of a software failure and the likelihood of such a failure occurring. When different aspects of security (of application and information security) are important, the techniques of hazard analysis in the context of security of use and analysis of information security threats can be used in the development of work plans in the field of identification of possible sources of accidents. The failure history of similar systems can also help identify the most useful techniques.

Description of defect characteristics plays a major role in understanding the product, facilitates process or product correction, and informs project managers and customers about the status (state) of the process or product. There are many taxonomies (classifications and structuring methods) of defects (failures). Characterization of defects (anomalies) is also used in audits and evaluations, when the evaluation leader often presents a list of anomalies formed by members of the evaluation team for discussion at the appropriate meetings.

Against the backdrop of evolution and the emergence of new design methods and languages, along with new software technologies, new classes of defects appear. This requires a huge effort to interpret (and correct) previously defined classes of defects (failures). When tracking defects, the engineer is interested not only in their number, but also in their type. A defect is the result of a software failure. Reliability models are built on the basis of failure data collected during testing of software or its use. Such models can be used to predict future failures and assist in the decision to stop testing.

Based on the results of work aimed at detecting defects, actions are taken to remove defects from the product under study. However, the matter is not lim-

ited to this. There are other possible actions that allow you to get the full benefit of the results of the corresponding work. This is analysis and summing up.

Static techniques involve a detailed study of design documentation, software and other information about a software product without its implementation.

The technique of collective evaluation can range from formal meetings to informal meetings or discussions about a product without even looking at its code. Typically, this kind of technique involves the face-to-face interaction of at least two, and in most cases, more than one specialist. At the same time, such meetings may require preliminary preparation (almost always concerning the definition of the content of the meetings, that is, the list of issues to be discussed). The resources used in such techniques, along with the studied artifacts (product, documentation, models), may include checklists, results of analytical techniques and testing work.

Sometimes, several engineers use the same technique but on different parts of the product. Some techniques are based on the specifics of the tools used. A number of techniques include expertise as an integral element of the overall quality analysis. Each type of analysis has a specific purpose and not all types are applicable to every project. An example of a support technique is complexity analysis, which is useful for identifying parts of a system design that are too complex to be correctly implemented, tested, or maintained. The result of the complexity analysis can also be used to develop test scenarios. Fault finding techniques, like control logic analysis, can also be used in other cases. For software with rich algorithmic logic, it is essential to apply algorithmic techniques, especially in cases where an incorrect algorithm can lead to disastrous results.

Other types of analytical techniques are known as formal methods. They are used to verify requirements and designs. Validation is applied to critical pieces of software. They are used to verify critical parts of systems, such as specific information security and reliability requirements.

During the development and maintenance of software, various types of dynamic techniques are used. Basically, these are testing techniques. Simulation, model checking, and symbolic execution techniques can be considered as dynamic techniques. Code review is considered as a static technique, but an experienced engineer can execute the code directly while reading it, using interactive step-by-step debugging tools to familiarize or evaluate someone else's code. Differences in the classification of techniques show that, depending on the role of a person in an organization, he can accept and apply the same techniques in different ways.

The third party is an independent source of assessment, accredited to hold the appropriate authority. For example, an organization that develops a particular standard, compliance with which is assessed by an independent expert and whose actions are confirmed by the creator of the standard. The purpose of such testing is to check the product for compliance with a specific set of requirements, for example, information security.

Software product quality models often include metrics to determine the level of each quality characteristic inherent in the product. If the quality characteristics are chosen correctly, such measurements can support the quality level in many ways. Metrics can help guide the decision making process. They can help identify problem areas and bottlenecks in processes. Metrics are a tool for assessing the quality of their work by the engineers themselves.

The resulting graphs and charts visually assist decision makers in identifying areas where project resources need to be focused. The results of trend analysis may show that the schedule is violated, for example, during testing; or that failures of certain classes become more and more frequent until corrective action is taken in the development process. Prediction techniques help in scheduling test times and in predicting failures.

The importance of each quality characteristic varies depending on the class of software. For example, reliability is most important for combat critical

systems software, efficiency is most important for time-critical real-time systems software, and usability is most important for end-user dialogue software. The importance of each quality characteristic also varies depending on the points of view adopted.

Users are mainly interested in the application of the software, its performance and results of use. They evaluate software without looking at its internals or how the software was built.

The creation process requires the user and developer to use the same software quality characteristics as they are used to establish requirements and acceptance. When software is developed for sale, the quality requirements should reflect the anticipated needs.

Since developers are responsible for creating software that must meet quality requirements, they are as interested in the quality of intermediate products as they are in the quality of the final product. In order to evaluate the quality of intermediate products at each phase of the development cycle, developers must use different metrics for the same characteristics, because the same metrics are not applicable for all phases of the life cycle. For example, the user understands efficiency in terms of response time, while the developer uses the design specification in terms of route length and latency and access. The metrics applied to the external interface of a product are replaceable by the metrics applied to its structure.

The manager may be more interested in general quality than in a specific quality characteristic and for this reason will need to determine the importance of values reflecting the commercial requirements for individual characteristics. The manager may also need to benchmark quality improvement against controllability criteria, such as planned delay or cost overruns, because they want to optimize quality within a limited cost, manpower, and time limit.

