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W 37 We make the future (Мы делаем будущее): сборник студенческих статей по итогам работы межинститутского круглого стола „WE MAKE THE FUTURE“ (июнь 2022г.) / Под ред. Л.В. Цуриковой, Е.Н. Тарановой, Е.А. Карабутовой. – Вып. IX. – Белгород, 2022. – 230 с.

Сборник студенческих статей охватывает широкий спектр актуальных проблем современной науки, отражает результаты теоретических и научно-практических исследований студентов неязыковых специальностей бакалавриата, специалитета и магистратуры очной и заочной форм обучения.

За содержание и достоверность статей, а также соблюдение закона об интеллектуальной собственности ответственность несут авторы. Мнение редакции может не совпадать с мнением авторов статей.

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W37 We make the future: Collected articles of students/ Editors-in-Chief: L.V. Tsurikova, E.N. Taranova, E.A. Karabutova. – V.9. – Belgorod, 2022. – 230 p.

This book is a collection of students' articles written to present the most interesting and important universal scientific ideas and researches.

The authors are urged to carefully examine the proofs and are responsible for correctness of the statements provided in the articles. The Editors-in-Chief may not share the opinion of the authors of the articles.

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SECTION 1. NATURAL AND HUMANITARIAN SCIENCES**CALCULATION OF THE DENSITY OF THE EROSION NETWORK OF THE KURSK REGION**

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Abstract: *Within the framework of this article, an analysis and identification of the characteristic features of fragmentation of river basins in the Kursk region were carried out, as well as factors causing fragmentation of the natural environment were presented, and approaches to overcoming fragmentation were considered. Mapping of the studied objects was carried out.*

Keywords: *integral indicator, natural and economic situation, environmental indicators, scale of quality criteria, erosion network*

An increase in the rate of formation of the anthropogenically accelerated nature of exogenous processes is observed with the active growth of human economic activity. Large relative height of watersheds

A significant level of heights of watersheds above the level of rivers, an increase in the rate of erosion potential of precipitation, as well as rapid loose subsoil, namely forests and loess-like loams, contribute to the large-scale development of deep and slope erosion. Quite extensively, this trend is observed on the territory of the Kursk region, the natural conditions and the maximum agricultural development of which significantly contribute to an increase in the rate of development of intensive erosion.

To carry out work on the assessment of the current situation, they were performed on the basis of the selection of erosion forms, according to the digital model of the Kursk region, obtained from SRTM data. To carry out operations aimed to calculate the horizontal division of the territory of the Kursk region, it is necessary to use the Hydrology toolset of the Spatial Analyst module, the functionality of which allows you to restore the links of the erosion network.

Work on the selection of the erosion network is carried out as follows:

- filling in incorrect relief depressions (Fill tool);
- classification of flow directions by points (Direction of flow tool);
- construction of a raster layer of the total runoff (Total runoff tool).

To identify the cells of the watercourse, it was necessary to select the values of the total runoff, indicating the transition from flat runoff to linear runoff: by comparing the value of the total runoff with the topographic map, the selection of quantitative values (1000) was performed. The selection of cells with the values of the total runoff is carried out by the Raster Calculator tool from the corresponding layer. After that, you need to get a raster layer of watercourses-links from the raster obtained in the last step, using tools such as Identification of Streams and Order of Streams. In addition, it is necessary to determine the order obtained by the raster layers according to Strahler-Filosofov. Then it is necessary to create a vector layer of erosion network links (in the form of polylines), which, after visual analysis and comparison with the contour lines pattern, needs to be improved, including the removal of closed loops [Kashchavtseva, 2011: 2].

The erosion network map is the basis for calculating the horizontal dissection. The length of thalwegs of erosional forms per unit area (km/km^2) was used as an indicator of horizontal dissection. The solution of this issue is possible in two ways in GIS. The first one is based on overlaying a grid of squares on a selected erosion network. The polylines of the erosion network were divided in accordance with the calculated squares (500×500), and the resulting segments, with the calculated length, were attached to the attribute data table of the vector layer of the calculated cells. From this data and the known area of the cell, the Field Calculator function calculated the horizontal subdivision values.

Another way to estimate the density of the erosion network is to use the tools of the “Density” block of the Spatial Analyst of the ArcGIS software package. The essence of the method is to calculate the density of point objects around each cell of the output raster. Conceptually, a neighborhood is defined around the center of each raster cell, after which the number of points that fall into the neighborhood is counted and divided by the area of the neighborhood.

Higher values for the radius parameter result in a more generalized density raster. Lower values result in a raster that shows more detail. When calculating the density, only those points that fall within the specified neighborhood area are taken into account. If no points fall within the neighborhood of a particular cell, that cell will be assigned the value NoData. If the conversion factor itself for area units is small enough, compared to the distances between points, then it should be said that the output values will be quite low. To obtain other, higher values, it is necessary to select a scale factor for larger units of measurement, for large units of measurement, for example, you can take not square meters, but square kilometers [Xiaoyu, 2017: 6].

With the Density Analysis tool, you can calculate the available amount of a given phenomenon over the surface of a given area. This analysis is carried out by determining the magnitude of the phenomenon under consideration at each location in a given territory and the spatial relationship of the locations of the measured values.

The function of the Density tool is to distribute a given amount of input layer over a given area to form a continuous surface [Sevriukov, 2018: 3].

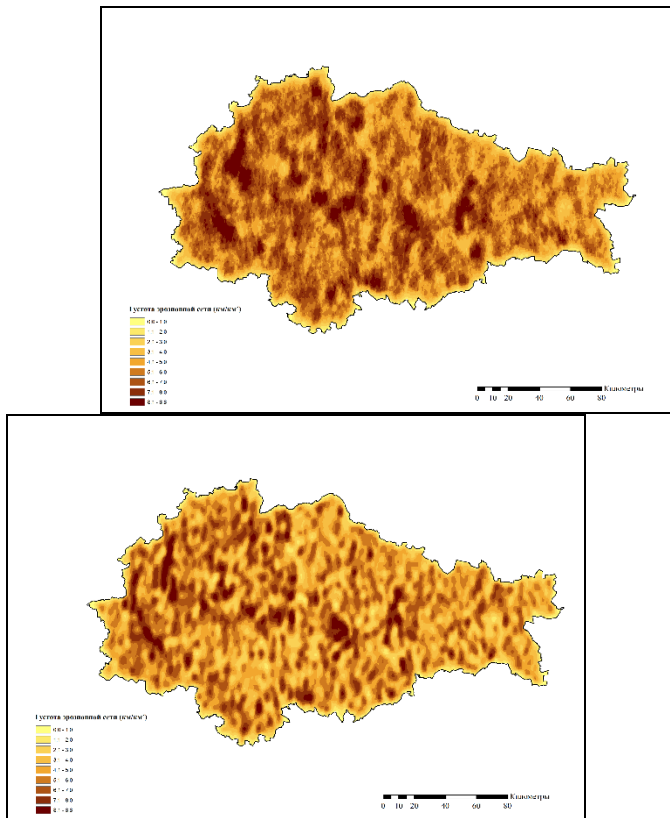


Figure 1. The density of the erosion network in the Kursk region using the following methods: a) Topo to Raster b) Kriging (Nuclear Smoothing)

When identifying erosional forms on the map of the late 18th century, for the correctness of the data obtained, we loaded a digital relief model for the territory of the region, obtained from SRTM data. Thus, cartographic sources were combined in such a way as to most adequately display retrospective data (Fig. 1).

It is established that the length of the erosion network of the region is 19463 km. To date, the density of the ravine-gully is 0.72 km/km^2 . The strongest erosional dissection was noted in the basins of the river Svapa (0.70 km/km^2), Seim (0.60 km/km^2), Svapa (0.70 km/km^2) and Psyol (0.50 km/km^2) rivers (Fig. 1). This area is also characterized by the most intense gully formation.

The lowest values are observed in the basins of the Ublya (0.30 km/km^2), Gerasim (0.3 km/km^2) and Apochka (0.2 km/km^2) rivers.

Thus, based on the operations performed, we can conclude that the ArcGIS software package is a multifunctional tool for working with cartographic materials. This set of programs makes it possible to assess the current erosion situation in the territory of the Kursk region on the basis of data from a digital model of the relief of the territory under consideration. Thanks to the tools for conducting spatial analysis available in the Arsenal of ArcGIS, it is possible to model the final results in the form of cartographic materials demonstrating the key characteristics of the gully network of the Kursk region.

The analysis of the geometry of the obtained vector objects also provides the user with the opportunity to automatically obtain quantitative characteristics of the

selected erosion network and its dynamics, including those at different hierarchical levels.

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SOME ASPECTS OF MANURE STORAGE AND PROCESSING IN PIG-FARMING

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Abstract: *The purpose of the article is to consider some approaches to manure storage and processing in the U. S. and Russia. The objects of the research are different storage systems and gas pollutants that can be emitted in case of improper storage. Research methods: statistical, comparative geographical, review of literature and Internet sources. The article highlights processing methods in the USA and Russian technological schemes. It emphasizes the connection of improper storage and air pollution (ammonia emissions).*

Keywords: *manure storage, air pollution, ammonia, pig breeding, storage, ammonia emissions*

The modern world has become the witness of numerous attempts of rural scientists to explain the reasons of pollution and to find the best ways of dealing with these problems. And the present paper considers the latest ideas applied in pig farming in Russia compared to those in the US.

To begin with, in the U.S. hogs are kept inside the barns on bedded or slatted floors. Bedding (it can be corn stalks, sawdust, straw) serves as a collector of solid manure and this bedding along with the manure is introduced to an arable land as a fertilizer. In the American pig industry, there are four main types of waste management systems: deep-pit, pull-plug pit, pit recharge, and flush systems. These systems use various manure collection methods. Moreover, their differences depend on frequency of cleaning and discharging. All of these systems are equipped with slatted floors. To define the advantages and disadvantages of the systems each of them should be observed and detailed:

- the pit system: animal wastes are collected in liquid form into a pit. Manure is kept in a sedimentation tank in which anaerobic conditions are maintained or in an outdoor storage facility. In these systems, the area may be cleaned from daily to yearly intervals;

- flush systems provide for removing manure several times a day;

- the pull-plug system: manure is stored in the pit for a week after that it is withdrawn from there and then moved to external storage facilities. This decreases emissions indoors but not essentially with the later storage of manure. The result of these storage methods is decomposition of manure and biogas formation.

Flush systems can lead to the formation of more emissions than pit recharge and pull-plug pit systems because of turbulence during flushing. Thus, the first two systems can be recommended for widespread use [Werth, 2014: 3].

Regarding Russia and its pig industry, the following conversion technological schemes are most widely used:

- composting;

- biothermal disinfection;

- separation into fractions [Bazykin, 2018: 1].

The first way implies that manure stores in heaps. This storage helps to get rid of microorganisms. A variation of this method is vermicomposting. It means earthworms are used to process manure. The biothermal disinfection requires expensive equipment and lots of fuel. Manure separation into solid and liquid fractions is the most modern technology concerning its preparation and conservation. The liquid fraction is used in watering and the solid fraction is applied as fertilizer. Such technology enables to lower the cost of building storages, reduce unpleasant odors.

What is more, improper manure storage and processing can cause emissions of pollutants. Many countries in which livestock develops intensively take steps to protect the environment. According to the study held in University of California, the most crucial pollutants which are controlled in the USA, and which have the enormous impact on air quality are carbon monoxide, lead, nitrogen dioxide, particular matters, and sulfur dioxide. In the U.S., there is a law that regulates contaminants and some of their compounds providing public health safety.

In Confined Animal Feeding Operations, the major air contaminants are particular matters, ammonia, hydrogen sulfide, volatile organic compounds, and odors. For instance, volatile organic compounds can be a source of ozone formation. Moreover, it is stated that human exposures to particular matters cause

pulmonary disease, heart attacks, and premature deaths worldwide. It is also noted that particular matters worsen atmospheric visibility by scattering and absorbing light [Werth, 2014: 3].

Ammonia emissions from manure cause principal air quality worries. As it was studied, outdoor storage tanks release large amounts of emissions. Generally, one of the vital issues connected with ammonia in hog production is its impact on the respiratory system causing irritation of the eyes, skin, mucous membranes, and upper respiratory system. Some effective ways to decrease emissions are proposed in Russia. These are some of them: closure of manure storage facilities (it can be floating roofs, geomembranes, etc.) reducing emissions by 70-90 %, mechanical separation of manure (level of emission reduction by 40-70 %) [Polukhina, 2015: 2].

To sum up, the considered subject is too wide to stop exploring. Scholars and scientific world go on seeking new methods of controlling pollutants. International interaction helps to share ideas and thoughts, learn something new. Researchers all over the world are on the same wavelength and stand for a healthy, free of pollution planet.

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AUSSICHTEN ZUR ENTWICKLUNG DES TOURISMUS IN DER REGION KURSK

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Annotation. *Dieser Artikel widmet sich dem Thema Aussichten zur Entwicklung des Tourismus in der Region Kursk. Das Territorium der Region*

Kursk ist durch unzureichende Kenntnisse der Bevölkerung über die Erholungsmöglichkeiten und geografische Lage des Gebiets gekennzeichnet. Unter diesen heutigen Bedingungen ist eine umfassende Bewertung des Erholungspotentials der Region Kursk erforderlich, wobei die regionalen Besonderheiten und Nutzungsperspektiven ermittelt werden.

Schlagwörter: *Erholungsmöglichkeiten, Entwicklung der Region, Natur, Entwicklung des Tourismus in der Region Kursk, Erholung und Tourismus*

In den letzten Jahrzehnten begannen sich Erholung und Tourismus in der Weltwirtschaft dynamisch zu entwickeln und wurden zu einer der Quellen des Wohlstands sowohl für Industrie- als auch für Entwicklungsländer in der ganzen Welt.

Das Territorium der Region Kursk ist durch unzureichende Kenntnisse der Bevölkerung über die Erholungsmöglichkeiten und geografische Lage des Gebiets gekennzeichnet, was unserer Meinung nach ein der Hauptfaktoren ist, der die Entwicklung von Erholung und Tourismus in dieser Region stört. Unter diesen heutigen Bedingungen ist eine umfassende Bewertung des Erholungspotentials der Region Kursk erforderlich, wobei die regionalen Besonderheiten und Nutzungsperspektiven ermittelt werden [Kumova, 2004].

Um die damit verbundenen Probleme zu lösen, werden geographische, integrale, differenzielle, technologische, kartografische, physiologische und psychologische Forschungsmethoden für Freizeitressourcen verwendet. Im Moment gibt es viele verschiedene Fachliteratur über das Studium der touristischen Routen in der Region Kursk sowie zahlreiche Internetseiten über die natürlichen, kulturellen und historischen Ressourcen der Region Kursk.

Die Region Kursk ist Teil der Russischen Föderation. Die Natur der Region ist sehr malerisch. Das Territorium des Gebiets besitzt die hochentwickelte Industrie und Landwirtschaft. Hier gibt es große Vorräte von Eisenerzen, Phosphaten, Kreide und Torf. Unter den hervorragenden bekannten Menschen der Region sind viele, die ihren Beitrag für die wissenschaftlichen und technischen Entdeckungen und Forschungen geleistet haben [Kumowa, 2004].

Das Territorium der Region liegt an den südwestlichen Hängen des zentralrussischen Hochlandes, dessen hügelige Oberfläche 177-225 m über dem Meeresspiegel liegt und stark von Flusstälern und Schluchten zerschnitten ist. Der höchste Punkt der Region und der gesamten Region Chernozemie, der 288 m hoch ist, befindet sich an der Quelle des Flusses Rat.

Die Formen und die Intensität der Erholungsnutzung des Territoriums sind eng mit der sozioökonomischen Entwicklung der Region verbunden, die Umsetzung der Ressourcenvoraussetzungen für die Erholungsorganisation und die Befriedigung der Erholungsbedürfnisse der Bevölkerung entweder beschwert oder erleichtert. Im Allgemeinen schenkt man große Aufmerksamkeit der Hauptrichtungen der Tourismuspolitik in der Region Kursk [Kumowa, 2004].

Im Register der Exkursionsrouten in Kursk und Kursker Region sind vom Jugend- und Tourismuskomitees etwa 20 Haupttouren aufgeführt. Mit der Bestimmung des Tourismus und der Reisen als vorrangiges Ziel der strategischen

Entwicklung der Region, weist die Verwaltung der Region Kursk auf die besondere Rolle hin, dass an diesem Prozess der Privatwirtschaft teilnehmen muss. Die Privatwirtschaft ist in der Lage und kann eine aktive Rolle bei der Entwicklung von hochwertigen Produkten und Dienstleistungen spielen, die die internationale und inländische Nachfrage befolgen [<https://adm.rkursk.ru/index.php?id=494>].

Wenn man über die weitere Entwicklung des Tourismus spricht, so ist es folgendes notwendig:

- die Konsolidierung von Unternehmen, Organisationen und Institutionen, die sich mit der Betreuung von Touristen befassen;
- die Erweiterung des Angebots der regional-touristischen Produkte;
- die Organisation von Aktionen und Veranstaltungen zur Förderung der Entwicklung des Tourismus in der Region Kursk (Ausgabe von Broschüren und Werbungen, die Veröffentlichung von Informationen über die Region im Internet und in touristischen Zeitungen und Zeitschriften; die Durchführung von verschiedenen Messen und Konzertprogrammen);
- die Erstellung eines Auftrags zur Herstellung des touristischen Produkts und systematische Überwachung seiner Qualität;
- auf Initiative und mit aktiver Unterstützung der Verwaltung sollen die regionalen und städtischen Behörden günstige gesetzliche Bedingungen für die Entwicklung des Tourismus in Kursk und der Region schaffen.

Aus unserer Sicht könnte ein diesem Zusammenhang als wichtigste Empfehlung für die Entwicklung des Tourismus in der Region der Eintritt der Region Kursk in die touristische Route „Der Große Goldene Ring Russlands“ gelten. Gleichzeitig könnte das der Entwicklung des Inlandtourismus in Kursker Region sowie der Verbesserung und Erweiterung der touristischen Infrastruktur der Region und die Erhöhung der Zahl der Arbeitsplätze beitragen.

In der Region Kursk gibt es viele Erholungsressourcen für ökologischen und sportlichen Tourismus. Die einzigartige Erholungsressource des ökologischen Tourismus in der Region ist das nach Professor V.V. Aljechin genannte Zentralno-Chernozemnyie Staatliche Biosphäre Naturschutzgebiet. Die Landschaft der Region ist günstig für solche Arten von Sporttourismus wie: Wandern, Skifahren, Bau von Lehrskipisten, Bergwandern in Mittelgebirgen, Radfahren, Reiten.

Die Landschaft passt auch gut für den medizinischen Tourismus, d.h. für den Bau von Sanatorien, Pensionen, Erholungsheimen und -zentren. Für den Strand- und Badeurlaub muss man terrassenförmiges Ufer, den offenen Zugang zum Wasser, den Sandstrand bauen.

Das Bioklima der Region Kursk ist im Allgemeinen ganz günstig für die Erholung. Das kulturelle und historische Potenzial der Region verdient auch als Bildungstourismus besondere Aufmerksamkeit. In unserer Studie haben wir die Probleme und negative Faktoren in der Region betrachtet, die die Entwicklung von Erholung und Tourismus behindern. Dazu gehören:

- unzureichende Informationen über die Region Kursk unter den Touristen;
- die Umweltprobleme der Region Kursk;
- schlechte Qualität von Touristenservice;

- schlechter und nicht attraktiver Zustand der Gebäude im Stadtzentrum und einiger Objekte mit kulturellem und historischem Potenzial [<https://svastour.ru/articles/raznoe/rossiyskiy-turizm.html>].

Fazit

Die Bewertung des Erholungspotentials und die Zuweisung von Erholungszonen der Region Kursk ermöglichten es, die Hauptrichtungen für die Entwicklung des regionalen Tourismus zu bestimmen.

Die Untersuchung des sozioökonomischen Zustands der Region Kursk gibt eine Möglichkeit, die Nutzungsart des natürlichen und kulturhistorischen Potenzials im Interesse verschiedener Erholungsarten und den Tourismus selbst zu korrigieren.

Die Region Kursk, die früher nicht als attraktiv für Erholung und Tourismus galt, wird allmählich zu einem der Anziehungspunkte für Touristen in Zentralnoje Chernozemnyie, da sie eine günstige geografische Lage hat, um Touristen und Urlauberverschiedene Freizeitressourcen anbieten.

Für die Entwicklung des Tourismus in der Region sollte in erster Linie die Zusammenarbeit zwischen Staatsbehörden, Verwaltung, Unternehmen und Institutionen bei der Entwicklung der Tourismusbranche empfohlen werden. Darüber hinaus ist es notwendig, die Aktionen und Veranstaltungen zu organisieren, um die Entwicklung und Förderung des Tourismus zu fördern.

Es ist auch notwendig, günstige gesetzliche Bedingungen für die Entwicklung des Fremdenverkehrs durch die regionale Verwaltung zu schaffen; die Empfehlungen und Programme zu erstellen, um Informationen über die Sehenswürdigkeiten der Region Kursk innerhalb und außerhalb des Landes zu verbreiten.

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SECTION 2. SOCIAL SCIENCES, ECONOMICS

FEATURES OF EDUCATIONAL AND ENTERTAINING CONTENT ON REGIONAL TELEVISION (ON THE EXAMPLE OF THE STATE TELEVISION AND RADIO COMPANY "BELGOROD") IN 2021-2022

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Abstract. *In this study, we analyzed the educational and entertainment content of the Belgorod state television and radio company in 2021-2022. The motivation to turn to this aspect was the increased interest of modern researchers in the mass media that operate in conditions of constant competition. It turned out that the creation of content for such TV shows has four features, each of which is described in detail in the study. The article also proves that when developing TV programs, the channel is forced to follow modern trends in the development of regional media, which are also detailed in the work. Implications of the results obtained.*

Keywords: *mass media, regional television, entertainment content, educational content, online-media*

Now researchers have shown an increased interest in mass media (television, radio, online-media). This is explained by the fact that over the past decade, there has been a dramatic increase in the online-media, YouTube channels in connection with which the television market is under pressure and competition.

The problem of the functioning of regional television in the face of competition with federal television channels and federal and regional online-media is particularly acute.

There is a large number of published studies describing the trends and features of the development of regional TV channels [Basmurzina, 2019; Skuridina, 2018], the specifics of creating programs on regional television [Ivashkova, 2018; Kalacheva, 2019], and the prospects for regional mass media [Miroshkina, 2019; Smirnova, 2020].

The experience of these studies will help us in studying the issue of creating educational and entertaining content on regional television. It's possible to believe that this topic will unlock the potential of regional television, which works not only as a high-quality advertising platform for advertisers in the region, but also as a mass media that seeks to satisfy the interests of the audience in various directions.

Hence the goal of this paper is to find out what are the features of educational and entertainment content on regional television. The uniqueness of

this study exists in the fact that the content of the state television and radio company "Belgorod" is taken as an empirical basis for the study, which has not been done by any researcher in the context of this topic.

The methodological basis of the study is the principle of scientific description, which allows interpreting quantitative and empirical characteristics and presenting the results of the study. The study is based on the following methods: theoretical, namely generalization and systematization, general logical, such as comparison and analysis, and others – content analysis, continuous sampling method, elements of statistical analysis.

The analysis of aspects influencing the features of creating content on the research topic

The author of the work "Releasing news on public and regional television: methods of construction, genre and thematic content" managed to establish that in regional programs the geographical coverage of events is formed in such a way as to draw the attention of the audience to the news story and to the territories where the action takes place. The conclusion of the researcher that the subject matter correlates with the territorial principle of news selection and reflects the events of the region is also logical [Kalacheva, 2019]. The importance of the stated thesis allows attributing the aspect of broadcasting to the local audience to the key features of creating educational and entertaining content on regional television. Another author draws attention to this provision, and reinforces the thesis with the argument that the ability to broadcast for "personal" viewer is the real superiority of regional television, which requires the development of the most effective ways of implementation in the near future [Skuridina, 2018]. In addition, it is worth noting that the federal media will never be able to get close to the regional audience: national TV channels are constantly striving to expand the geography of their messages, but most often this happens due to international news, not local ones [Smirnova, 2020].

The factors hindering the development of regional TV channels include the following indicators: increased competition for the audience between various types of regional media; popularity and accessibility of online media; more active and efficient work of online media with information related to the region, which S. A. Skuridinova identified as a result of a study of the main trends and features of the development of regional television [Skuridina, 2018]. It can be concluded that these items are directly related to the production of educational and entertainment content by regional television.

Having outlined the main conditions under which regional TV channels have to create educational and entertaining content, it's worth proceeding to its direct analysis. As it was mentioned, the releases of five TV programs that are created by the state television and radio company "Belgorod" and broadcast during the regional prime time on the TV channels "Rossiya1" and "Rossiya 24" were taken for the empirical basis of the study. Such programs include "Morning of Russia. Belgorod", "Belgorod Memory Card", "Human and Faith", "Vesti. Science" for TV channel "Russia 1"; program "Culture" for the TV channel "Russia 24". Data on the number of issues analyzed are presented in Table 1.

Table 1. Some features of the analyzed issues

TV program name	Program type	Direction of the program	Number of analyzed TV releases for 2021-2022
"Morning of Russia. Belgorod"	daily program on weekdays	educational and entertaining	174
"Belgorod Memory Card"	special program	educational	8
"Human and Faith"	special program	educational	1
"Vesti. Science"	special program	educational	1
"Culture"	special program	educational	3

1. Evidently, an extremely important feature of broadcasting educational and entertaining content to a wide audience is the transmission structure and its technical components.

A systemic analysis of TV releases allowed summarizing the information and visualize it in Table 2. The presented conclusions allow disagreeing with the thesis of the author of the article "'Like' to regional television: problems and prospects of regional broadcasters" E. A. Smirnova, who argues that the problem of modern regional media is a limited technical resource. The researcher believes that the shooting of stories is usually limited to one location, journalists rarely use life, stand-ups, "overlap" the picture only with off-screen text [Smirnova, 2020]. According to the table, correspondents and presenters often use the stand-up format. In addition, the analysis of the episodes allowed noting that the program "Morning of Russia. Belgorod" has changed three studio premises in less than a year of continuous broadcasting. Observation showed that the studios for broadcasting improved each time. An absolutely new studio was also created for the "Vesti. Science". It turns out that the income of this regional media allows regularly updating the technical base of the TV channel.

The study of the theoretical base shows that educational and entertaining programs are indeed created according to a standard compositional plan: the plot, the main part, the climax and the denouement. At the same time, journalists use the principle of an inverted pyramid. In this case, the most important information about the event or phenomenon, and details are given to the audience [Ivashkova, 2018].

2. Many important provisions were revealed when characterizing the genre-thematic content of educational and entertainment programs.

Increasingly, regional programs maintain audience interest through unique content. Researcher N. A. Basmurzina notes that today this has become possible thanks to storytelling, which is characterized by the fact that plot construction is based on real stories of local residents [Basmurzina, 2019].

The analysis of the TV programs makes it possible to understand that the stories created in the storytelling genre are of a purely local specificity.

Table 2. The results of a systemic analysis of TV releases

TV program name	Release Timing (average)	Number of TV stories (average)	The number of releases in the frame of the stand-up format (average)
"Morning of Russia. Belgorod"	23 minutes	3	5
"Belgorod Memory Card"	10 minutes	1	4
"Human and Faith"	12 minutes	1	2
"Vesti. Science"	12 minutes	4	6
"Culture"	12 minutes	3	2

Attention should be paid to the positive experience of the program "Morning of Russia. Belgorod" which began its broadcast at the end of April 2021 and managed to gain the trust of the viewer. Storytelling is the backbone of the TV program. The vast majority of materials tell about the fate of individual residents of the region who have achieved particular success in sports, work, creativity, professional activities, volunteering and other areas. At the end of each episode, the presenter announces that everyone can contact the producers of the program via e-mail, get a mobile phone number or search for various social networks in order to suggest a topic or an interesting character. Such work with the audience allows influencing the viewer emotionally: the audience trust the TV channel, a person has a desire to share an individual story.

The observations made it possible to identify other interesting genres within which educational and entertaining content is presented on the TV channel. In the form of an extended informational plot, material is presented for the "Vesti. Science". Special reports from art exhibitions and concerts are the specifics of the "Culture" program. As a unique genre, the material for the historical project "Belgorod Memory Map" is presented. In the release of the program, the story is associated with an appeal to the past through archival photographs, videos, documents and the broadcast of the current situation (interviews with historians, political scientists, and eye witness accounts of events). The religious program "Human and Faith" also acquired a unique format, where the main theme of the issue is a significant event in the life of believers and is revealed through interviews with clergymen, or religious people, and a generalization of the accumulated historical material on the problem.

The leading programs "Vesti. Science", "Human and Faith", "Culture", "Belgorod Memory Card" also create content for the TV show, and allow drawing the following conclusion: there is a conditional personalization of headings on the TV channel. Researchers have concluded that this trend helps to keep the part of

the audience that is interested in receiving a certain kind of information exclusively in a specific program. The constancy of the journalist leading the rubric also contributes to the emergence of a sense of trust among the audience in the truthfulness and honesty of the program [Basmurzina, 2019].

The street-talk format has become a traditional genre for every second episode of the "Morning of Russia. Belgorod". Correspondents Polina Bykova, Victoria Kozhushnaya, Vladislav Kharchenko most often work in this direction on important social or entertainment topics. Interviews with astrologers, psychologists, nutritionists, cosmetologists or doctors for the same TV program are most often conducted by its permanent presenter Olesya Shabanova. This circumstance allows making an assumption: regional TV channels lack professional staff, so it's not possible to see a frequent turnover of correspondents in the same genres. Nevertheless, the researchers are betting that the school of regional television is an excellent start for a journalistic career, since in the conditions of a limited human resource, a regional media journalist masters almost all creative and technical professions in this area and becomes a competitive specialist already at the federal level [Smirnova, 2020].

3. The image of the host of the program contains a special load because the researchers argue that TV presenters become the link of each issue [Ivashkova, 2018].

The manner of conducting the TV releases is friendly and calm, which may indicate that journalists adhere to uniform professional standards or the adopted editorial policy. A similar image of TV presenters is fully consistent with the format of television programs.

It should be noted that the middle-aged presenters and correspondents are most often involved in the creation of educational programs ("Belgorod Memory Card", "Culture", "Human and Faith"). Perhaps this is due to the difficulties of developing the problem-thematic basis of the release and its production. Program "Vesti. Science", where a young TV presenter is involved, is considered an exception. Perhaps this is an editorial decision related to attracting the younger generation to the scientific topic. As a rule, young TV presenters and correspondents work on creating entertainment content for program "Morning of Russia. Belgorod".

It's found out that the "Belgorod Memory Card", "Culture", "Human and Faith", "Vesti. Science" are special and do not air regularly, so the presenters of TV releases do not change. TV program "Morning of Russia. Belgorod" goes on the air daily on weekdays. TV presenters Olesya Shabanova and Natalya Tomitsik work on TV releases with different frequency. The "temporary" presenters who are mainly involved in the development of news programs of the TV channel (Aleksey Kornev, Lyudmila Pershina) were noticed several times during the analyzed period. In such situations, the editors fail to hide from the viewer, accustomed to a certain image on the screen, a force majeure due to which the "permanent" presenter did not go on the air.

4. The author of the study "Trends in the development of information broadcasting of a regional TV channel" discovered that the growing popularity of

online media and YouTube channels makes it necessary to reconsider the ways of presenting information. In this regard, programs are now mastering the Internet space and moving into the category of Internet television. For example, TV channels conduct video broadcasts on the network [Basmurzina, 2019].

When analyzing five educational and entertainment programs of the regional TV channel a similar trend was identified: programs upload videos of their programs to the YouTube platform, to the official website, to the channel's pages in social networks (Vkontakte, Instagram) to expand the audience. This allows keeping TV channel in touch with the viewer. In addition, the author of the scientific article "Like" to regional television: problems and prospects of regional broadcasters" discusses the challenges and strategies for the need to develop Internet platforms and social networks [Smirnova, 2020].

This study was designed to clarify the features of educational and entertainment content on regional television.

It can be said that the main factors determining the development of television in the context of the region are the conditions of the external and internal environment. This conclusion is consistent with the findings of previous studies, according to which the main factors in the development of a regional TV channel are as the followings: the concept of broadcasting; creation of new projects; the presence of advertising; new faces [Miroshkina, 2019].