The development process must be structured in such a way as to ensure that the quality of the product can be measured. The higher the quality of the de-

velopment process, the higher the quality of the software developed in this process. The quality at each stage of the project increases, firstly as a direct consequence of the maturity of the process, and secondly, due to the use of a higher quality intermediate product produced at the previous stage.

Quality accumulates in a product in a complex production in a cumulative manner, and the contribution to quality made in the early stages has a stronger impact on the final product than in the later stages. This is confirmed by programming practice, for example, it is known that system design flaws cannot be compensated for by high coding quality. To manage the quality of building a complex system, it is necessary to select manufacturers based on measuring the degree of maturity and transparency of the development processes used. Measuring the quality of the development process of contractors is an important part of overall quality management, more important than measuring the quality of the final product produced during acceptance testing.

Testing and quality measurement should occur at all stages of the life cycle. Extracting quality data that was built in at an early stage can be very expensive if full results are not available. An increasing number of services are available online. In this mode, people do business, watch their favorite TV programs and make new social contacts.

On the one hand, the phenomenon of the digital world increases the level of accessibility of services and social interactions, and on the other hand, it leads to the emergence of a number of ethical problems related to with privacy, monitoring, data protection, etc. The advantages of the digital world are obvious, but it can also facilitate organized crime such as pedophilia and terrorism. The ability of the same technology to do both good and bad is called the dual-use dilemma. This dilemma is inherent in almost any technology. In most cases, identifying the dual use dilemma does not lead to a ban on the development of the relevant technology, but rather people are trying to find ways to extract benefits from it while minimizing harm.

Developers of software systems for the digital world face three main challenges. The first is that developers must strike a balance between protecting the privacy of individual citizens and protecting vulnerable groups of users - for example, protecting children from robbery. The second problem is that the designers of some systems must take into account both citizens' need for freedom of choice and the public good. Gambling sites that are attractive to many often cause gambling addiction, and shooting games can stimulate aggressive behavior. Finally, the third problem is that ethical considerations are often interpreted differently depending on the geographic, cultural, ethnic, religious, and even historical context. Solving these problems requires the collaboration of software developers with ethicists, legislators and sociologists.

New apps are changing the way people communicate. Personal photos and videos posted on the Web become available not only to family and friends, but to the whole world. Many turn to information from open Web encyclopedias such as Wikipedia, which are co-authored by volunteers. Tweets are used to inform friends and family about what is happening at the moment. Political events are now discussed in forums instead of pubs. Software is written collaboratively by people living in different places and countries.

In addition to sharing information, these applications provide many new tools such as social networking, user-generated content, but at the same time there are obvious ethical dilemmas and risks. Anything posted on the Internet can be misused. It has become much easier to get access to private information, because people often disclose this information without thinking about the possible consequences.

The standards that software developers must follow are clearly defined and understood. They have a moral duty to protect the public welfare and the privacy of those affected by the software they create. There are also purely pragmatic reasons for this, since people want their moral rights to be taken into account. Those who get into trouble with social media may simply stop using

them. People who are worried about the fate of the content they could post on YouTube may never start using such a service.

The advent of Web 2.0 applications requires a rethinking of the ethical standards that guide their development and use. It became necessary to answer a number of new questions. What kind of problems do users of these applications experience? What do people worry about when they give out their personal information, discuss the latest news, or post pictures of themselves on the Web? What do members of existing "real" communities expect from Web 2.0 applications? What should developers do to ensure that such applications are trusted and user privacy is guaranteed?

Ethics of decentralized information systems

Traditionally, information security has focused on securing an organization around the perimeter of its systems and network. This is based on the implicit assumption that the inside of this perimeter can be more or less trusted, but not the outside. But changing technologies, business processes and their legal framework no longer allow us to rely on this assumption. Many organizations are now outsourcing some of their IT processes and employees are demanding that they be allowed to work from home.

Unprecedented scale of business cooperation leads to the formation of complex global networks in which there is more trust in the networks of third-party business than in their own. Mobile devices provide access to data from anywhere, and smart homes are equipped with microchips that constantly communicate with each other and with their headquarters.

When using cloud infrastructures, organizations can rent personal computers on an hourly basis. This leads to even more complex systems, or systems of systems, that span the boundaries of multiple parties involved and traverse their security perimeters. The boundaries between systems and organizations are disappearing, becoming both connected and fragmented. In this regard, there is a

need to change approaches to ensuring security. With deperimetrization, not only the boundaries of the corporate IT infrastructure are blurred, but also the boundaries of the responsibility of organizations. If a company outsources the processing of its data to third parties, then who is morally responsible for maintaining the confidentiality of its customers' data?

Deperimetrization imposes new moral and legal obligations on people and organizations that develop software. In a complex chain of events or systems, any action leading to unpredictable consequences will involve many people. All of them will have the opportunity to prevent these consequences, and, therefore, no one will be personally responsible for this.

The problem of blurred responsibility manifests itself in the development of software systems that depend on other systems that depend on third systems. This is the result of a development philosophy based on a service architecture, when the overall functionality of the system is determined by services that can be combined into larger applications that perform end-user tasks. In such cases, the network organization and technological structure make it difficult to determine who is responsible for the unreliability of the final results.