Thus, although regional television is under pressure of federal TV channels, online media, YouTube channels and local media, this does not prevent individual TV channels from developing in their own directions. Analysis of the programs of the state television and radio company "Belgorod" made it possible to identify the features of the creation of educational and entertaining content of this media. It is based on the structure and technical content of the TV show, the genre and thematic content of TV releases, the image of the presenter, the release of the TV program on other platforms, including YouTube and various social networks. The present results also indicate that the syncretism of the genres of television journalism makes it possible to combine information and entertainment in the plots. The results of the study indicate that programs with educational and entertaining content perform the key functions of television: informational and recreational.

The results obtained are valuable not only from the point of view of the uniqueness of theoretical conclusions. They are of practical importance: regional TV channels can use the material to improve their own content, in particular when creating educational and entertainment programs. In addition, the acquired knowledge will be useful for students in the study of specialized disciplines: Fundamentals of television journalism, Genres of television journalism, Television program.

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TOOLS FOR PERSONNEL ADAPTATION IN THE CONDITIONS OF DIGITALIZATION OF PERSONNEL MANAGEMENT

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Abstract: *The article presents the results of a review of digital tools that are used in the course of organizing the process of adaptation of employees of organizations in modern conditions. Different opportunities for greater flexibility and mobility through the use of new technologies are analyzed. Then new effective methods in the conditions of digitalization of personnel management are considered.*

Keywords: *personnel adaptation, personnel management, digitalization, personnel adaptation tools, HR sector*

In a competitive business environment, more and more organizations are realizing the importance of unlocking the full potential of digital technologies for the HR sector. Intelligent work provides opportunities for greater flexibility and mobility through the use of new technologies and concepts in the work place, and this is another step in this area to achieve new highest results. The use of effective methods is one of the main goals for all modern organizations [Chashchin, 2021: 300].

The increased attention to the problems of forming an effective process of personnel adaptation in the conditions of digitalization of personnel management is primarily due to the need to maximize the potential of digital technologies for effective changes in human resource management. These qualitative changes should correspond to the brand-new knowledge and digital innovations in modern economics and management. In the conditions of digitalization, an effective process of adaptation of new employees can be ensured through the use of modern technological tools.

Materials and methods. The gamification method involves presenting any situation or process as a game, and all its participants as players. The games are successfully applied during adaptation activities. With the help of special programs and applications, a new employee learns to apply knowledge in a game format in accordance with the specifics of the organization, thereby adapting to the working conditions in it. This method allows you to arise interest and motivation for training, quickly reach the required level of labor productivity, increase staff involvement and the level of innovative thinking.

With the help of a chatbot that can be used on the basis of messengers (Whatsapp, Telegram and others), it is possible to carry out constant feedback between a new employee and an organization. Through such a bot, an employee receives detailed and exhaustive pre-prepared answers to his questions about the company, daily routine, social guarantees, corporate culture and much more. In turn, a chatbot can be a means for corporate mailing lists with important information. The advantages of using a chatbot are the reduction of the company's costs with high staff turnover, the convenience of the format for informing a new employee about the organization, minimizing the decrease in labor productivity, which is inevitable when a new employee is included in the work, by freeing HR managers from assistance in personnel adaptation.

The use of a corporate portal created on commercial or open platforms can also be considered one of the adaptation tools. Commercial ones include Oracle WebCenter Suite, MS SharePoint, IBM WebSphere, 1C-Bitrix, open ones – Joomla!, Jboss, Plone, Drupal, Jive and others. Such a portal can be used in the process of adaptation as a means of familiarization with the necessary corporate documents and important information about the organization, to get acquainted with the main processes in the organization, as well as a means of training the adaptable employees. The convenience of such a portal is to quickly and remotely familiarize a new employee at a convenient time for him outside the box via the Internet.

Cloud services can become a platform for distance learning of new employees Mail.ru, Yandex. Disk and others. Downloading training videos and other files, sending them out using communication tools, such as a chatbot, will reduce the time for staff training and its costs.

The use of applications or services for evaluation is relevant in the conditions of digitalization (Proaction.PRO, Commito KPI, Squadrille, StartExam and others). The assessment of a beginner at each stage of the adaptation process can take place in a convenient mode. The software product allows you to individually determine the evaluation criteria, change the scales and adjust the value of each quality or skill that an adaptable person should possess. Such methods speed up the process of evaluating a new employee through automation, allow you to monitor the effectiveness of the adaptation process and adjust the training of a new employee in accordance with the competencies he needs.

The means of establishing communication between a new employee and an established team can be the creation of an online community. Virtual acquaintance, informal communication takes place here, the necessary support and assistance can be provided, which contribute to the formation of the labor collective [Subochev, 2019: 264]. The platform for creating such a community can be: the company's website, social networks and various messengers.

To sum up, it must be emphasized that automation of processes and reduction of paperwork, followed by an increase in such a resource as time, has a positive effect on the personnel management department, and also allows you to save money resources [Zhuravleva, 2019: 64]. Thus, automation and digitalization of personnel adaptation processes using these tools are ways to positively influence the effectiveness of the adaptation process, both in the qualitative aspect and in the time and financial aspects.

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IMPACT OF THE COVID-19 PANDEMIC ON HR MANAGEMENT

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Abstract: *The article considers the impact of the COVID-19 pandemic on the field of personnel management. In particular, new methods of personnel management are described, which began to be actively used during the pandemic, and a number of problems in the field of personnel management that have become a consequence of it are highlighted.*

Keywords: *personnel management, pandemic remote work, HR Digital, operational monitoring, economic relations*

The assessment of the consequences of the COVID-19 pandemic on various spheres of public life is just beginning. The pandemic has had a painful impact not only on people's lives, but also on the effective activities of organizations. In the context of the pandemic, there was a need to revise the strategy of companies and restructure their main management systems, including the personnel management system.

The non-stop and rapid changes in the world associated with the COVID-19 pandemic have increased the importance of the HR function in each company. Competent human resource management is the most effective tool for adapting to new realities.

At the same time, the sphere of personnel management itself has mainly been transformed through changes in economic relations, forms of interaction between employees and employers, and the expansion of the practice of using remote work formats.

It is fair to note that most companies were not ready for the immediate transition of the operational model of personnel management and adaptation to the new unplanned reality caused by the pandemic. The managers faced a number of key issues which included the following ones: the ways to organize operational monitoring of the health status of employees; defining a pay strategy for quarantined employees; getting ready IT systems for mass transfer of employees to remote work; spotting processes that an organization could automate quickly; the ability of the organization to promptly adjust recruitment plans.

In addition, during the outbreak of the pandemic, many organizations were forced to switch to new management methods, applying the new global trend HR Digital. The transition to digitalization is a new stage in the development of the HR industry and brings the work of HR specialists to a new level of management, where they must use modern digital tools such as HR automation, HR analytics, HR marketing, Smart recruiting, e-learning [Urintsov, 2019: 269].

Ensuring a high level of staff involvement in remote work, maintaining a unified corporate culture in a situation of change, creating the most convenient service for employees using digital technologies have been priorities in the field of personnel management not only since the beginning of the spread of COVID-19, but also to this day.

Remote work revealed the existing need to increase the level of motivation of employees. In the process of erasing the boundaries between work and personal life, most workers have faced burnout, a crisis in relationships and other psychological problems. To combat this, organizations have deployed a variety of assistance programs, for example, a set of webinars, joint meetings with management, online team building [Medvedeva, 2020: 17].

The pandemic had a significant impact on the organization of recruitment and selection of personnel. Despite the frequent transfer of interviews online, this process has become much more efficient. Together with standard selection tools, gamification elements are now used: the candidate's behavioral reactions are evaluated by specified algorithms. In addition, the pandemic has affected the speed of decision-making, and therefore the selection procedure has become much shorter. Now job seekers can quickly get feedback, and employers have the opportunity to view more candidates and cut off unsuitable ones at the testing stage [Safonov, 2020: 557].

Undoubtedly, the COVID-19 pandemic has entailed other negative consequences: stress and anxiety of employees, a high level of staff turnover in the organization caused by mass illnesses, a reduction in "live" personal and group communications, and many more issues. Employees of the older generation, for whom the transition to new forms of activity, interaction and management is most difficult, are also under threat [Yakubovich, 2014: 411]. Nevertheless, organizations strive to eliminate all kinds of threats that hinder the effective activities of their employees.

Thus, the COVID-19 pandemic has significantly affected not only the work of the organization as a whole, but also the field of personnel management. Despite the large number of problems that have arisen, the pandemic has served as a powerful impetus, causing a new stage in the development of the HR field.

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FEATURES OF MOTIVATION MANAGEMENT OF EMPLOYEES OF GENERATION „Z”

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Abstract. *The article considers the peculiarities of the phenomenon of Generation "Z", people born at the junction of the 90s and 2000s. A number of features that characterize this generation are being analyzed, including: focus on quick results; high level of self-esteem; focus on their own goals; lack of attachment to a particular organization; ease when working with any information and using digital technologies; ability to do several things at the same time; quick involvement in work, social responsibility. The work is based on general scientific research methods: deduction and induction, analysis and synthesis, generalization; a number of publications of researchers on the subject under consideration are observed.*

Keywords: *motivation management, digital economy, personal, generation Z, incentive system*

Personnel are the most important economic resource of modern organizations; in this regard the role of personnel services in the processes of its formation, use and development is increasing [Anichin, 2017: 67]. The motivation and incentive system is a key tool that influences the development of personnel and its effective use. The formation of this system is one of the most important strategic tasks in the activities of any organization [Timokhina, 2021: 348].

At the same time, the formation of an effective motivation and incentive system should be based on the use of a differentiated approach in the context of various categories of personnel. Thus, with the increase in the number of

employees of organizations in the proportion of employees of generation “Z”, the problem of forming an effective motivation and incentive system for this category of employees is becoming more urgent. It is customary to call people born at the junction of the 90s and 2000s Generation “Z”. There are a number of features that characterize this generation, including: focus on quick results; high level of self-esteem; focus on their own goals; lack of attachment to a particular organization; ease when working with any information and using digital technologies; ability to do several things at the same time; quick involvement in work, social responsibility [Baidalova, 2018: 31].

In order to build a highly effective motivation system for Generation Z employees, their core values should be taken into account, which will allow creating the incentives needed by the employee. Among the incentives that could influence the motivation of Generation Z are the following ones:

1. Mentoring system.
2. The opportunity to implement the creative potential.
3. The possibility of using social networks, corporate portal, various technologies in the workflow.

It is necessary to take into account the fact that modern youth has changed the preferred source of information and the preferred form of content. To be successful, content for generations Y and Z must have very specific characteristics: short, but informative; visually rich, but simple; personalized, but accessible everywhere; engaging, interactive, socially relevant and honest. If we want to involve them, we must learn how to motivate them effectively through training and the social significance of their work.

The features of motivation management of generation Z employees can be distinguished as followings:

1. Coaching approach in management. This approach can help employees and managers to maximize their own resources.
2. New technologies. Young workers need modern technologies, for example, chatbots and platforms for communication.
3. Continuous development. For employees in organizations, there should be a well-structured training system for training in different directions.
4. Organized adaptation and mentoring processes. Assistance in adaptation will be better perceived from an employee of an equal position than from a manager.
5. Personalization of the recruiting procedure. Giving employees the opportunity to formulate their own job titles and practicing personalized job descriptions is preferable.
6. Unacceptability of borders and frameworks. Generation Z employees do not like the control over their arrival and departure times, the rigid assessment of labor.

Employee motivation management features should be taken into account to retain generation Z.

Taking into account these features, it is possible to increase employee loyalty, their productivity and their satisfaction with the remuneration system.

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THE MAIN GOALS AND OBJECTIVES OF NEUROMARKETING

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Abstract. *In the article it has been considered that neuroscience today is relevant due to the growth of competition in the market of goods and services, excess of the product offer, an increase in the number of players in the market. The author draws attention to the fact that the role and influence of neuromarketing is constantly increasing, because the human brain can predict and potentially influence consumer behavior and decision-making. The article discusses the main goals and objectives as well as neurobiological methods and technologies of neuroscience.*

Keywords: *neuromarketing goals, application areas, consumer neuroscience, behavioral economics, neurobiological methods, advertising*

Neuromarketing has gained its popularity relatively recently. The marketers comment that in the field of marketing research, its methods are used little or very little. Research was conducted at universities from the point of view of science, but not for commercial purposes of large corporations. Another reason explaining the rare use of this field of marketing is ignorance the opportunities it offers.

This new development of neuroscience is important for the public understanding. Some have argued that the public understanding of brain imaging lacks sufficient skepticism. The public may not always realize that the colorful results of functional brain scanning appear as such only after extensive image processing and statistical analysis as well as in the context of a specific experimental paradigm.

The field of neuromarketing, also known as consumer neuroscience, studies the brain to predict and potentially influence consumer behavior and decision-making. Imaging, scanning, or brain activity measurement technology is used to measure a subject's response to certain products, packaging, advertising, and other areas of marketing.

Today neuromarketing has emerged thanks to some amazing discoveries in the fields of neuroscience, social psychology and behavioral economics, which have changed our understanding of how the human brain perceives, interprets, makes decisions and acts in the world. These findings will be applied to advertising, marketing and consumer behavior.

Neuroscience is a branch of neurobiological research that aims to understand consumers through their cognitive processes and is used in marketing, explaining consumer preferences, motivations and expectations, predicting their behavior and explaining the successes or failures of marketing or advertising messages. In other words, neuromarketing is any marketing or market research activity that uses the methods and techniques of brain science or is based on the conclusions of brain science [Agarwal et al., 2015].

The basics of neuromarketing are as the followings:

- *Neurology* which is the science of studying the human nervous system, including the brain, its anatomy, functions and the peripheral nervous system that it controls.
- *Behavioral economics* which is the science of studying how people make economic decisions in the real world.
- *Social psychology* which is the science of studying how people think and act in the presence of other people.

The main goal of neuromarketing is to understand what the consumer will react to, whether it's the color of the packaging, the sound that the box makes when shaken, or the idea that the buyer will pay attention to and buy, because the buyer does not have such a product or service.

If we consider **the specific goals** of neuromarketing, they are as the followings:

- 1) Knowledge of how the human nervous system receives, encodes, stores and extracts information from human stimuli.

2) Check the effectiveness of advertising messages created by marketing science.

3) Receive data that will help you choose the best format that provides a stronger emotional connection with the consumer.

4) Forecasting consumer behavior based on scientific research.

5) Improve the planning and development of all aspects of marketing: communication, product, price, promotion.

6) Meeting the real needs of the consumer in adjusting the marketing strategy of the brand.

To study the brain processes of the consumer, neuromarketing uses neurobiological methods and technologies, as well as experimental methods. Neuroimaging, pharmacological manipulations, psychological or psychophysical methods are very often used to study basic psychological processes such as attention, memory, learning or emotions, among other tests.

How neuromarketing can be useful to an ordinary person:

- It can explain us what's going on in consumers' brains when they experience a marketing stimulus.

- It can tell how the brain reacts to marketing stimuli presented in various situational contexts.

- It can show how the brain translates these reactions into decisions and consumer behavior [Bonner, 2015].

If talking about the global applications of neuromarketing, marketers consider the followings:

- *Branding*. Understanding brands and branding is an area in which neuromarketing plays a big role. A strong brand evokes deep associations with related ideas that keep this brand in the spotlight of consumers.

- *Product*. Innovative product and packaging design are two areas of research in which neuromarketing is of great importance.

- *Advertising* is the most active area of neuroscience. In this field, it answers questions such as: “How does advertising work?”, “What makes one ad more successful than another?” Such questions have always been incomprehensible, but thanks to this science, these questions have answers.

- *In-store shopping and marketing* are areas of research in which neuromarketing helps to understand the needs of customers and why they buy certain products.

- Since nowadays most of the purchases are made online, *the Internet* also needs neuroscience.

- *The entertainment industry*, in which neuroscience can be used to understand how people are persuaded or manipulated to buy a particular product.

The field of neuromarketing is new and a bit complicated for many people. Before neuroscience, marketers relied solely on market research through traditional methods such as focus groups, interviews, and field trials to gain insight into consumer interests.

Thus, the above mentioned technology helps marketers understand how a particular person's brain reacts to a particular situation using different resources and tactics [Daugherty et al., 2018].

Marketers have **4 principles** of neuroscience, which are used by large corporations:

1. *Scarcity*. There is no denying that if a certain product or service seems to be in short supply or in short supply, people are more likely to buy it. The reason is that the fear of missing or losing something can be stronger than the desire to get something. Experienced marketers use the concept of scarcity to increase demand for their products. Streetwear retailers such as Supreme or Yeezy have popularized the concept of a "drop" product, where less product is offered for sale than required, resulting in limited editions selling out in minutes.

2. *Psychology of habit*. The logic of creating a habit is very simple – it's all about repetition. They say that if you want to make people known on any channel, allow them to desire intentionally or unintentionally. The same applies to business, which is why subscription services have been in vogue lately. The repetition of these games makes people crave them because these games become their unintentional habit.

3. *Impact on emotions*. Almost everyone wants to have a person in the life who understands emotions of other people without expressing them.

4. *Social proof*. As humans, we are social beings, and our behavior in many cases is determined by social norms. A person is more likely to do something if others do it.

In consumer behavior, if several people buy a particular product or service, it works as a „social proof” and more people will follow that particular behavior, thereby increasing the demand for that product or service. For example, reviews in marketing are a way to attract consumers, since observing how other people have benefited from this particular product or service can act as a powerful driving force to follow the same behavior (for example, in buying). Neuromarketing is a complex system that includes many goals and objectives for its development and the most effective use. Due to neuroscience people can understand what is going on in a person's brain, what drives his decisions, how to use advertising effectively and much more related to subconscious influence on a person.

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MERCHANDISING AS A METHOD TO STIMULATE SALES

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Abstract. *In the article merchandising has been considered as a method to stimulate sales, directly effecting buying activity. The author characterizes this effect with the help of various merchandising instruments influencing the formation of the would-be behavior in the retail space. The author also emphasizes the importance to create the brand identity resonating with customer identity, which ensures customer loyalty enhancement. In the article the conclusion is made that upon optimization of the retail floor it is necessary to pay attention to trends, currently topical design of shop windows, products arrangement and design the shop so that it allows representing the product in the best possible way.*

Keywords: *trademark, merchandising instruments, assortment, customer's behavior, sales-purchase process, retailer, enterprise income*

Under conditions of contemporary economic situation any trading enterprise striving to carry out its activity successfully in the consumer's market, has to orient at quality and relevance of the products to be sold, as well as to try efficient managing of products sales. Sales management of the products is one of the main criteria for the enterprise to earn a profit and maintain sustainability under conditions of tough competition.

One of the contemporary marketing technologies to manage products sales is merchandising. Merchandising stimulates sales through attracting attention of end users to certain trademarks and goods in the outlets without active participation of the trading personnel in the sales-purchase process. It allows to promote the product efficiently, to create a special ambience in the shop, to optimize the product assortment in the shopping space, to develop an optimal shop planogram, to increase a number of repeat customers, to enhance personnel performance efficiency and maximize the enterprise income.

Merchandising may be of various types, and selection of an appropriate merchandising depends upon a seller, accessible space and type of products to be sold.

There are **5 merchandising types**:

1. Product merchandising
2. Visual merchandising
3. Retail merchandising
4. Digital merchandising
5. Omnichannel merchandising

Product merchandising is products promotion to earn income. The product may be of any type, for example, a digital product or a physical product, available in retail shops. If it is a training/educational online-course, then advertising actions will be carried out, predominantly, on the Internet through electronic marketing or social media marketing.

Visual merchandising is a process of selecting products and their features using demo methods. Visual merchandising may be defined as all activities implemented to display the product in order to emphasize its distinctive feature. Actions, applied in visual merchandising, may be created using any available space, layout and distance between the products, lighting in the shop and realization various designer's solutions. The mentioned above type of merchandising is appropriate for products sales in the shop and on the Internet. Bright colors and different "screaming" slogans are used for this purpose. At the same time, it is not less important to organize the space in the proper way.

Retail merchandising strictly refers to products sales in an ordinary shop, such as a trade center, individual trading sites set up during events. Retail merchandising includes all marketing and advertising activities, which are somehow used to sell the goods to customers. However, in a digital space retail merchandising is called digital merchandising.

Digital merchandising is a term used instead of retail merchandising to sell the products on digital platforms. All types of activity applied to promote the goods on the Internet are included. It is called, as well, online merchandising, or electronic commerce. It includes all types of activities, such as web-sites promotion, demo of digital products, e-mail marketing, social media marketing, digital marketing, etc. Digital merchandising assumes ever-growing importance, because more and more retailers open their business on the Internet for wider public outreach.

Omnichannel merchandising or omnichannel retail sales refers to creation of interaction with clients, when a retailer sells his/her products and could contact those clients. For example, when a retailer sells the products in a physical shop, via a web-site of electronic commerce or application, then he/she will try to provide a problem-free service to the clients. For example, if a buyer visits your shop through a search system, but exits the page without purchasing anything, then he/she will receive exclusive offers by e-mail or through social media marketing. Merchandising is relatively cheap and proves its high efficiency. The researchers have proved that buyers participate in the purchase process unconsciously, acted upon by impulses, formed by purchasing instruments [Ajith et al., 2018].

Merchandising is an efficient method to enhance sales of products in the shop. It includes various types of activity, such as demo methods, advertising actions, special offers, free samples and other operational methods in the points of sales. Each retailer is to have a clear identity in order to communicate with his/her consumer efficiently. An available identity of the retail brand, resonating with a customer identity, expands opportunities of a retailer to establish meaningful relations between the customer and the brand. It leads to higher client involvement, enhancement of brand loyalty and growth of readiness to pay. Though for retailers

it is especially important to establish correspondence between an own identity of the customer and that of the retailer, it is significant to recognize that both identities will be constantly developing. To maintain compliance between the identities, the retailer has to reveal, form and integrate the consumer's experience through contact points so that he/she resonates with the customer [Roggeveen et al., 2021].

Nowadays there is a formidable competition between brands and trademarks, each customer may select in favor of any product, based on his/her own preferences. Therefore, to interact with your customers properly, it is necessary to find out needs of your clients and make them attractive offers. Contemporary technologies assist to get orientation at the target customers, because many brands use such merchandising instruments as banners, advertisement, discounts, layout in the shop, so that the seller will make a buying decision spontaneously, right in the shop.

After a purchase has been made, the retailer may collect lots of necessary information: a purchased number/amount of goods, a paid sum, composition of the purchase basket as well as data on the consumer – a gender, age, composition of his/her family. If that information is processed properly, it will give better orientation at your “own” clients, offer the customer products he/she is interested in and forecast his/her behavior in the shopping space, as well as allow developing other instruments in order to encourage customers adopting decisions in favour of your products [Grewal et al., 2017].

Thanks to reasonable utilization of the available trading space, the shop layout may “enforce” the buyers to traverse along a majority of passages in the shop and to increase access to the goods. The buyers could not make impulsive purchasing in the shop unless they see the products. Consequently, the more products are viewed by the buyers, the more purchases they make. Other instruments are displaying of products “needed” by the buyers in the corners or in the back part of the shop, thus enhancing visibility of the product. In contrast, the goods “wanted” by the buyers are to be displayed before the shop in order to attract people into the shop. Besides, the layout of the shop should provide the client a nice and exciting travel across the shop.

If marketing communication promotes this or that product and trademark efficiently, packaging is made in the shopping space properly, buying decision is immediately adopted. The clients might be attracted by a shop window or a general exterior appearance and the increase of the client's number is followed by a sales growth, especially in combination with well-planned merchandising instruments, which are visually attractive. Effective layout and appropriate division of the hall into trading areas, goods compliant with the customers' needs, a number of items in the assortment, ambience in the shop and other factors must be oriented at reduction of time spent for search of the planned products in order to free up time for unplanned purchasing and in-depth examination of the products. When time and efforts of retailers are spent for planning and layout of shopping floor spaces, it is necessary to maximize potential of the latter, to use all available space and

organize the work of the shop in such a way, that the buyers may, at the same time, gain positive impressions from purchasing.

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FIVE MANAGEMENT MODELS OF THE INNOVATION PROCESS

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Abstract. *The article provides an overview of management models of the innovation process used in the work of innovative companies. A comparison was made and differences between five generations of innovation process models were revealed by the author. Special attention is given to historical changes in the evolution of innovation process models.*

Keywords: *innovation process, management models, competitive advantage, marketing, research and development expenses, innovations, cost efficiency*

The value of innovation in the modern world is increasingly increasing. For most enterprises, they become a driving factor in the competition. However, not all companies that have embarked on the path of innovative development achieve a satisfactory profit margin and competitive advantage in the market. And the problem for them often lies not in the lack of brilliant ideas and inventions that can lead them to the leaders, but in the inability to organize an effective innovation process from an idea to a successful product on the market. The study and application of the mechanisms of models of the innovation process can provide the enterprise with these conditions.

The relevance of the research of the innovative development of the enterprise lies in the fact that the use of innovations in the implementation of commercial activities allows you to take a leading position among manufacturers of new products, endow products with a high degree of knowledge intensity and novelty, thereby making it competitive on the world market.

In innovation management, there are five generations of innovation process models that have been used by innovative companies since the 1950s. The appearance of each new model of the innovation process was due to significant changes in the market, such as: economic growth, industrial recovery, tougher competition, inflation, stagflation, economic recovery, unemployment and lack of resources. Under the pressure of market changes, companies were forced to change their approaches to managing innovation processes.

The first approach that dominated in the 50-60s of the last century was **the “technology push” model**. Within the framework of this approach, a linear model of the innovation process was developed.

The innovation process in the linear model is presented in the form of a causal chain starting with discoveries, as a result of which new knowledge is transformed into new products, passing through certain stages. The result obtained as a result of each stage becomes the input resource of the next stage, and the subsequent stages do not provide feedback to the previous ones. Such an idea of the innovation process is associated with the scarce supply of new goods that developed on the market of Western countries in the period from the early 50s to the mid-60s of the twentieth century. Therefore, the more companies carried out developments, concentrating efforts on fundamental and applied research, the more products and services were brought to the market. It was assumed that large expenditures on research and development should provide more new goods and services. At the same time, the stage of commercialization of research results is not due attention was paid, as it was considered “automatic”. Research and development expenses were considered in companies as corporate overhead.

Increased competition in the market in the mid-60s in developed capitalist economies forced companies to step up marketing activities to stimulate sales. The change of emphasis in management led to the development of the second linear model of the innovation process called **“demand pulls”**. In this model, innovation was driven by demand, which had an impact on the direction and scale of technological development. The divisions of the companies interacted with customers who proposed the idea of a new product or a new field of research, and then passed the ideas on to scientists for development. Marketing was a source of ideas and directed the efforts of research units. The companies focused on increasing the cost efficiency of research and development, the introduction of project management in order to reduce the time of bringing a new product to markets. For the most part, companies using this approach to building an innovation process simply adapted existing products to meet the changing needs of users, thereby running the risk of becoming hostages of technological incrementalism.

The most famous kind of linear model of the organization of the innovation process is **Robert Cooper's "Gate" model ("Stage-gate model")**. The model divides the process of developing a new product into five consecutive stages with intermediate points. Each stage is a set of parallel actions performed by a project team formed from representatives of different functional areas of the company. The "gates" that serve as "checkpoints" between the stages of the project represent a certain set of results or criteria on the basis of which the management (a meeting of managers) determines the quality of the work of the completed stage and the appropriateness of allocating resources for the next stage. As a result, compliance with strict criteria for the transition of a project from one stage to another reduces the risk of final innovation. At the exit of the "gate" one of the following decisions is made: go to the next stage, close the project, postpone the project, and repeat the current stage. Before the start of the next stage, the plan for the stage is approved and the date of the next meeting of the "gates" and the results to be achieved are determined [Du Preez et al., 2006].

The disadvantages of the Cooper model include the inability to return projects to more early stages of the innovation process. Now many analysts consider linear models as too simplistic and show that in different markets, the value of the technological push and the stimulating role of demand for technological development can be different at different stages of the innovation process.

Many of these problems were taken into account in the third model of the innovation process, known as **the conjugate (interactive) model (Coupled model)**, which integrates the first two approaches and focuses on the process of establishing feedback [Rothwell, 2004].

In the coupled model, the sources of ideas are both the results and the needs of the market. Thus, there may be more than one direct path from research to commercialization of innovations. Innovation is considered as logically a sequential, but not necessarily continuous process. Feedback loops may occur at any of the subsequent stages. For example, market testing of a new product may indicate the need to refine the design. If it is impossible to solve the identified problem within the framework of existing knowledge, it becomes necessary to conduct additional research. The organization of information interaction between scientific, production and marketing activities in a coupled model has allowed companies to reduce costs.

The coupled (interactive) model, one way or another, remained linear. In the mid-1980s, the new organization of production at Japanese enterprises led to the emergence of the fourth generation of models of the innovation process – **integrated models**.

In this model, the stages of fundamental and applied research are excluded for the first time from the linear sequence of innovation formation. The role of a donor of fundamental (and applied) research is transferred to the state. Companies focus on the work of their own units. Research activity turns into a continuous process of supporting the units with scientific knowledge, by formation of a corporate knowledge base about advanced technologies, own

market solutions.

The integrated model has two important **distinguishing characteristics**:

1. high integration of production units with the external environment (for example, suppliers);
2. a parallel way of organizing work and using project teams.

This approach to the organization of the innovation process allows enterprises to reduce the time of product development while reducing costs, significantly increase horizontal cooperation (creation of joint ventures, strategic alliances) [Pervaiz, Shepherd, 2010].

The problem facing many modern enterprises the rapid introduction of a new product to the market in conditions of limited resources contributed to the emergence in the 1990s of a network model of the fifth generations of the innovation process (**Systems integration and networking model**).

The network model allows firms that do not have sufficient own resources to create innovations to develop through integration with a network of other firms and organizations (suppliers, research laboratories, universities, consumers and other institutions) [Rothwell, 2004].

The following advantages of the network organization of the innovation process can be distinguished:

- a group of small firms can create advanced technologies using the knowledge and resources of other organizations within the network;
- all participants benefit from the accumulation of skills and collective learning taking place online;
- within the network, companies can combine efforts, knowledge and skills in various ways to eliminate bottlenecks;
- there is a reduction in costs and time for creating innovations;
- the network promotes the entry of small innovative firms into the industry;
- companies have the opportunity to create a product that meets market requirements by involving suppliers and advanced users in product development.

Nowadays organizations need to be improved, as any innovation can become a competitive advantage. Five main models of the innovation process are described in scientific sources: the “technology push” model, Robert Cooper's “Gate” model, the conjugate (interactive) model, integrated model, Systems integration and networking model. Each of them represents a set of many useful mechanisms and tools for innovative development, as well as an important stage in the evolution of the innovation process. It should be noted that the market conditions and competitiveness of organizations are constantly changing, which ensures the continuous development and addition of existing concepts of the innovation process. Thus, new models are already being formed for the challenges of the new time, and their description in scientific works is only a matter of time.

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PLANNING STRATEGY OF THE ORGANIZATION ACTIVITIES

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Abstract. *The article deals with the problem of study strategic planning process and its components specific for the organization. The article reveals the definition of strategic planning, its tasks and goals. The article characterizes the processes, basic components, principles of strategic planning, as well as the advantages and main problems of its use. In the modern world it is difficult to ensure the stable operation of enterprises, focusing only on the current situation, so many enterprises use strategic planning in their activities.*

Keywords: *strategic planning, organization planning process, economics, regulations, enterprise*

The relevance of strategic planning is that it helps the company to make effective management decisions to achieve their goals.

The purpose of this article is to determine some specific features of strategic planning process of organizations.

Strategic planning is a way of determining the goals of the organization, the resources that it needs to achieve them; definition of standard plans that are aimed to the acquisition and use of these resources [Ilinykh, 2005].

Many modern companies use strategic planning for their activities, because it has a number of such advantages as:

- full analysis of possible threats and opportunities;
- contributions to the development of corporate spirit;

- analysis of the advantages and disadvantages of activities;
- creation of prerequisites for strategic thinking;
- increase the efficiency of organization management;
- creation of regulations for departments of the organization;
- optional resources.

Strategic planning of the organization includes the following factors: social, economic, political. For successful activity, the organization must analyze the external and internal environment.

Forecasting the activities of the enterprise, the formation of methods for improving activities are the main goals of strategic planning.