In this situation, ethics that assign responsibility to any one person or organization is useless. It is unclear not only where the lines of responsibility lie, but also how much influence the organization has and how it can influence the consequences. If an organization decides to enforce some data protection policy on its software, the same data may be held by another organization.

When the responsibility of an organization is unclear, the consequences of its actions are also unclear. This means that the organization must handle risk differently. Deperimetrization leads to the problem of uncertain risk. When developing a service, it is not known exactly which services it will depend on.

Conversely, it is not known exactly in which other services the service being developed will be used. In this case, it is impossible to estimate the probability of undesirable events. The traditional approach to risk assessment focuses on

the likelihood of failures and the severity of their consequences, usually expressed in monetary terms. This approach is criticized for various reasons, for example, it is based on the assumption that the probabilities of events and their associated costs are known, and in a deperimetrized environment this assumption is usually not correct.

All this leads to the need to more accurately classify risks. In the event of uncertain consequences, risk management should be based on the precautionary principle. This principle states that if the consequences of an action on public health or the environment are not known, then these actions should not be taken. When developing programs in a deperimetrized world, the risks are not defined, and often even doubtful. The Precautionary Principle can help with the creation of ethically developed network services, since it does not assume that there is an opportunity for objective risk assessment, and the responsibility for the consequences is not assigned to one person or one organization.

Codes of ethics are often used to regulate the conduct of professionals in their respective fields. The Code of Ethics and Professional Practice for Software Developers highlights the importance of self-regulation, offering practical advice, fundamental principles, and methods for applying its recommendations to complex situations.

Guided by the Code of Ethics, a balance should be found between various factors when deciding on the best course of action. The Code can help software developers make complex technical and ethical decisions that benefit society, the profession, and the developer himself. The most modern Internet banking solutions use the Secure Sockets Layer (SSL) or Transport Layer Security (TLS) protocols for server authentication and cryptographic protection of the communication channel between the client and the server. With these protocols, the server authenticates itself using a public key certificate.

After that, a cryptographic secret session code is pseudo-randomly generated on the client side, this code is encrypted using the server's public key (ex-

tracted from the server's certificate) and transmitted to the server. The authenticity, integrity and confidentiality of all subsequent transmitted messages are cryptographically protected using a key derived from the secret code.

Although all Internet banking solutions use the same server authentication scheme, users are authenticated in different ways. Some banks use passwords or PINs. Sometimes authentication or transaction authorization numbers are used, as well as more complex mechanisms, such as those based on one-time passwords or a question-and-answer scheme. No major bank uses public key certificates to authenticate users.

The client part is the most vulnerable in modern Internet banking solutions. Typically, some standard commercial browser is used as the client software, the functionality of which can be extended with, for example, active content executing in the browser. Most browsers can be modified by adding helper modules or plugins. Users are accustomed to installing all sorts of plugins on their client systems, so it's not hard to distribute malicious ones. The attacker only needs a good and believable cover story that would force the user to install his plugin. Many methods of social engineering can serve this purpose.

An attacker can perform on the client side: credential-stealing attacks, channel-breaking attacks, and content-manipulation attacks. For each class, appropriate means and methods of protection are offered.

Current topics in the field of information ethics

Topics relevant to information ethics include intellectual property, privacy, security, information overload, the digital divide, gender discrimination, artificial mediators, virtual reality, robotics, reliable and up-to-date environmental information, and censorship. All this is subject to careful ethical evaluation, not only in terms of universal rights and principles, but also in terms of differences between cultures, historical and geographical features, which implies the exist-

ence of different theoretical foundations and practical options for solving problems. This area of ethical research is called "intercultural information ethics".

Of particular importance is the question of how different cultures can flourish in a global digital environment, while avoiding the danger of isolation or loss of identity. Information ethics research structures are active in Africa (African Information Ethics Network) and in Latin America (Latin American Information Ethics Network).

The concept of "intercultural information ethics" can be defined in a narrow and in a broad sense. In a narrow sense, ethics considers the impact of information and communication technologies on different cultures, and also focuses on how specific aspects of it are perceived by different cultural traditions. In a broad sense, ethics considers intercultural aspects caused not only by the development of the Internet, but also by the mass media, making historical comparisons. Intercultural information ethics studies emerging issues, both descriptively and normatively.

Digital surveillance in public places should provide safety and security, countering accidental or deliberate threats, such as criminal acts or acts of terrorism. But at the same time, it threatens the independence, anonymity and trust that form the basis of a democratic society. New technologies that allow tracking the location of individuals using radio frequency identification (RFID) systems or ICT implants are just as unpredictable in terms of possible dangers and benefits. Therefore, they require particularly careful study and control.

Another problem is information overload, which has a huge impact on the daily lives of millions of people, giving rise to new types of diseases and posing serious problems for medical practice. There is no systematic understanding of the pathologies of the information society. An equally big concern is the problem of Internet addiction, especially among the younger generation. There is a growing need for cell-free places or periods of time when you can take your mind off the need to be constantly available.

The problem of information ethics associated with the digital divide should not be considered only as a problem of technical access to the Internet. It touches on a range of issues, including how people can better manage their lives using new interactive digital technologies and avoiding the dangers of exploitation, leveling, colonialism and cultural discrimination. Individuals, as well as society as a whole, should be aware of the opportunities that arise when combining traditional and digital technologies, depending on the needs, interests and cultural traditions.