The tasks of strategic planning include the analysis and evaluation of the organizations activities for business success.

It is necessary to consider strategic planning as a set of interrelated management processes, following one after another. It should be noted that these processes can influence each other in reverse order.

Strategic planning processes are as the followings:

1) the mission of the organization is defined, at this stage it is described in detail: why the company exists; how it differs from all other organizations; strategic vision. A criterion is created for evaluating all the actions of the organization;

2) the goals of the organization are determined – here the organization will determine the results that need to be achieved over a certain period;

3) an analysis and assessment of the external environment is carried out – the external environment can be divided into two main groups: the close and the far environment. The inner circle joins customers, shareholders, suppliers, competitors. The outer circle is for all other groups of people (state, society, etc.) joined according to their interest;

4) an analysis and assessment of the internal structure are carried out – the internal environment includes fixed assets, raw materials, labor resources, funds, technologies;

5) an analysis and development of strategic alternatives are carried out – at this stage decisions are made to achieve the goals of the company;

6) a strategy is chosen – the organization chooses among the alternatives one propose that is more suitable for its activities;

7) a strategy is being implemented;

8) a strategy evaluation is determined.

Strategic planning is an long-term planning of the enterprise (3-7 years). Its distinguishing feature is a lack of clear values of indicators, with the help of which all the results of the company activities are evaluated. It determines the course of the organization activities and goals, as well as the ways and means to achieve these goals.

Components that are used in strategic planning are as the followings:

- analysis of the potential opportunities and strengths of the organization;
- determination of the main factors of development of the organization;

- availability of competitive advantages of the organization, due to the introduction of innovations, cost reduction for goods/services, as well as prices;
- synergy effect;
- SWOT analysis (advantages, disadvantages, opportunities and threats);
- Comprehension of the need for strategic planning of the activities of an organization [Shogenov, 2007].

Strategic planning is necessary in order to make the decisions in terms of the current situation, as well as to forecast future activities.

It's important to mention the principles of strategic planning which are as the followings:

1. The principle of unity. There is a single, specific goal, the activity is aimed to achieve.
2. The principle of participation. All employees of the organization are participants of the planning process.
3. The principle of continuity. Planning activities should be carried out throughout the specifics of the organization.
4. The principle of flexibility. The organization should have an ability to change its plans and direction.
5. The principle of accuracy. The plans of the organization must be specific, if possible, and detailed [Rudenko, 2014].

The concept of modern strategic planning allows organizations developing a set of methods and tools that can adapt the enterprise to market conditions. Effective planning is the foundation for the development and implementation of a system of interrelated measures aimed to strengthen the economic situation in enterprises and create conditions for further effective work [Rudenko, 2014].

Evidently, the development and implementation of strategic planning can cause many difficulties:

- management department is not prepared for strategic planning;
- management department is not interested in planning activities;
- choice of a wrong strategic planning process;
- ineffective planning and control process;
- organization has no strategic control;
- incorrect interaction with external companies [Magdanov, 2008].

In conclusion, strategic planning is the key to the successful policy of any organization, because it allows assessing the current situation, predicting the future, helping to identify potential opportunities, as well as possible threats. This is one of the functions of management department, which is a process of selecting the goals of the enterprise and methods to achieve them.

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DEVELOPING REVENUE MANAGEMENT IN THE HOTEL INDUSTRY

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Abstract. *The article deals with the problem of revenue management in the hotel industry. The purpose of the article is to consider the processes of stabilization and development of the hotel business, and to find the method of income management development of a hotel enterprise. The practice of income management arrangement in the hotel industry is analyzed, as well as the problems of income management in this area are presented. Some methods for developing an income management strategy, as well as technological solutions based on statistical indicators of the activities of a hotel facility are proposed. The information touching the issues of interaction of OTA channels and development prospects is presented by the author.*

Keywords: *hotel services, strategy, competitive advantages, revenue management, cost reduction, market segmentation, automated system, online platform*

In the modern hotel management ensuring the growth of operational indicators, reducing costs and ensuring growth are the main tasks of each hotel manager. Technological features of sales tools have their own characteristics, so it is worth focusing on them. In order to determine the effectiveness of the hotel business and the direction of its development, the manager needs to have information on technologies for determining the best price to create a high profitability of the hotel based on demand forecasting, which is called Revenue

Management (Cost Management). The selection of criteria includes the location of the hotel, number of rooms, market segment and some other features. Highlighting the fact that the cost of accommodation for different periods is different, it can be mentioned that this should be done in accordance with the additional demand. In order to maximize income, hoteliers need to be able to anticipate and take into account all individual customer requests in the hotel business. This is not only the number of rooms sold on a particular day, it is the general picture of the number of rooms sold, the refusal received, the potential demand (a guest who wants to book, but does not have time to do it or who is stopped by the competitors) [Bushueva, 2019].

The demand for hotel services is inelastic, so a price reduction will only lead to a decrease in income. It is necessary to run not by lowering the price, but by developing the service. The task of each hotel is to provide the guest with the best price that meets the needs.

The main indicators and necessary information that determine the effectiveness and smoothness of the work process are as the followings:

1. Daily receipt of reliable information. Data, analytics, statistics on the results of the hotel activities should be regarded.

2. Accurate forecast of demand and load allows making the right decision in choosing a tariff, organizing relevant purchases, and personnel planning. It is necessary to mention that forecasting requires both detailed statistical and data on real previous bookings, as well as data on possible bookings.

3. It is also important to highlight that guests are of different types and among them there are the most pleasant ones. To provide a database for collecting this information, it is necessary to have a PMS system and a CRM system. In this case, it's possible to get a general picture of the duration of the guests stay, detailing the additional expense and preferences of the consumers.

4. Modern revenue management can reach some deeper indicators, such as average tariff (ADS), revenue per available number (RTP). And today, the revenue management focuses not only on the sales of the room stock. In particular, the efficiency of sales of conference rooms can be estimated by the coefficient of their frequent use.

5. Formation of a revenue management culture is a technological operation. At present modern automated tools for profitable management are becoming increasingly important, teamwork, the focus of employees on optimizing profits from all sources – all this requires the collaborative work of all departments of the hotel. But the booking department specialists, the restaurant service people, as well as the sales staff should be involved in all the processes related to the issue of achieving the strategic goals of the hotel [Romanyuk, 2016].

The main criteria that the industry should develop for profitable management are as the followings:

1. Available production facilities that allow performing the work efficiently and on time.

2. Attracting additional buyers. As a rule, companies that accept orders or reservations beyond their production capabilities face the task to choose the guests.

At the moment, income management helps the company to be sure that they get more profitable guests refusing less profitable ones.

3. Change in demand for services during the day. The team representatives have to be selective during peak periods, as well as stimulate demand of guests during less profitable periods. Due to this, it is possible to increase the load for low periods and prices for high ones; thus, to increase revenue by managing sales volumes and prices.

4. Market segmentation. Different groups of guests with different consumption specifics should have different approaches to service products. In particular, business travelers plan their trip at the last moment and wish to pay a higher price for the flight and the hotel room that best matches the schedule [Lesnik, 2020].

Currently, there is a wide range of channels and methods of sales through which hotels conduct their activities, but the most expensive is OTAkana – online intermediary sites. The Booking Company engaged in booking hotels is among the leaders. It occupies the high position of the hospitality industry market. In addition to this channel, hotels use the official website of the hotel, the phone numbers of the hotel support service, reservations through tour operators / tour agents, reservations "from the counter" / without pre-order.

The hospitality is a constant change. And the American global travel company Expedia has acquired online travel agencies Travelocity, Orbitz, HomeAway. OTA Booking Service Booking.com (a giant online platform) now offers technological solutions, such as automation of the hotel through PMS and profit management. The online meta search platform MATSearch is expanding its fast booking offerings to keep customers on its sites. OTA have become channels for online travel purchases, forcing hotels to pay much more for customer access. The increase in the cost of sales has reached 15-25% and continues to grow. And hotels continue to pay third parties to provide more and more opportunities for selling services every year. On average, hotels pay from 16% to 18% of the guest income they receive from attracting customers, but this ranges from 15% to 25%, and in some cases from 35% to 40%. These costs are distributed by about half – these are internal and external costs for direct sales and marketing. From 7% to 15% of the guests income is accounted for by internal payments, and marketing expenses – the remaining 7%-10%. The market positions have become more and more obvious. Guests make the choice of hotels much deeper in the search process, because they collect travel information on aggregator sites, such as: Google, Trip Advice and Booking.com, before expanding the long list to a short one. In case a consumer decides to make a purchase of a hotel on the Internet, there is a chance to turn to seven or ten sites and be redirected to search the information sites based on which hotels have a higher rating [<https://hotel.report/events/oteli-i-ota-vmestestestno-vroz-skuchno/>].

The first industry study dedicated to the study of customer acquisition costs was completed in 2019 by the Hotel Business Management Association (HAMA). The Association collected information on almost 500 member hotels for the period from 2015 to 2019 and found out that commission costs for hotels grew twice, i.e.

as fast as income growth. The threat to the hotel industry of dependence on third parties is an increase in costs during promotion, and the erosion of the brand due to the fact that hotel services become of high-quality and unique that they cease to differ in any way from each other. For this reason, consumers in general do not understand anything about why they should pay more for something. With the help of OTA, which is a hotel management tool in the hotel business, can analyze the prices of other hotels based on the analysis of competitors prices. As a result, making adaptation to market conditions and dynamically changing the cost of placement to a more profitable one for the buyer. From the point of view of online channels, one of the constituent factors that influence the positioning of an object in the sales leaders is elastic pricing strategies for consumers. And that is why everyone understands how important it is to have a high level of service and a special pricing strategy that directly affects the loading of the number fleet.

It's important to mention the experience of the hotel business management department and revenue company – "Xotels". An independent Greystone Lodges on the River hotel worked with the company. As part of this strategy, a competitive strategy was developed to promote the number funds, regardless of changes in the tariff policy through OTA channels.

The company "Xotels" offered the participants of the competition of non-refundable rates hotels with flexible conditions that allow canceling reservation 24 hours before arrival. At the same time, flexible conditions compared to conditions without compensation turned out to be more profitable for consumers. This fact was introduced into the OTA algorithm and it began to promote the hotel to the top of sales. Within a few weeks, the hotel moved from the 3rd booking page to the 1st without increasing the commission fee. The increase in the utilization of the hotels room stock was 7% compared to the previous year [Ukhina, 2017].

The international revenue management company "Kalibri Labs" collected information from almost 30,000 hotels in the USA. This information was obtained from 2017 to 2020 with an ongoing data update process on a monthly basis that will occur in the future. This data includes information about total revenue, nights of accommodation and channels, segments and the tariff code for each transaction in these hotels. Based on these data, a number of net income indicators are formed and the profile of each major region in the US market is provided. With the help of this Kalibri database, it is possible to analyze trends at the level of a hotel, region, brand, group of owners, as well as to analyze trends in the third-party market in the frame of the country and, in particular, in a specific market. Analyzing whether a stand-alone hotel or a hotel chain is of an overstated or understated index a particular supplier or a particular business model can provide an idea of what can be offered in the market. Such analysis can help a hotel team determine whether the tactics is good.

It's important to mention that international hotel industry experience can help the Russian market understand the development direction. The technology of profitability management in business shows that Revenue Management is an increase in income not only here and now, not only during a period of high demand, but also in the future. Currently, there are many companies in the hotel

market that are engaged in the development of automated systems that help the hotel manage pricing. In 2020, HOTEL SALESTRACKER plans to enter the market with a new product, an innovative one, which has no analogues in any of the existing markets. Artificial intelligence guards the hotels revenue and sales. According to the company, the product has already been tested in the largest hotels of more than 200 rooms. The Sky Point Hotel in Sheremetyevo became the approbation base for this platform. With the help of HOTEL SALESTRACKER, it is possible to quickly find the answer to any question. Artificial intelligence analyzes a huge array of information and presents this data in the form of a graph and table. The program evaluates about 7000 pieces of information annually. At the same time, considering that it "searches" the data specific for the previous three years, it turns out that in general the program estimates 28,000 units of information. In its calculations there are 147 indicators. These are not just standard hotel indicators (ADR, workload, etc.), but deeper analytics data. The graph shows the data of the reports. Thus, HOTEL Sales TRACKER makes it possible to monitor the situation that is happening in the hotel, to see blind spots, and also to take prompt action [Stepanova, 2018].

The automated hotel management system allows analyzing the situation every five minutes. As a rule, in such cases, price adjustments based on incoming bookings or cancellations can be seen. The automatic unscheduled report informs if the hotels competitors do not have available rooms, and it is a distinctive feature of the system that provides a positive feedback from hoteliers. At the moment, the online platform has been successfully tested on the basis of the Alex Groupe hotel chain. Currently, all these factors allow recommending automated revenue management solutions to the Russian hotel industry and, in the future, to the world market.

Currently, 80% of the guests of modern hotels get information from the Internet. According to this indicator, there is an increase, which makes absolutely all owners and managers focus on the following: calculate the optimal advertising campaign, reduce the cost or consider the effectiveness of advertising campaigns. The hotels need to develop a marketing strategy that can really increase the profitability of the hotel with the help of online advertising and minimize financial problems. Only a small percentage of hotels in the market of accommodation services for tourists and guests of the capital do not use the services of OTA intermediaries. With each sale, the hotel loses 15-18% of the cost, paying a commission of OTA. Therefore, hotels are searching the ways to increase direct sales in order to reduce their OTA dependent position. It is necessary to find out the policy of interaction [<https://hoteltechreport.com/news/revenue-management>].

In conclusion, Revenue management in hotel industry is an essential element for running a successful business. To achieve high sales rates, businessmen focus on different indicators and on external factors, therefore, HOTEL SALESTRACKER systems (artificial intelligence) should be used to systematize and analyze information about guests.

Also OTA sites are popular, high-quality, visual, and most importantly, they are highly trusted. The person who consult the Booking.com can be sure that the

information provided (photos of the hotel, its description, accommodation conditions and guest reviews) is verified and reliable. If the hotel is well advertized and has a good reputation, it can push new guests to visit it.

Hotels try to learn all the services of OTA to get high sales rates, and they tend to develop additional marketing strategies to reduce the cost of cooperation with the specialists of the sites.

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DETERMINING THE MAIN FEATURES OF THE TOURIST SERVICES

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Abstract. *The article focuses on the specifics of Travel Company functioning in relation to high-quality service provision. The aim of the study is to single out and analyze the most important components of the service provision process. The author justifies the importance of hospitality in tourism and travel-related services. The article focuses on the ethics of business communication, which makes an integral part of tourism business management. The study provides insight into such vital issues as service strategy and contact areas and can be of interest both for specialists in tourism business and the general public.*

Keywords: *tourism, Travel Company, travel-related services, service strategy, tourism business management, hospitality*

Nowadays the issue of providing high-quality hospitality and tourism services remains relevant as it contributes to the success of tourism business. Based on this presupposition it is important to single out and consider the most essential components characteristics of a travel company operation.

It should be stressed that service ("public service") is "a package of various social products" [Fasmer, 1986]. Service is a complex process based on the interaction of a representative of a tourism product (tour operator or travel agent) and its consumer (tourist). The main peculiarity of this process is that the creation of a tourism product, which occurs in the above-mentioned interaction. The outcome of this process depends on the effort and behavior of the parties involved in this process. It can have either positive or negative results.

Hospitality is one of the cornerstones of high-quality service in tourism business. In the ordinary sense hospitality is the act of being friendly and welcoming to guests or visitors and is characterized by openness, good-nature, respect, and politeness of travel agents. The hospitality of travel agencies is quite similar: the employees use their professionalism to make customers feel at home.

Hospitality in the provision of tourism and travel-related services has a great impact on the consumer, without it, the tourism product would lose its originality, and therefore, the tourist would not be able to fully satisfy with this product. The customer who is treated well is happy to purchase a tourism product and to recommend the travel company to other people.

When providing tourism and travel-related services, it is important to highlight the general recommendations on the techniques of tourism service, which are as the followings: clear compliance of the services provided with the paid set of

services; compliance of the advertised level of service to the declared one when selling the tour; targeting tours by content; precise and timely provision of services; optimality of the service program; animation of service [Ilyina, 2005].