The issue of privacy provides an example of how specific ethical issues are perceived from the point of view of various cultural traditions, for example, Chinese, Thai, Japanese. Privacy becomes a key issue as it concerns basic ideas about the human person. Digital globalization should show us the interaction of people with each other in a single world, instead of turning the digital perspectives of life and reality into a kind of digital metaphysics or ideology. This is the subject field of digital ontology.

Computer technology is not neutral. They are filled with human, cultural and social values. These values can be predicted and taken into account, they can appear and evolve after much trial and error. In a multicultural world, conflicting value systems can arise. Digital media enable the inhabitants of the 21st century to transform themselves and their relationships with the outside world. This implies the possibility of self-expression of each person within the global network while maintaining historical, cultural and geographical features. In order to understand and cultivate the diversity of human cultures, intercultural dialogue on ethics is essential.

Ethics of digital microeconomics

As the company grows and develops, the amount of knowledge increases and expertise in a particular area deepens. The company seeks to use this advantage to stimulate the further development of its own business. New custom-

ers are also set to benefit from the developed competencies of the provider. But as a result of a successful deal, the provider gets two or three customers - direct competitors in a particular market area. If the necessary precautions are not taken in time, this situation will inevitably lead to a conflict of interest, or to the loss of one or all clients and loss of business reputation.

For a software development company, this means implementing mechanisms that protect the interests of customers and their own company, while not compromising productivity and efficiency. A new client provides an increase in turnover, profits, and staff growth. But there are still potential problems. If you look at the current problem from the side, then the question arises, how much is it possible to develop two products with similar functions for two different companies that can successfully compete in the market. How can one avoid becoming a defendant in a high-profile industrial espionage scandal? How to preserve the unique individual features of these solutions?

It is worth paying attention to how the provider protects the intellectual property of each client; keep companies as customers, despite the fact that they, for their part, may consider the situation as a conflict of interest; avoid ethical issues in software development. The most important issue for customers is the protection of their intellectual property. The nature of these projects involves the transfer of intellectual property to development teams. This may be information about how the internal modules of the software work, or all or part of the code. All of the above can be considered as intellectual property. Some of them represent patented or patentable technological secrets.

Part of the objects may relate to the competitive advantage of customers. Employees are required to participate in information security training. On competing projects, team members are instructed not to discuss project issues with other employees. Under no circumstances will employees move from one project to another. No company will risk its professional reputation.

Ethics of digital journalism

The digital environment has brought both new opportunities and new challenges to journalism. Today, the ethical principles of journalism are being tested for strength. The process of emergence of new forms of digital media and media journalistic activity is accompanied by ethical and value changes in the field of digital journalism.

The basic component of the macrostructure of the global digital environment is telecommunications systems and networks, primarily the Internet: the long-established and largest segment of the web1 network; segment of social networks and Web 2 platforms; rapidly growing Web 3 segment of mobile applications (smartphones); payment and settlement networks such as PayPal, SWIFT, Biteojn; a segment of embedded specialized processors for various objects of industrial, social, urban infrastructure (the so-called Internet of things), as well as embedded chips for medical implants, toys, clothing (the so-called bodinet), connected via the Internet to control centers.

In the digital environment, previously disparate information carriers coexist in parallel, capable of being combined into one platform (multimedia), unfolding into a multi-platform and interactive storytelling (transmedia), allowing you to work with large amounts of data and augmented reality.

One of the key characteristics of the digital environment is interactivity (synchronous and asynchronous communication using emails, chats, SMS forums, social networks, performing the functions of information exchange, navigational, adaptive, commercial). New media represent not only new technologies and new content, but also a different approach to understanding media.

The consumer not only receives a media product, but also participates in the process of its creation. The user interacts with the media and decides what, where, how, how much to search and choose, how to interpret, when to stop and who to trust. The processes of media convergence, as well as the digitalization of media, accelerate the disintegration of the old structures, systems of relation-

ships, and professions. Simultaneously with the processes of convergence at the level of media systems, formats, genres, professions, distribution channels, there are processes of divergence - the collapse of former connections and technological chains.

The tasks of producing content, manipulating it and managing links between own and other people's materials on the web have come to the fore. The conceptual core of the second generation Web is people, not technology, and the possibility of individual self-expression and intense social interaction. Web 2.0 has become a social innovation phenomenon rather than a technological innovation. The technical and communicative features of new media have activated the audience, which has moved from passive consumption of information to the production of content in any form and in unlimited volume. The hypertext and interactivity of online media creates a new format for consuming media information content.

New media have integrated the Internet, computer games, digital films and photographs, mobile telephony and the virtual world in general. This is the widest range of new media formats, which may include: online media portals; online media; Internet TV (webcasting); internet radio (podcasting); mobile TV; blogosphere; cinema designed for the Internet audience; social networks (including children's social networks); twitter; virtual communities; virtual games; other resources Web 2.

New media are characterized by interactivity, multimedia, hypertextuality, convergence, digitalization and belonging of the resource to the media space, that is, the presence of a digital medium. A newspaper, TV program, or radio program may have a touch of interactivity by communicating with readers through phone calls. However, if they are not digital, they cannot be classified as new media.

The wide possibilities of the digital environment as an accessible and multi-tool platform have led to the spread of citizen journalism. There is citizen

journalism integrated into traditional media (the use of user-generated content by journalists). There is civic journalism, which is implemented in social networks, the blogosphere and other platforms that are not related to traditional media. Such civic journalism is implemented either on the website of a single blogger, or in collective blogging. One of the first such collective blogging projects was a website.

The International Federation of Journalists is the most authoritative organization in the field of journalism. Founded in 1926, the Federation has now united journalistic unions in more than 90 countries of the world. The Declaration was adopted by the IFJ Congress in 1954 and amended at the IFJ Congress in 1986. Respect for the truth and the public's right to truth is the first duty of a journalist. The journalist is at all times obliged to defend the principles of freedom of objective collection and publication of news, as well as the right to unbiased commentary and criticism. When covering events, a journalist is obliged to operate only with facts that are established personally by him. The journalist is obliged to use only worthy methods of obtaining information, photographic materials and documents. The journalist is obliged to do everything possible to correct or refute information if it does not correspond to the truth.

The journalist is obliged to consider as a professional secret the source of information received in confidence. A journalist is obliged to take into account the danger of discrimination that may arise for a person due to the activities of the media. It must do its utmost to prevent, even inadvertently, inciting discrimination, in particular on grounds of race, sex, sexual orientation, religion, political and other opinions, as well as national and social origin.

The journalist is obliged to consider the following violations of professional ethics inadmissible: 1. plagiarism; 2. deliberate misinterpretation; 3. fabrications, slander, defamation, false accusations; 4. receiving a bribe in any form as payment for the publication or concealment of information.

Fake news parajournalism has been developed. The trend has influenced the increase in requirements for the professionalism of journalists. Since the task of a journalist is to study and analyze news that may turn out to be fake, the competence of fact-checking has become especially significant. Verification of information is becoming one of the main tasks of journalism. After phenomena such as surfing and chatting, there is a process of mining confidential information for the purpose of manipulation and massive destabilization.

These actions take place on platforms controlled by the world's major Internet giants GAFAM (Google, Apple, Facebook, Amazon, Microsoft). The main difficulty in decoding online propaganda is that it is about fighting a certain form of destructive ideology based on innovative technologies. The goal is to create chaos in existing political systems.

In the digital environment, it becomes necessary to verify both the source of information and the content itself, the authenticity of its content, especially when it comes to user-generated content. Fake news can represent both direct (including unintentional) misinformation (fake in the usual sense), and biased coverage of events - shifting emphasis, suppressing details, artificial glorification or, on the contrary, stigmatization, strengthening the emotional range due to the lack or lack of data. The Internet has become the main platform for fakes. One of the reasons was the high speed of content delivery.

In Western societies, the funds that were allocated for public benefit journalism are gone, and it is becoming increasingly difficult for publications to maintain their ethical principles and independence. At the same time, political bias, corporate control of the flow of information, stereotyping, and conflicts of interest that journalism was originally designed to combat continue to gain momentum. Loyalty to the fundamental principles of journalistic ethics is especially highly valued in the era of social transformations that are pushing the global communication culture towards chaos. The misuse of false information (fake news) threatens media professionals. The values of journalism such as fidelity to

facts, transparency, humanity and respect for opponents, as well as the recognition of one's own mistakes, are the main principles that should guide both social media users and citizen journalists.

The problem is that the dominant information giants such as Google, Facebook, Amazon and Twitter spread information in an environment where there is no value system. Unlike the professional media, they do not give any priority to news, even if it serves the public good. In other words, their marketing treats journalistic reporting as equal to any other content, including offensive, false or illegal content.

The online journalist is his own editor. He is capable of analyzing the agenda as a whole. He quickly and efficiently, with minimal time spent, orients himself in the context of information and is able to independently determine the most correct mode for creating and distributing information, adapt the form and method of presentation to various media and methods of communication. He has the competence to monitor his own performance. It is understood that he makes decisions about the appropriateness of this or that action promptly. Another important feature of digital journalism is its interactivity.

It is important for a journalist of a new formation not only to provide sufficient data at the current time, but also to track what the reaction of the audience was, discuss information with it and perceive its opinions, which can become the basis for continuing communication. The tools for such communication will not necessarily be the pages of the publication that published the source material. It can continue in social networks, in instant messengers, in other media. An online journalist is not only focused on creating content. It is ready to use the content response. He is set not to broadcast, but to discuss his work.

In a networked reality, information can emerge and spread without the participation of organized journalism. The price of an error in the mass media has decreased, it has become possible to correct it in real time and for all consumers at the same time, the regulatory requirements for the author of infor-

mation and its distributor have decreased. Online media are much more relaxed about inaccuracies.

They don't have the trauma of the high cost of distribution, including rebuttal distribution. The digital environment has updated the concept of "post-truth". Awareness of the new problem plunged Western journalism into a state of pessimism: in the information world, in which it is impossible to rely on factual data, where evidence and evidence cease to be the main way of public dialogue, the journalist loses ground under his feet, feels helpless and unnecessary. Not only journalism is under attack, but the entire traditional system of values. Facts held a sacred place in Western liberal democracies.