It is very difficult to imagine the techniques of tourism service without such a component as the ethics of business communication as it directly affects the quality of service in a tourism enterprise. In business communication, the main regulator of these relations lies in ethical norms, which are based on the understanding of what is good and bad, right and wrong. According to this, the ethics of business communication can be understood as a set of moral principles, rules, ideas, and its role is to regulate the relations and behavior of people involved in the process of providing services.

According to the ethics of business communication employees representing a tourism product should be punctual, confidential, benevolent, polite, friendly, and respectful, they should be good professionals. All employees of travel agencies should follow the abovementioned principles. The staff should make efforts to ensure that their client is satisfied with the quality of service. Therefore, their appearance, manner of communication, attitude and willingness should help the client form a general idea of service [Botavina, 2001].

In addition to the service techniques, each travel agency normally devises a service strategy. The point is that the company acts in accordance with the plan that this strategy implies. The plan defines the priorities of strategic goals in the service, due to which, when they are achieved, a positive image of the organization is created, the number of regular customers increases, and the company has a stable position among the competitors in the market.

While servicing consumers, it is necessary to arrange the custom service environment, called the contact area.

In service-providing companies the contact area varies depending on the type of activity the company provides, it may have different scales and operate in a variety of settings. Basically, the service process takes place in the company's office, when a specialist and a customer sit at a table opposite each other, but sometimes the contact area is limited to a service space. In travel companies the contact area is usually an office in which the service is provided. The office of a travel agency should be functional, convenient, and comfortable. A pleasant interior, safety and comfort of the office as well as a good indoor climate create the right atmosphere for the contact area. The furniture and the atmosphere in the contact area influence the consumer's behavior and decision-making ability. Unfortunately, an unpleasant contact area can deter the customer from further cooperation.

Thus, the process of providing services is quite complex and capacious, as it is characterized by a number of features that affect the quality of service. This includes hospitality, ethical standards, qualified and customer-respecting staff, service techniques and strategies, which any travel agency should adhere to in order to provide high-quality services. Travel companies successful functioning helps to achieve goals and provide high-quality service.

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MASS COMMUNICATION ACTIVITY AS A MEDIUM FOR THE IMPLEMENTATION OF COMICS

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Abstract. *The article is devoted to the implementation environment of comics. The article studies the history of the appearance of the first comics, their development and their influence on the mass media. The object of the study is comics. The purpose of the article is to study the history of the development and formation of comics and consider their influence on mass communication activities. The study is based on the following methods: a review of the literature and the study of history.*

Keywords: *comics, caricature, typography, illustration, CCA*

The first comics appeared in the period of the 16th and 17th centuries, just then the first religious illustrations began to appear, the purpose of which was to retell biblical stories. However, as a genre of literature, “comics” originated precisely in the 19th century - during this period, the printing industry was actively gaining popularity. The first printed comics are considered to be illustrations by Rodolphe Toepffer, a Swiss writer and artist. It was he who became the founder in the publication of comic books and the first theorist in the field of studying a completely new direction in art.

The first work of Rodolphe Toepffer was the cartoon „Histoire de Mr. Vieux Bois”, written and illustrated in 1827, but it was published in Geneva exactly ten years after its creation. The book was presented in 30 pages and had 158 illustrations – short stories that ridiculed the adventures of the protagonist – the eccentric man Oldbuck and the life of his beloved. The stories themselves

consisted of hand-drawn pictures with brief captions telling the story in a humorous tone. Each story was divided into blocks consisting of three pictures, and gradually linking the characters together. This simple style of storytelling was widely and lauded by readers and became the canonical format in typography, which is still used today.

The beginning of the popularization of the comic book can be considered 1839 – during this period, the second edition of the comic book about the adventures of Oldbuck was written and published in 92 pages.

In 1892, the United States picked up the popularization and published in the newspaper the first American comic strip called “Bears and the Tiger”, with a simple humorous plot. In the future, American culture began to actively engage in the printing of comics: at first, cartoonists drew simple and uncomplicated stories for newspapers and magazines, however, popularity began to grow so rapidly that many studios had to create separate offices and hire employees for the rapidly soaring type of literature. No one then knew that comics were only to capture the world market of entertainment literature in the future.

Between the 1930s and 1950s comics culture began to gradually lose all humorous fervor and began to take up more serious and heavy topics for simple picture books: action and adventure came to the fore and the first superheroes began to appear in the world. On April 18, 1938, on the pages of the new Action Comics № 1 magazine, the character of the Superhero, rightfully cult for everyone, appeared, which made a boom in the comics industry: all possible plots were squeezed out of artists about him, so his antipode Batman appeared, and, subsequently, from another studio of artists the symbol of the American comic book, Captain America, was born.

Unfortunately, the Golden Age of comics passed quickly enough and was replaced by the Silver Age, which reduced the number of stories about superheroes. With the end of the Second World War, the world plunged into a period of recovery and few continued to be interested in people in colorful tights with raincoats screaming for world peace. All past characters have ceased to look comical and inspiring and have acquired the status of absurdity.

All of these factors led to a decline in humorous comics and an increase in demand for horror and action films, which saved the industry from a decline in popularity and introduced blood thirst into the environment of fascinating stories, which brought not the best messages for readers.

The new comics were so anti-moral that law enforcement raised the alarm and filed a lawsuit, which resulted in severe censorship of all creativity, political suppression and lack of freedom in writing.

The next period in the formation of comic book culture was not so brightly received by critics and readers. More serious problems come to the fore in superhero comics – drugs, gangsterism and depression. The Comics Code Authority (CCA), which has imposed the strictest censorship, again opposes a release with such a solid theme, but Marvel, which initiated the first comic book with such a heavy plot about Spider-Man, defends the right to release with the

support of readers. This caused the American community to lose respect for the CCA and advocate for the abolition of censorship.

At the same time, the first comic book about a group of mutants, called the X-Men, appears. The new heroes include racially different and international characters, raising a new wave of aggression. Echoing the struggles of the Civil Rights Movement, bias against the X-Men's genetic traits has become the comic's most enduring theme.

The comics of the Bronze Age, unlike the Golden and Silver Ages, focused on the harsh realities of racism and global hatred. As the stories became more focused on solid, realistic stories, the style of the images morphed to suit them.

With the onset of a new, Dark Age, comic book writers were already in full swing creating psychologically complex characters. Succumbing to the new fashion, Alana Moore's *Killing Joke* introduced us to the Joker, who was not just a giggling buffoon, but a terrifyingly psychotic serial killer. Guardians gave us heroes who were driven to questionable actions by the very nature of the world they were trying to protect. At the time, the line between hero and villain wasn't just blurry; writers found out that it did not exist at all [Sokovina, 2016: 12].

The idea of sustainable comics as a single literary work led to the publication of several graphic novels, culminating in Art Spiegelman's *Maus*, the first comic book series to win a Pulitzer Prize. Comics have finally come to be seen as a legitimate art form, as malleable and open to creative expression as any other medium.

Currently, comics continue to develop as an art form, despite of all the stereotypes that it is exclusively for children. Comic book culture has evolved into something massive and boundless that continues to amaze readers over and over again.

Thanks to the development of technology in film, television and video games, there have been many adaptations of comics, leading to an increase in the number of fans of this type of literature.

Comic books have become ubiquitous, no longer limited to publishing giants Marvel and DC, writers are free to explore specialized publishers and niche markets, even abandoning traditional distribution channels to publish their content online.

Due to mass communication activities, the distribution of comics has reached a large-scale stage. *Svobodna* began to touch upon and spread even more global topics published on free Internet resources, giving many readers unlimited access to content.

Currently, many topics are openly covered with the help of comics, they include journalism, education regarding any political views, fashion promotion and other socially important opinions and topics in society.

A recently underestimated form of literary art is experiencing unprecedented success and demand around the world. The now popular writer and comics artist Neil Gaiman describes the possibilities of comic culture this way: "... pictures and words are used to try to do what no one can ever do in cinematography" [Bogdanova, 2020: 2].

During the history of mankind, comics have adapted to the events every time. Just as comics affect society, so does society affect the topics that are raised in comics. Comics and graphic novels touch on a range of social issues and allow us to showcase what is happening in the world today. Some comics only function as plot devices, some act as social commentary, and still others try to make people think.

In recent years, they have seen an increase in interest in comics, primarily due to the entertainment industry and the Internet. The Internet has given people new opportunities to buy, sell and share comics in the online marketplace and websites like eBay and Amazon.com [Saudov, 2019: 3].

Internet comics forums and message boards have also provided a vehicle for comic book readers and collectors to come together and share their passion for this creative medium and pique the interest of those new to comic culture.

Thus, comics are now recognized as a valuable medium and we can see their influence in almost every sector of our entertainment. From movies to television and from video games to amusement parks, comics have had a huge impact on our culture. As a result, comics are no longer censored in the sense that they should and should not be. For some this may be bad, but for others it is a core part of free speech and the first amendment.

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MEDIA IMAGE OF A RESIDENT OF BELGOROD REGION IN PUBLICATIONS OF REGIONAL PRINTED EDITIONS (2020-2021)

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Abstract. *The article touches upon the categories of manifestations of Belgorod residents and classifies them into thematic groups revealed in the local press. During the study popular Belgorod newspapers and publications of a wide range of genres were analyzed. It turns out that the local press presents Belgorod residents in a positive and neutral way, but it never shows them in a negative way.*

Keywords: *mass media, media image, local Russian newspapers, print media, informatization*

In the era of informatization and close attention to the Web, when many aspects of our life are „mediatized” in social networks and statistical aggregators, we turned to the traditional print media of Belgorod and the region in order to make an attempt to classify the components of the media image of a modern Belgorod citizen.

A media image is a set of emotional and rational ideas based on information received from the media [Marushchak, 2012]. The theoretical basis of the study includes publications by domestic and foreign experts K. Boulding, S. I. Deryagina, R. S. Gilyarevsky, A. V. Marushak and many others.

The empirical base of the study is printed publications mainly published by the “Mir Belogorya Publishing House”: information and news publications “Belgorod News” (or “Belgorodskie Izvestia”), „Belgorodskaya Pravda”, “Sportivnaya Smena” and “OnOnas”, the youth magazine. In addition, the materials of the Ivnyansk district newspaper “Rodina” (“Motherland”), the socio-political newspaper of the Korochansky district “Yasny Klyuch” were studied.

Empirical material was also selected from the popular free newspaper “Our Belgorod”, published by the municipal autonomous institution “Belgorod-Media”. During the study of empirical material, standard scientific methods were used, including qualitative analysis of content, the method of scientific description and comparison.

The result of the study was the identification of a thematic group of publications aimed at creating a media image of a resident of the Belgorod region. These bands have been analyzed in terms of genre range and stylistic traits. As a result of the work, the cumulative media image of a resident of the region is formed by publications of the following framework topics: “Resident of Belgorod and ecology”, “Belgorod residents are passionate about sports”, “Resident of

Belgorod respect traditions and culture”, “Resident of Belgorod are a volunteer” and “Resident of Belgorod are positive”.

Thematic groups of publications include materials of a wide range of genres. The interview genre turned out to be the most influential in the context of creating a recognizable media image of a Belgorod citizen. The media image of Belgorod residents is diverse and not static.

In the materials of the local press, Belgorod and the region appear as places where significant cultural events regularly take place, many of which are unique in their kind. Belgorod residents take an active and feasible part in them. “*At big events it is often possible to see guys in blue and white t-shirts with a dove emblem. These are the “Victory Volunteers”. They help veterans and event organizers*” [Toktaryova, 2021]. Town people are not devoid of self-irony. “*When a person wanted to move, they thought that Belgorod was kinda religious city. Moved and realized – not “kinda”* [Shilin, 2021]. The media image formed in the print media of the region has a great influence on the formation of regional identity [Golovnyova, 2017].

To form an idea of the category of citizens through the speech of individuals, Belgorod journalists use the interview genre. In this genre, the speech features of the hero are very important. For example, a coach of a football team is expressed differently than a museum worker with forty years of experience.

The Belgorod media do not use the interview genre in cases where the speech of the hero – a lumpen, a criminal, a low-moral person can marginalize the media image of a resident of the Belgorod. The words of such people are transmitted by the journalist indirectly.

In conclusion, this work can be expanded and continued in the future. It is possible to investigate which messages from local media got into federal publications and to analyze the media image of a resident of the Belgorod region at the all-Russian level.

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**THE ACTIVITY OF MUSEUMS OF THE BELGOROD REGION OF
THE BELGOROD REGION IN THE COVERAGE OF REGIONAL
PUBLICATIONS (2019-2020): PROBLEM-THEMATIC AND GENRE-
STYLISTIC ASPECTS OF PUBLICATIONS**

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Abstract: *The article deals with the coverage of regional museum activities by regional media as an institution that has an impact on the development of Russian society. The article analyses the topics of publications devoted to the events of museum life. The most popular genres of notes and announcements are considered.*

Keywords: *regional museum, regional media, newspaper, Diorama Museum, exposition, military history*

The museum as a social institution organizes and coordinates the activities of people to preserve the monuments of past eras and transfer knowledge about them. Without the museum, this activity would probably have been fragmented and inconsistent [Dunaeva, 2011]. Museums form the educational and cultural environment, perform an educational function [Saskudaeva, 2018]. In addition, museums are developing and gradually linking their activities with modern technologies that allow them to attract a large number of visitors. Especially popular today are quests, which also organically fit into the museum space along with the usual excursions [Bitter et al., 2017]. The work of regional museums is aimed at preserving the history and culture of a particular region – they are often called local history museums.

Museums of the Belgorod region are among the most important cultural institutions in the Belgorod region. Belgorod State Museum of History and Local Lore, Diorama Museum “Battle of Kursk. Belgorod Direction”, Belgorod State Art Museum, Belgorod Museum of Folk Culture have the richest funds and, due to their active work, high attendance. This is probably why their names are most often found on the pages of local print media.

The regional newspaper „Belgorodskiye Izvestia” (BI), the regional “Znamya” (Z) and the city's “Nash Belgorod” (NB) are social and political, they promptly cover events in various spheres of life in the region. Culture does not take up much space on the pages of the studied newspapers, but in each issue several articles are necessarily devoted to it. Most often, these media cover the activities of museums in the Belgorod region on their pages.

The topics of publications are determined by the events that have taken place: the opening of exhibitions and the holding of public events. Institutions are

active, expositions often replace each other, and thanks to the continuous replenishment of funds and constant cooperation with other museums, they present new exhibits to the attention of visitors: “For two months, Belgorod residents had a unique opportunity to get acquainted with rare ex-donations from the collection of the Borodino Field State Military Historical Museum-Reserve, which in 2007 was awarded the UNESCO Prize, and in 2017 recognized as the best museum of military history”.

Another popular topic of publications is the interaction with museum visitors, the organization of excursions, lectures, meetings and other cultural events in which the inhabitants of the region constantly participate. This is how Belgorod residents learned about expositions and innovations that allow people with disabilities to make visiting museums accessible. Journalists talk about this, give their own assessment, various historical facts and quotes from the statements of the heroes and guests of the meetings.

When covering the events of museum life the genres of notes and announcement are more often-used. These genres help to quickly highlight the event and briefly convey the most important information about it. Less common are interviews that are dedicated to larger events.

Among the stylistic means, we can mainly see the descriptive words: "This is a unique project created by the joint efforts of the Belgorod State Museum-Diorama and the Tambov Regional Museum of Local Lore". Most often, they are used in the texts themselves, less often in headings.

So, the museums of the Belgorod region work closely with the local print media. The main topics of newspaper publications are the opening of exhibitions, interaction with the audience, holding meetings and lectures. To cover the topic of museum activities, the genres of notes and announcements are more often chosen, interviews are rarely used.

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REALITY SHOW ON MODERN RUSSIAN TV

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Abstract. *The article deals with the problem of the sharp impact on the viewer of the increasing popularity of reality shows on modern television. To track this trend, a survey was conducted within the Institute of Public Opinion, which identified the main reasons and genres of watching reality shows. The main classification was also considered, which helps to understand how reality shows are formed and what influence each of them has on the audience. It also allowed us to see the changes that occurred during the formation of the genre reality TV.*

Keywords: *reality TV show, format of the show, the script, hidden cameras, limited space, genre reality shows, analyzing respondents*

The reality TV shows have become very popular nowadays. In this regard, there is a need to study such programs. And in recent years, such shows have acquired a rather scandalous image. They had a strong impact on the behavior of a person, and its desire to lead a similar lifestyle, negatively formed on society.