For self-justification in modern language, there are transitional stages between truth and falsehood: "alternative truth", "my own truth", "I see it this way", "alternative version of reality". The process of moving away from the traditional truth-false dichotomy has been going on for a long time. Media projects are not oriented towards professional journalism standards (balance of opinions, fact checking, separating them from opinions). They have never been included in the system of professional journalistic activity; corporate ethical standards are alien to them. The audience of each individual such site may be relatively small, but the information they produce can be very quickly and widely distributed through social networks.

The actions of single sites with a small audience can have a cumulative effect. As a result, the cumulative impact can be quite significant. Fake media have appeared in the global information space, which, under the guise of news sites, distribute their news about fictitious or constructed events. Social networks and traditional media have become effective channels for the dissemination of fake news. Social media has become a peddler of misinformation.

Firstly, the scheme of dissemination of information through subscriptions to communities, with which the user usually associates himself, through friends, reduces the criticality of the perception of the message. The user sometimes

does not even read the message to the end and clicks on the share button simply because of a pre-formed sympathy for the source of information. Secondly, the administration of social networks is not motivated to deal with such phenomena.

In the disinformation ecosystem, the audience is not a passive target. Under emotional tension, manipulations by politicians and journalists, she also becomes a participant in the processes of this system. Among the driving factors on the way to the era of post-truth are the following characteristics. These are socio-psychological phenomena inherent in the individual and society, which cause incomplete or distorted perception of information.

Mass culture forms in an individual and society an alternative ethics with its intermediate stages between truth and lies, the justification of lies. The philosophy and aesthetics of postmodernism spread among the mass audience ideas about the relativity of moral categories and their insignificance. Social institutions use manipulative techniques, impact on the emotional sphere, populist ideas, falsifications and misinformation. They form cynicism and distrust of the elites and experts among the mass audience.

Information technologies have led to the disorientation of the individual in the flow of information, the disintegration of the audience into informationally isolated communities, which have simplified the process of disseminating false information. The emotional impact has supplanted the balanced rational coverage of events. There was a drop in the significance of factual information. Despite being immersed in post-truth processes, society has not lost interest in how things really happen. There is growing resistance to post-truth. State and non-governmental organizations are actively implementing courses on increasing the media literacy of the population.

Online journalism will become the dominant, if not the only form of existence of the profession. A number of special knowledge will be added to the existing functional capabilities and duties of a journalist, primarily from the field of data analysis, social theory and cognitive psychology. The ethical problems

of digital journalism do not become an obstacle to its development, but determine its features. For professionals who strive to achieve a socially significant result, these issues must constantly remain in the focus of attention. At the same time, the peculiarity of the digital environment is that it provides very little time to solve problems. Postponing the search for solutions to new ethical questions will only increase the number of ethical problems.

The institutions of the digital environment are being formed. Among them is the Institute of Media Ombudsmen. The media ombudsman (press ombudsman) is the reader's editor. It responds to readers' complaints about media content. If, in his opinion, the complaints are justified, then he publicly admits the correctness of the reader. He can also explain to the audience some of the features of the work of journalists (short deadlines for preparing material, the inability to listen to all sides), which could lead to an involuntary mistake. He should not be too close to either journalists or readers in order to remain neutral in decision making. The importance of this institution has only increased since the beginning of the digital age.

Press councils are voluntary independent associations of journalists specially created to regulate the ethical issues of journalistic practice. Sanctions taken by such councils come down to censure of the professional community, it is possible to draw up black lists of violators. In this case, the violating party is given the right to respond. With the advent of the digital age, press councils are expanding their scope of work to include digital media.

Fact-checking resources and fact-checking publications can be considered a new mechanism for media self-regulation. Fact-checking is a relatively new concept of journalism, denoting a set of technologies for verifying information. Fact-checking (or fact-checking) is also called the genre of journalistic publications, which is the exposure of fake news or a fake statement, necessarily with an exhaustive list of evidence. A fact-checking resource is a website, public, tel-

egram channel or other platform completely dedicated to the analysis of unreliable news and statements.

Fact-checking can be presented as a rubric of a separate media. Its purpose is to analyze the statements of politicians, explain complex issues and code words used to hide the truth. Fact-checking resources appeared precisely as a response to the aggressive challenges of the digital environment: the epidemic of fake news, the spread of post-truth ideology. Fact-checking resources are engaged in the refutation of false information in the network environment.

Wikiritribune1 is a pilot project from the creator of Wikipedia to counter fake news. Unlike wikipedia.org, the new platform will work on a hybrid model: content will be created by both volunteers and professionals. The main interest is not the distortions coming from the speakers, but the distortions of information that occurred through the fault of journalists. This includes both unintentional misrepresentation by a journalist (due to inattention, insufficient time to check the facts), and deliberate disinformation, including biased presentation of news. Fact-checking materials refute false information.

They accustom the audience to the conscious consumption of information on the network. Familiarizing the audience with the basics of fact-checking, teaching them to read information thoughtfully in an online environment will not only help raise the audience's media literacy, but will also improve the situation with journalistic ethics. An enlightened audience will eventually become more discriminating in relation to media materials (especially in the digital environment) and will express dissatisfaction with those authors who allow distortion of information, and those media whose authors do this regularly.

With all the positive aspects of fact-checking resources and materials, very strict requirements are put forward for them. First, journalists engaged in fact-checking other people's publications themselves must strictly observe the requirement of objectivity. Otherwise, it discredits the activities of the entire editorial office and turns fact-checking into a war with competitors. Secondly,

even when faced with gross distortions of information, it is important to maintain a respectful tone when evaluating the activities of colleagues, that is, not to get personal, not to write rudeness.

In addition to self-regulation, there is legal regulation of journalistic activities. Countering fake news is seen as a serious challenge to the information health of society. The need to counter them is considered at the state level. The law prohibits the publication of unreliable publicly significant information under the guise of truthful messages if it threatens the life and health, property of citizens, undermines public order and security, interferes with the functioning of life support facilities, infrastructure, banks, energy facilities, industry and communications. Online media fall under the law.

The digital environment has the potential to fundamentally change journalism, and those changes have already begun. However, how journalism will change under the influence of the digital environment in the future depends, among other things, on the journalistic community itself. The digital environment requires constant scrutiny, highlighting its benefits and risks. The journalistic community must respond in a timely manner to the challenges of the environment, only then the formation of digital journalism can take place with the least losses. This also applies to the ethical realm. Each new challenge of the digital environment should be timely comprehended by the journalistic community and codified.

Mechanisms for ethical self-regulation in the digital environment include: ethical codes and standards, press councils, media ombudsmen, media criticism, fact-checking resources and materials.

Ethical standards should be reviewed for relevance every year and, if necessary, edited and supplemented. Press councils can be an effective self-regulatory body, including in the digital environment, but for this they should strive to expand the scope of their activities: attract new members, actively dis-

seminate information about their activities, both among journalists and among the audience.

Fact-checking publications can be considered a media self-regulation mechanism, because they analyze the publications of colleagues for compliance with the main postulate of journalistic ethics - the inadmissibility of misrepresenting information - and publicly censure violators.

Post-truth is influenced not only by the audience, but also by the journalists themselves. While continuing to be convinced that they evaluate reality objectively, they do not notice this.

Freelance journalists are generally not members of trade unions. There is a problem of their integration into the professional community, the transfer of the fundamental values of the media sphere to them. Journalists in this category are forced to combine creative activity with the work of a manager, which increases the risk of moral and ethical dilemmas.

The Code of Ethics governing the standards of freelance journalist and blogger activities contains fundamental provisions. It prescribes the observance of the principle of freedom of speech, the right of the public to reliable and comprehensive information. Check the accuracy of the information, indicate the source of the information (there should be several of them, and in the absence of facts, it should be directly indicated that an opinion or unconfirmed information is being published), make sure that the sources are reliable.

Present different opinions, including opposing ones; in case of criticism of people or organizations, always give them the floor; In the absence of a comment, indicate the reason. Do not allow personal prejudice to influence the performance of the duty of a journalist: in particular, do not focus on ethnicity, gender differences, religion, disability. Respect the honor and dignity of every person. Avoid insults, slander and labeling. Do not lie in order to gain access to information. Work openly and avoid plagiarism, as well as the manipulation of

quotes and images. Fix errors completely, quickly, and prominently for the audience. Protect the source of information. Do not disclose confidential source.

Do not allow threats or gifts to interfere with the work of a journalist. Do not profit financially from unpublished financial data or provide such data to others. Do not portray research results as conclusive if they are still at an early stage. Until the guilt of a person in a crime is proven by the court, do not comment on the progress of the process.

The following moral and ethical obligations of freelance authors of individual publications are emphasized. A journalist cannot work for the heroes of regular publications (people or organizations). If you want to create a personal blog or page on a social network or write a book, the journalist must coordinate his idea with the editor, since personal publications will be connected by the audience to the media and should not contradict his standards. Staff journalists should not work for other publications as freelancers during regular business hours. You should write under your own name or a permanent professional pseudonym. Freelance journalists can pose as correspondents from the publication only when they are doing their job.

Digital Generations and Ethics

The concept of an ethical agenda in media draws on a variety of generations. This, according to her, is more of an attempt to self-identify for everyone, to develop values, to find a foothold in the face of uncertainty. One of the elements of the new ethics prescribes to find your own and calm down. Here you can see the connection with the appearance of general anxiety and attempts to find support. If earlier life went on in a calmer information world, where there was not so much content and communication methods, now the situation is radically different. The huge amount of content that a person has to pass through himself does not make it easier to find a balance.

Despite the fact that anxiety in one form or another has always existed, the younger generation is more inclined to dialogue with itself and tries to understand new trends, meanings, ideas.

Generational characteristics are manifested in the types of content consumed. Thus, “boomers” (people born in the 1980s) like to read longreads, “Xers” (millennials) are more involved in “TV consumption” and prefer longer, longer viewing of content. For zoomers, it is important to do everything quickly, to be in time everywhere, which is why short videos are so popular among them. If earlier children walked along the street and went to libraries, now they do all this in the virtual space.

Ethics and the role of influencers in marketing tools

One manifestation of the change in public sentiment has been the increasing role of influencers in marketing tools. The importance of influencers cannot be underestimated. Each of these people has authority, and therefore such marketing budgets are justified.

There are three stages in the activities of bloggers and influencers: disinterestedness, covert commercialization, and overt commercialization. The last stage reduces the credibility of the influencer. Manipulation of the attention and trust of users is abused by digital platforms: services and resources.

They use "dark patterns", which refers to techniques for manipulating user behavior through the design and layout of a website or application in order to trigger the desired commercial action. This is the result of digital services competing for user attention. Because of such a policy, companies risk only the trust of the client.