Reality TV is a relatively new genre on television. Despite this, it has gained great popularity among viewers and has taken an important place in the media information space. Reality shows have become the most viewed products not only of the media market, but also of individual media structures. They had a great impact on their audience, changing the mass consciousness on the structure of TV programs. As a result, new types of reality shows began to appear. They were completely different in content, structure, and idea, and constantly competed with each other. Special attention is paid to the creative potential and quality of the content that was reflected in these projects.

The main problem was the appearance of a new reality TV product in the television market of many countries, which was reflected in modern television, in terms of its concept, content and genre characteristics. All this was directly related to the problems of the development of the information society in Russia.

The first programs were like spying on people. This format of the reality TV show was liked by the TV viewers, so it became the most popular in the world. About these programs, modern researchers write that the main idea of them was to bring the TV viewers closer to the events taking place in real life, which could only be observed through the TV.

It soon became obvious that it was interesting not just to peek, but also to create circumstances in which real people would behave in unpredictable ways. [Maximov, 2017: 307].

On modern television, there are fewer and fewer reality shows that do not have a script, and the camera just “spies” on how life goes. However, there are programs that have retained the old format. For example, in Germany, there is a TV channel that is entirely dedicated to reality shows. On it, the audience watches how the driver transports the cargo from point A to point B in real time. At the same time, nothing special happens. The viewer shows the ordinary life of the driver, his trip and conversations with people he meets. New places that he passes through are also shown – all this is shared with him by the viewer. However, most modern reality shows are filmed according to a made script. In addition, the creators are prepared to do anything to attract viewers and sometimes come up with unpredictable scenarios.

Currently, there are many attempts to classify the varieties of television reality shows. For example, S. L. Urazova identifies three typological branches of television programs, where their origin is taken as a basis. The researcher says that the first branch takes its origin from the American format *Survivor* (1998), owned by Fox [Urazova, 2011: 74].

The essence of this format is that the developers of reality shows put groups of participants in extreme conditions for “survival”. In this way, team members have fun in various exotic ways, trying to stay in the project as long as possible. Such programs were designed to examine the physical and moral qualities of a person, as well as to test it for “strength”, endurance and to understand how resilient it is.

The second branch takes its origin from the “Big Brother” program. It is who is considered the ancestor of Reality TV, this type of TV programs on the planet. A special feature of such reality shows is the isolated rooms in which there are hidden cameras. The essence of such projects is to explore the mental and behavioral nature of a person. According to the author of the program, daily life, replete with unpredictable twists, is much more interesting than any fiction. But in practice, everything turned out to be different. Monotonous daily life is not only uninteresting, but also threatens one of the important properties of television “entertainment”. Therefore, in order to give the program the greatest “drama” and increase audience demand, the producers of this branch decided to turn Reality TV into a Reality-Show.

With the change of the name of the program, a number of its characteristic features also change. First of all, the behavioral reaction of the actors who independently “write” the script for the program changes. This has led to the fact that the inherent research principle turns into a “bad” production, where actors “try to interest the viewer in various everyday turns” [Maximov, 2017: 307]. But this did not arouse any interest in the public. Then the producers of TV programs decide to strengthen the recreational function to make them attractive. The plot of such programs was aimed at identifying unknown human instincts. Gradually, the research TV program began to disappear.

The third branch was called “Talent Search”. In Russia, it is known for such programs as “Star Factory”, “Dancing on Ice”, “Ice Age”, “Become a Star” and many others. Also, this branch includes TV programs-games. The most famous

project in this direction is “How to become a millionaire”, which still focus the attention of TV viewers. There can be many variations of this type of reality show, and the search for talent can be conducted in any field. The main thing is that it is interesting and focuses the viewer.

There are several options for staging a reality show. Many projects when creating a program combine different approaches together. But in all cases, the participants live in a limited space, and their actions are constantly filmed and broadcast on television and the Internet. In such programs, all the turns of events are pre-planned and thought out in accordance with the standards and conditions of the show. The scenario is built so that the characters cannot move away from the framework.

Reality shows usually have a specific goal that you can achieve, win and get a significant prize. In addition to the main ones, there are also key elements, conditions of the format, which are prescribed in advance.

The participants of the project are not just characters, but also rivals in the fight for the main prize. They begin to drop out of the reality show with different frequency, on different grounds: by voting of viewers, participants of the show, or at the request of the creators of the program. That is, there are a number of certain rules that are known to both the audience and the participants. According to them, the drama of the project is built.

At the moment, there are many different classifications of reality shows. Each of them is unique in its own way. However, the most popular classification remains by genre. It consists of 3 genres, each of which is divided into several types. These divisions are similar to the classification of S. L. Urazova. However, it has its own unique differences.

1. Melodrama is a genre of reality show that reveals the spiritual and sensual world of the characters in vivid emotional circumstances.

2. Love story – a genre of reality show, in the center of which are interpersonal relationships between the characters of the project, the search for their “second half”.

3. Adventure – show, the plot of which is exciting, unexpected events that happen to the hero of a reality show.

When analyzing reality TV shows in the genre of “Adventure”, “Melodrama”, “Love Stories”, it was revealed that reality TV shows of each genre have their own characteristics that distinguish them from each other, and the further construction of the program, the selection of participants and the format of the project depend on them. Despite this, they are all united by common criteria: during the project, different situations are shown between the participants of the reality TV show, who are in limited conditions. All this is captured on cameras and shown on TV.

When analyzing the answers to the question do you watch any reality show (95%) of respondents answered “yes”. According to the survey of the “Institute of Public Opinion”, the most popular shows are those that reflect love relationships. They were preferred by (48%) of respondents. The second place was taken by reality TV shows related to the transformation of participants. They are watched by

(42%) of respondents. (39%) of respondents are interested in programs about repairs – this is the third place. The fourth place was shared by reality TV shows about survival and competitions, achieving the goal – (36%) of respondents voted for them.

The question “Why do you think people watch reality TV shows?” was also asked. The most popular answer is that people like to look at conflicts, quarrels, fights. More than half of the respondents (56%) answered it. The second place was taken by the answer – reality shows allow people to realize the desire to “spy” on someone else's life (48%) of respondents. In the third place – this is a way to relax, relax – (35%) of respondents.

Having analyzed these programs, it's possible to conclude that reality TV shows have become a very popular genre. They have a great influence on the viewer, showing real events taking place behind the camera. Regardless of the format, type, purpose of viewing and audience requests, reality TV shows are of great interest to viewers. This was confirmed by the survey data conducted by the Institute of Public Opinion. However, thanks to them, the growing popularity of reality TV show was confirmed.

Reality shows are easily recognized among other genres of television programs. They differ in their goals, objectives, methods and means of receiving and transmitting information. This makes reality TV stand out as a separate genre. Despite this, they are increasingly increasing their popularity, as the basis is “hidden surveillance”, and this is very attractive to viewers.

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THEORETICAL ASPECT OF IMPACT INVESTMENT IN THE MODERN WORLD

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Abstract. *The article is devoted to the relevance of impact investments. The impact investment criteria were studied, and their analysis was given to identify the relevance. The analysis made it possible to identify why it is profitable to use impact investing, its impact on society and how to accelerate the development of impact investments in Russia and allowed to reveal possible prospects for its development.*

Keywords: *impact investments, social investments, impact investment criteria, benefits of using impact investments, development of impact investments, socially transformative investments, social investment, investor interest*

Impact investing („impact investments” or “socially transformative investments”) is a term that has appeared in Russia quite recently and is just beginning to get acquainted with it. Impact investments are actively used in Europe and the USA, where they already have a powerful infrastructure and a research package [<https://www.garant.ru/products/ipo/prime/doc/72980288/>].

At the end of August 2021, a statement was issued, which was signed by 181 American companies, including Amazon, Coca-Cola, IBM, Jacobs, Apple, American Express and many others. This document announced new goals: instead of maximizing shareholders' profits, they decided to work with a more pronounced emphasis on the benefit of customers. In Russia, such a model is often called “social investment” [Busemeyer, 2019].

Impact investing is also understood as investments in companies and funds that, in addition to generating income, are interested in the impact of their activities on the environment and society. The investor secures ownership of the assets and expects to receive income at market rates and rates below the market average.

The investor's interest is not only in making a profit, but also in contributing to the development of society. This type of investment is different from charity. The impact investment criteria are presented in Figure 1.

The essence of goal setting is that socially significant goals are prescribed in the business plan. With their help, it is possible to determine what positive result will be achieved for society.

Return on investment is one of the key criteria for return on investment. This criterion makes it possible to develop markets for financing public initiatives – impact investing and has a long payback period.

The criterion of the return spectrum is that this indicator can have a value of 1%, 5%, 20%, etc. There must be a relationship between the benefit to society and the receipt of profit. Income can be generated at market rates and levels below the market average.

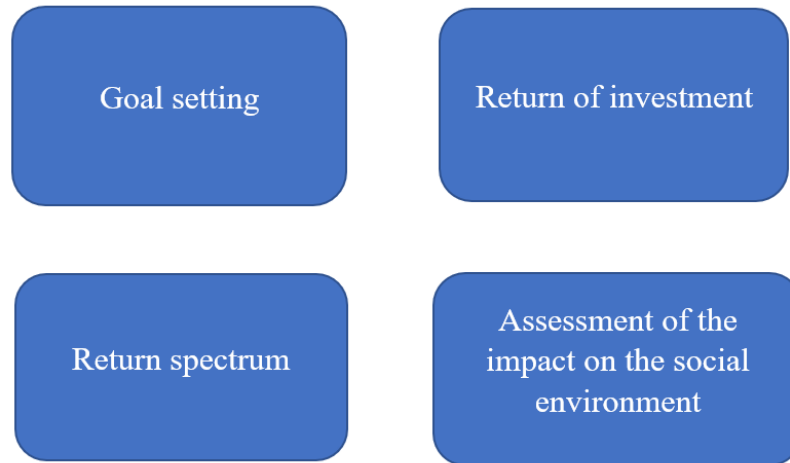


Figure 1. Impact investment criteria

The assessment of the impact on the social sphere is due to the fact that it is necessary in order to show a significant contribution to society and to declare that the goal has been achieved. Figure 2 shows the reasons for the beneficial use of impact investments.

Impact investments:

- meet global challenges, which means their impact in many areas. The most pressing problems in the world (global warming, poverty, limited access to medicine and education) cannot be solved only through subsidies from the state. It turns out that in order to achieve the Sustainable Development Goals in developing countries, 2.5 trillion dollars should be allocated annually [Gingrich, 2015];
- help to achieve the profitability of market rates. A study of the Global Impact Investing Network (GIIN) has shown that a significant part of impact investments (totaling \$ 15 billion) provides market returns [Ivanova, 2013];
- make capital work. In order to ensure social responsibility for business, it is necessary to invest in environmental, public and medical projects. The return on such investments will bring more benefits than working with donations or grants. Smart impact funds help recipients sustainably develop, earn profits and move towards progress;
- allow equalizing the value of investments. With impact investing, you don't have to choose what to focus on: social change and values or income. It is this type of investment that allows you to remind society that you are a responsible investor and at the same time you can make a profit;
- satisfy customer demand. Research conducted by the Global Impact Investor Network (GIANT) has proven that consumer demand is one of the main reasons why investment funds are increasingly offering impact investments. This means that in order to remain competitive in the modern socio-investment environment, it is necessary to offer impact investments.



Figure 2. The benefits of using impact investments

Investments change the culture of investing. The impact of impact investing is growing every year. Most of the funds allocated for the development of social projects have been raised over the past decade. Investors can use the experience gained to improve efficiency in investment activities. To create a new approach to impact investing, it is necessary to demonstrate leadership qualities and resources to revise the status quo.

Impact investments help to „heal the world”. Investors and social entrepreneurs have a moral duty: to unite to transform the economy and change the perception of values. Therefore, impact investing allows us to participate in the social changes that are necessary for our world and descendants. It is given to us to carry out social changes [Vladyka, Gorbunova, 2019].

Thus, in order to accelerate the development of impact investments in Russia, it is necessary to find a balance between well-being in the social environment and the efficiency of doing business in the country. To increase the awareness of the population about such a concept as impact investing. Create conditions for improving the clarity of work in Russian companies. Create a common framework of terms and effective tools for companies engaged in the development of impact investments in Russia. Provide government support to organizations that develop impact investing. For example, special tax regimes can be established for them, state funds or special organizational and legal forms can be created.

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FUNDAMENTAL ANALYSIS OF SECURITIES

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Abstract. *The article discusses the basics of fundamental analysis, the need for its application to evaluate companies on the stock market and its application in practice. The differences between the types of economic analysis used by investors at the current stage of market development are also investigated. The indicators of Sberbank, which are of interest for fundamental research, are considered. The factors of the world markets and the national market are evaluated, and indicators*

of the sectoral level are investigated. The possible prospects of this company within the existing political and economic constraints are revealed.

Keywords: *fundamental analysis of securities, world economy, Russian market, indicators of fundamental analysis of securities, prospects of the Russian market*

To evaluate securities in modern conditions, it is important to study a very large range of indicators, since the modern world assumes a connection between the economic state of the state and its political and socio-economic course.

Speaking about fundamental analysis, it should be noted that it is an independent method of evaluating securities and issuing companies. During the fundamental analysis, the investor examines the financial and accounting reports of the company and tries to find the fair value of its securities [Kiyantsa, 2008].

Fundamental analysis is quite time-consuming, because in different conditions the same factors can have different effects on the market. In these conditions, it is important to analyze macroeconomic indicators in dynamics and to understand the essence of cyclical market changes under the influence of these indicators.

As a result of the evaluation of statistical data on macroeconomic indicators, the investor has the opportunity to make forecasts of the values of the value of financial assets for a certain period of time.

In addition, fundamental analysis concerns not only securities, but also their issuers. Some investors evaluate the company's activities and decide to participate in its business.

In modern practice, there are three main methods of analyzing financial markets: fundamental analysis, technical analysis and intuitive analysis.

Fundamental analysis studies the movement of prices under the influence of macroeconomic factors. It can help to determine the market trend, but fundamental analysis is often not enough to determine the specific moment of the transaction. In this case, it is much more useful to apply technical analysis [Kartashov, 2017: 136].

Technical analysis is based on the following hypothesis – market prices take into account all the knowledge, desires and actions of all market participants, reflecting them in their dynamics. As a result, both price and volume include every transaction made by an army of thousands of traders.

An intuitive (psychological) approach to analysis is professed by a small number of traders and, as a rule, does not lead to long-term success [Tsybulnikova, 2017: 99].

The main source of information for the analysis of an enterprise is its accounting and financial statements. The investor is interested in the size of capital, revenue, EBITDA and net profit, borrowing volumes, profitability and solvency.

One of the main absolute indicators are revenue and net profit. The company's revenue is the main financial indicator characterizing the company's

activities. The determining one is the revenue from core activities, and besides it there are revenue from investment and financial activities [Likhovidov, 2018: 81].

Net profit is the cash that the company receives after making mandatory payments to the budget. The profit indicator depends on a huge number of factors, for example, for companies that sell not only within their own country, but also abroad, profits may increase or decrease under the influence of the exchange rates of other countries.

There is a fundamental analysis on the example of Sberbank PJSC. As part of the fundamental approach, an assessment should be carried out according to the following scheme:

1. Macroeconomic analysis.
2. Industry analysis.
3. Company analysis.

The state of the world economy at the moment is difficult to accurately determine. It is obvious that the sanctions imposed on Russian individuals and legal entities can lead to a recession not only of the Russian, but also of the world economy.

There is also a significant risk of inflation accelerating to 17-22% against the backdrop of tough sanctions and a doubling of the key rate in February 2022. Thus, according to HSE forecasts, inflation is expected “in the range of 20-30%, and a drop in GDP – up to 8-10% [Kartashov, 2017: 33]. Representatives of other financial universities also predict inflation in the region of 20%”.

It is worth noting that the banking sector has suffered the most severe sanctions blow. VTB, Otkritie and Sovcombank were the hardest hit in this sector of the economy. Sber, in turn, got off with inclusion in the list of CAPTA, which means that its correspondent accounts opened in American banks are subject to closure [Naiman, 2019: 82].

Sberbank's position in the Russian banking sector is the most stable, since it accounts for the majority of assets. Sber is also a state-owned bank, so its stability is also ensured thanks to the active support from the state.