The information that is published in the online space is framed in a different context than in the printed edition. The level of coverage of news reported through a digital newspaper, magazine or blog is high. Readers from different parts of the world can access the same source. It is a format that encourages in-

teraction with the reader. On the other hand, digital journalism is completely connected to current events.

The Internet not only opens up new professional opportunities for specialized journalists. It has also led to the development of new habits in readers who read news via mobile phones. Society demands up-to-date information about the latest news and events. A new issue of a magazine or newspaper has a static format when it hits newsstands located at different addresses in cities. However, the newspaper's website may be updated throughout the day. In this way, it offers high-quality and creative content. Through specialized training and hands-on experience, the author strengthens his personal brand. This is where his work differs from that of others.

There is a Code of Ethics for Data Usage. This is a set of professional standards for ethical behavior in the processing of information. The development of the code was the market's response to the need to define the rules for interaction between companies and consumers in the course of a large-scale digital transformation of the economy and the increased role of data. The initiators of the creation of the code were the Big Data Association, which unites key market participants, and the Internet Development Institute.

In addition to the norms of legislation, the code defines the principles of professional ethics in the collection, storage, analysis of data, as well as in their commercial use, including in advertising and marketing. In particular, it is necessary to highlight the ban on the use of technologies aimed at overcoming legitimately functioning means of protection, the ban on falsifying data for analytics purposes, as well as falsifying the results of their analysis, the ban on collecting personal data that misleads users that they are participating in market research.

The Code establishes the principles of data processing by artificial intelligence and remote methods of interaction with citizens upon obtaining their consent to processing. It is important for the largest customer data companies to build trusting, long-term partnerships with the people they work for.

An important component of the document is the White Paper. These are practical cases of using data, including examples of business practices, decisions and actions of the participants of the code, aimed at the safe handling of information. Among which are methods of remote identification of customers, mechanisms for terminating marketing communications with customers, the most common methods of anonymizing personal data, the procedure for processing information in the cloud.

Cases are recommended to prevent fraud in the financial market, including bank customer accounts. The essence of this mechanism is that the credit institution, with the prior consent of the client, exchanges information with the mobile operator about suspicious calls to his number. This allows early detection of fraudulent schemes using social engineering methods, when criminals imitate calls from banks or government agencies, and suspend account transactions. A similar practice is also applied in case of suspicious calls on behalf of a client to a credit institution, for example, from an unknown device or from a location that is not typical for the client.

Since self-regulation is formed by market participants taking into account real business processes and is flexible, this approach is more effective and guarantees the rights of all parties to the relationship without hindering the emergence of innovative products and services.

The issue of attracting media people and influencers to work on projects stands apart. Just as actors and actresses replaced models in advertising campaigns, so with the expansion of the influence of social networks, people from TV came to replace people from Instagram. In large marketing agencies, entire departments are responsible for working with bloggers, because it is important to find not just the most popular person of the present time, but a person who will be accepted by the brand's target audience who shares its values.

In the era of Instagram, the word "blogger" became the first association to the expression "opinion leader". Collaboration with a blogger or other non-

trivial brand influencer is not only an image story about expanding boundaries and an attempt to get closer to the consumer, but often an opportunity to increase sales by several times. There is a huge difference between a person's reaction to a jumper from an advertising campaign in a glossy magazine and the same jumper on a real person from a photo in the Instagram feed.

Properly integrated blogging advertising is only slightly inferior in sincerity to friendly advice, and therefore, in a world ruled by the words “openness” and “honesty” in 2020, bloggers are the most successful salespeople. However, many luxury brands are wary of influencer marketing.

An overabundance of bloggers and influencers generated by the Internet will throw the industry back to its roots, and media personalities who have achieved success with sweat and blood will return to advertising campaigns, who will not only declare the status of the brand, but also act as a kind of ambassador-curators, capable of giving the audience a beautiful picture, and share valuable experience with it.

The orthodox Dior, Chanel and Louis Vuitton, whose campaigns are not complete without eminent actresses, models who have become famous even before the era of sole power of Instagram, and other celebrities, whose success no one doubts deserved, remain loyal to the “old school” opinion leaders to this day. It is possible that other brands, having experimented with new wave influencers, will resort to proven methods to attract the attention of buyers.

Virtual influencers have been added to the heroes who have moved from offline to online. These are specially created by man three-dimensional images that exist only in the space of the World Wide Web. Platforms for publishing content are also changing – bloggers from TikTok have replaced the phenomenon of Instagram bloggers.

The most advanced and daring brands create TikTok accounts, involving not only experts in working with the new social network, but also bloggers who have achieved success in it. The phenomenon of TikTok is that, thanks to the

work of the application's algorithms, it is much easier to get recognition here than to gain an audience on Instagram, and therefore the level of trust in the content produced on the social network is quite high.

Platforms will change, but bloggers as one of the driving forces of influencer marketing will remain. Blogging is also a profession, and this must be accepted. When working with influencers, it is necessary to clearly understand the goals and objectives of the campaign, correctly calculate the age of the target audience and determine its interests. Regardless of whose image the buyer will associate with the brand, this image must be relevant and not go against the ideals and principles of the brand and not undermine the trust of the audience.

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