To analyze the issuer, a number of economic indicators should be considered to assess the company's growth dynamics. The main indicators required for the analysis are given in Table 1.

Table 1. Indicators of the initial assessment of Sberbank PJSC

Indicator	Year		Growth 2020 to 2019, %	Year 2021	Growth 2020 to 2019, %
	2019	2020			
Net operating income, billion rubles	2 013	2 182	8,4	2 501	14,6
Net interest income, billion rubles	1 416	1 589	12,2	1 802	13,4
Net profit, billion rubles	845,0	761,1	-9,9	1 251	64,4
JSC dividend,	18,7	18,7	0,0	-	-

RUB/share					
AP dividend, RUB/share	18,7	18,7	0,0	-	-
Shareprice (JSC), RUB	254,8	271,0	6,4	293,1	8,2
Number of shares (JSC), mln	21 587	21 587	0,0	21 587	0,0
Shareprice (ap), RUB	228,3	240,7	5,4	278,5	15,7
Number of shares (ap), mln	1 000	1 000	0,0	1 000	0,0
Dividendincomefor JSC, %	7,3	6,9	-5,5	0	-100,0
Dividendincomeforap, %	8,2	7,8	-4,9	0	-100,0
Capitalization, billionrubles	5 728	6 091	6,3	6 606	8,5
EV, billionrubles	3 645	3 714	1,9	4 197	13,0

The table shows that the indicators of net operating income, net interest income and net profit tend to increase. The choice of these indicators for the study of Sberbank PJSC is due to the specifics of some indicators of the banking sector. For example, the net operating income indicator is an accounting indicator of banks, which can be compared with the revenue indicator of non-financial companies [Naiman, 2019: 69].

This indicator is calculated before the creation of reserves for portfolio impairment and consists of net income on securities, commission income and net interest income. In dynamics, we see an increase in the bank's revenue in 2021 by more than 14%. Such a growth rate of the financial indicator may indicate a significant increase in the number of services provided by the bank, which led to a 14% increase in revenue.

The net interest income indicator characterizes the main source of the bank's income, which is formed in the form of the difference between all interest income and all interest expenses. This indicator should be considered in order to track the formation of the bank's revenue. Thanks to the evaluation of this indicator, it is possible to investigate the structure of revenue. The table shows that net interest income is more than 50% of the bank's revenue.

The growth of this indicator in both 2020 and 2021 amounted to more than 10%, which indicates that the bank is conducting a competent sales policy, since income is provided by issuing loans by the bank. Hence, it can be concluded that the bank actively provides loans to business entities and expands the occupied market segment.

The key indicator of the company's analysis is net profit, which tends to grow in the post-pandemic 2021. During this period, the policy of supporting the country's financial system was implemented. In particular, concessional lending was actively developing, so the population actively took out loans and provided the bank with a large profit. These tables allow us to see that in 2021 the bank's net profit increased by more than 60%.

The indicators characterizing the securities of Sberbank PJSC are of interest for analysis for the reason that any investor is interested in a company with a good history of paying dividends, i.e. the company must regularly pay dividends over a long period of time [Graham, 2021: 123].

Thus, the simplest analysis of securities indicators gives an idea of dividend payments and the level of capitalization of the company. It can be seen that the dividend yield is decreasing every year. However, this factor is rather related to the fact that the volume of dividend payments did not change either in 2019 or 2020, and the increased market value of shares had an impact on profitability. In the context of these indicators, it is interesting to consider the capitalization indicator. Its value directly depends on the market quotations of shares, since it represents the total value of all shares of the company, calculated according to current quotations on the Moscow Stock Exchange. It can be seen that the company is valued by the market significantly above its revenue and profit.

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INVESTMENTS IN ECONOMIC DEVELOPMENT AT THE PRESENT STAGE IN RUSSIA

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Abstract. *The article analyzes the concept of investments, their forms, types and also the impact on the economic climate in the country. The article deals with the issues of state investment policy, presents a classification of the investment and financial markets is presented. Summing up the results, it can be concluded that investment plays an important role for the successful functioning of the Russian economy, because it brings new technologies and managerial competencies to the country.*

Keywords: *investments, foreign investments, export of investments, import investment, development of a modern economy*

High investment activity is a prerequisite for the development of a modern economy, as foreign investment plays an important role at both the macro and micro levels. Economic growth and investment are interconnected and interdependent, investments create a material basis for progressive development of the enterprise, the results of which, in turn, are a source of funds for new capital investments.

In modern economic literature there are various definition of the concept of „investment”, which reflects the ambiguity of this concepts as an economic entity. To a large extent this due to economic evolution, the specifics of specific stages historical and economic development, dominant forms and methods management.

Investments are financial investments with the aim of generating income in the future. Investment activity is an integral part of the economy of any country. The positive dynamics of the volume of investments in the state leads to the strengthening of the position of the national economy on the international field. With their help, the economy stabilizes, competitiveness grows, the ratio of exports and imports changes [Schneider, 2019: 42].

Investments play an important role in maintaining and building the country's economic potential, which has a positive impact on business activities, leads to an increase in gross national product and increases the country's activity in the foreign market [Akhmetzyanov, 2021:176].

Investments are the main factor influencing the intensive development of industrial and economic potential through the accumulation of social capital and the introduction of scientific and technological achievements. Economic entities themselves make decisions on investment. The main criteria for the need for investment are the growth of production efficiency and profit maximization.

The transformations taking place in Russia have an impact on all aspects of the investment process. One of the positive features of the investment attractiveness of the Russian Federation for investment is a large concentration of educated and highly qualified workers, as well as the availability of natural resources that are attractive to foreign investors. The segment of residential and commercial real estate has been the leader in terms of investment for several years now. The development of investment attractiveness is inextricably linked with human capital. One of the results of investment is the introduction of new technologies into society, without which the functioning of investment projects is impossible.

However, currently Russia is not a favorable environment for attracting investment in the real economy. Its investment attractiveness has recently deteriorated significantly, and the reasons were factors such as COVID-19, which undermined the economy of all states, the economic crisis, sanctions, which now make it difficult for foreign companies to develop their business in the Russian Federation, as well as a decrease in the cost of oil on world markets. The decrease in activity in the field of trade operations with foreign partners is also one of the negative characteristics of the investment environment.

This follows a long line of development analysis, which assesses the role of investment in terms not only of its internal productivity but also of its backward and forward linkages and capacity to incentivize complementary investments. The company's investment activity is associated with investments in acquisitions of land, buildings and other real estate, equipment, intangible assets and other non-current assets, as well as with their sale. The outflow in this case is the expenditure of cash for the purchase of these assets, and inflow - the receipt of money from the sale these assets [Tsaruk, 2020: 194].

Investment resources in Russia are unevenly distributed among the regions, concentrating in large metropolitan areas and regions rich in natural resources. Other regions and most of the manufacturing industry in Russia do not have the opportunity to use the investment potential. Equally important at the present stage of development of the Russian economy has acquired regional investment policy. Investment policy depends on how the investment process proceeds.

To solve the problem of attracting investment to the country's economy, a serious state investment policy is needed. Its main task is to create a favorable environment that helps attract and increase the efficiency of the use of investment resources in the development of the economy and social environment. An important principle of the state's investment policy is the creation of conditions for improving corporate relations. The investment process is a multilateral activity of the participants in the reproduction process to increase the capital of the nation.

The main condition for the formation of a successful investment policy enterprise is its focus primarily on the solution long-term goals rather than short-term results. At present time, the state is forcing enterprises to achieve, rather, short-term goals by creating anti-crisis programs needed to survive. The investment policy is part of the general investment strategy of the enterprise (organization), which determines the choice and methods implementation of the

most rational ways to update and expand its production and scientific and technical potential [Vorontsovsky, 2021: 435]. This policy is often aimed at ensuring survival in a complex market environment, on achieving financial sustainability and creating conditions for the future development.

Investment activity in Russia is regulated by the current legislation. The legislative framework for investment policy regulates investment activity of economic entities in various forms. Defines Federal Law “On investment activity in the Russian Federation, carried out in the form of capital investments” [http://www.consultant.ru/document/cons_doc_LAW_22142/]:

- fundamentals of urban planning policy;
- the procedure for the development of urban planning standards and urban planning documentation;
- rights and obligations of subjects (participants of urban planning activities).

Thus, investment plays an important role for the successful functioning of the Russian economy, because it brings new technologies and managerial competencies to the country which show the level of development of the investment sector and the presence of certain problems in it. Russia strives for sustainable development, which is impossible without investments, for which the growth of the country's investment potential and risk minimization are important.

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THE ROLE OF EXPORT POTENTIAL IN THE FOREIGN ECONOMIC ACTIVITIES OF BELGOROD REGION

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Abstract. *The article is devoted to the export potential of Belgorod region in the foreign economic activity in the context of the instability of the political and economic situation in the world. The main indicators of regional foreign trade in 2013-2020 were studied for this purpose. The main export flows and foreign economic relations of Belgorod region in 2020 are considered in the article. The analysis made it possible to identify the main trends in the development of the regional economy, identify the problems that exporting enterprises face, and propose ways to solve them.*

Keywords: *region, economy, foreign trade, export, industries*

At the present stage of development of economic relations, the degree of involvement of regional economies in the processes of international trade is increasing. The foreign trade activity of the regions, consisting of flows of exports and imports of goods, services, capital, affects the functioning of the state in the field of international economic relations as a whole. At the same time, the constituent entities of the Russian Federation are characterized by uneven economic development and the standard of living of the population, due to the peculiarities of settlement, socio-economic situation and climatic conditions, richness of mineral resources, factors in the formation of industrial relations and the investment potential of the regions.

Belgorod region, the study of foreign economic activity of which this article is devoted to, has an advantageous geographical position in the south-west of the Russian Federation, which opens up opportunities for trade with both CIS countries and non-CIS countries. In general, the regional economy is based on the richness of the subsoil – about 229 mineral deposits (iron ore, bauxite, apatite, chalk, clay, sand, mineral water, etc.) have been explored, and about 70% of its territory is fertile black soil [<https://www.rosnedra.gov.ru>]. This allows the region

to occupy key positions in the manufacturing, extractive industry food industry and agriculture and enter the top 30 regions of the country with the highest GRP.

An important component of the economic development of the territory is the successful implementation of its trade potential in the international market. In order to consider the volume and determine the significance of the foreign trade of Belgorod region, it is necessary to consider its main indicators given in the Table 1 (Compiled by the author)[<https://belg.gks.ru/>].

Table 1. Dynamics of foreign trade indicators of Belgorod region in 2013-2020

Indicator	Years							
	2013	2014	2015	2016	2017	2018	2019	2020
Foreign trade turnover, million US dollars	7569,6	6444,2	4248,8	3592,9	4400,3	4838,4	4752,3	4544,4
Export, million US dollars	3412,5	3176,0	2426,1	2190,5	2789,8	3350,4	3264,9	3145,2
Import, million US dollars	4157,1	3268,2	1822,7	1402,4	1610,5	1488,1	1487,4	1399,2
Foreign trade balance, million US dollars	-744,6	-92,2	603,4	788,1	1179,3	1862,3	1777,5	1746,0
Average exchange rate of the dollar, rubles	31,9	38,4	61,0	67,0	58,4	62,7	64,7	72,1
Gross regional product, million rubles	569006	619678	693379	778028	837307	911598	955952	966700
Gross regional product, million US dollars	17862,8	16121,7	11374,7	11606,3	14349,0	14536,9	14766,9	13399,1
Foreign trade quota, %	42,4	40,0	37,4	31,0	30,7	33,3	32,2	33,9
Export quota, %	19,1	19,7	21,3	18,9	19,4	23,1	22,1	23,5
Import quota, %	23,3	20,3	16,0	12,1	11,2	10,2	10,1	10,4

The analysis of the data of Table 1 makes it possible to identify a downward trend in the total volume of foreign trade of Belgorod region, which is expressed in a consistent decrease in both absolute and relative indicators. This fact is due to the crisis of 2014-2015, caused by a sharp depreciation of the ruble (the table shows the increase of the dollar by 1.6 times in 2014 compared to the level of 2013), the introduction of economic sanctions by Western countries against Russia. It is worth noting that this factor turned out to be key for the economy of Belgorod

region, both as a border and transit region, as many supply chains were disrupted. In 2017-2019 there was a moderate increase in indicators, but in 2020 the economy of the country and the region, in particular, was affected by the factors of the pandemic, again entering the recession stage.

With regard to detailed indicators, it can be seen that in the study period, exports prevailed over imports. Only at the beginning of the dynamic series (2013-2014) was the foreign trade balance negative. But as a result of the introduction of the import substitution policy and the influence of the previously noted trend towards a decrease in the role of Belgorod region as a transit region, this ratio has returned to normal.

The calculated values of the foreign trade, export and import quotas correspond to a significant degree of participation of the region in the system of international economic relations, since the values of exports and imports of goods account for more than 1/3 of the total GRP of the territory [Kamyshanchenko, 2014: 9].

In the context of this study, it is supposed to focus on the export flows of Belgorod region, which reflect the industrial specialization of the region, stimulate economic growth, provide an influx of foreign capital and contribute to the filling of the budget. Export potential, as the ability of the regional economy at this stage of development to produce and offer competitive products on the international market at world prices, is based on the competitive advantages of the territory.

Figure 1 shows the distribution of exported goods by regions of the world – going to non-CIS countries or CIS countries (Compiled by the author according to [https://belg.gks.ru/]).

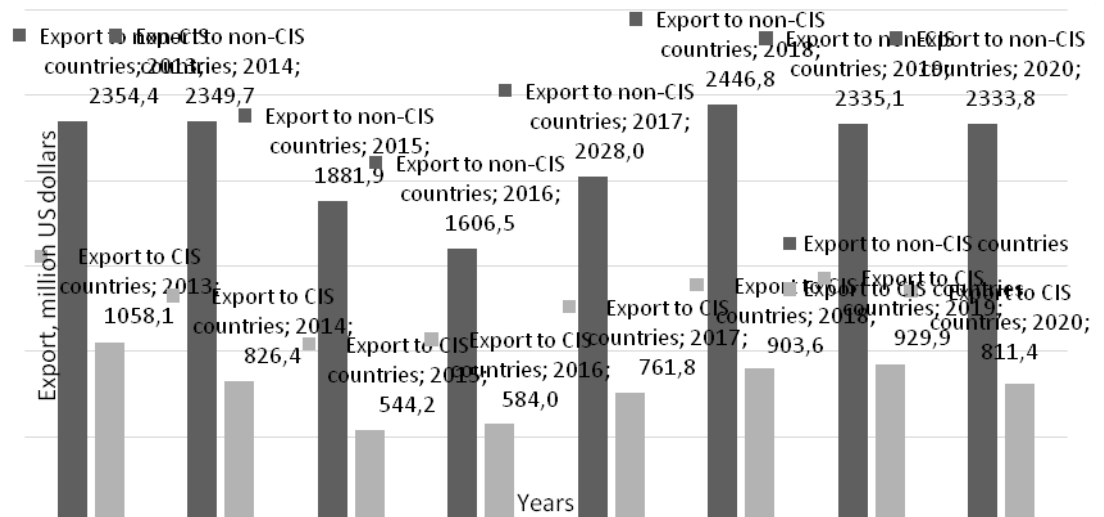


Figure 1. Dynamics of export of goods from Belgorod region to non-CIS countries and CIS countries in 2013-2020

The analysis of the above histogram indicates the orientation of the regional export flows to non-CIS markets - the share of such goods is three times higher

than the share of those supplied to the markets of the CIS countries. In general, the dynamics of indicators lends itself to the previously described patterns of development of the economy of country in 2013-2020. Author supposes that the share of exports of goods to non-CIS countries is so large, since they are the main buyers of huge volumes of high-quality metals and mineral products, which their countries are not rich in.

In addition, non-CIS countries purchase about half of the regional food products and raw materials [<https://ctu.customs.gov.ru/>]. The remaining export food and non-food products fall on the CIS countries, where, in addition to food products, metals and mineral raw materials, chemical industry products, rubber, textiles and engineering products are in great demand. Most likely, it is difficult for such goods to compete with high-quality goods of world partners from Europe, Asia and America.

Next, it is necessary to consider the geographical structure of export of Belgorod region to non-CIS countries in 2020, using Figure 2 (Compiled by the author) [<https://belg.gks.ru/>].

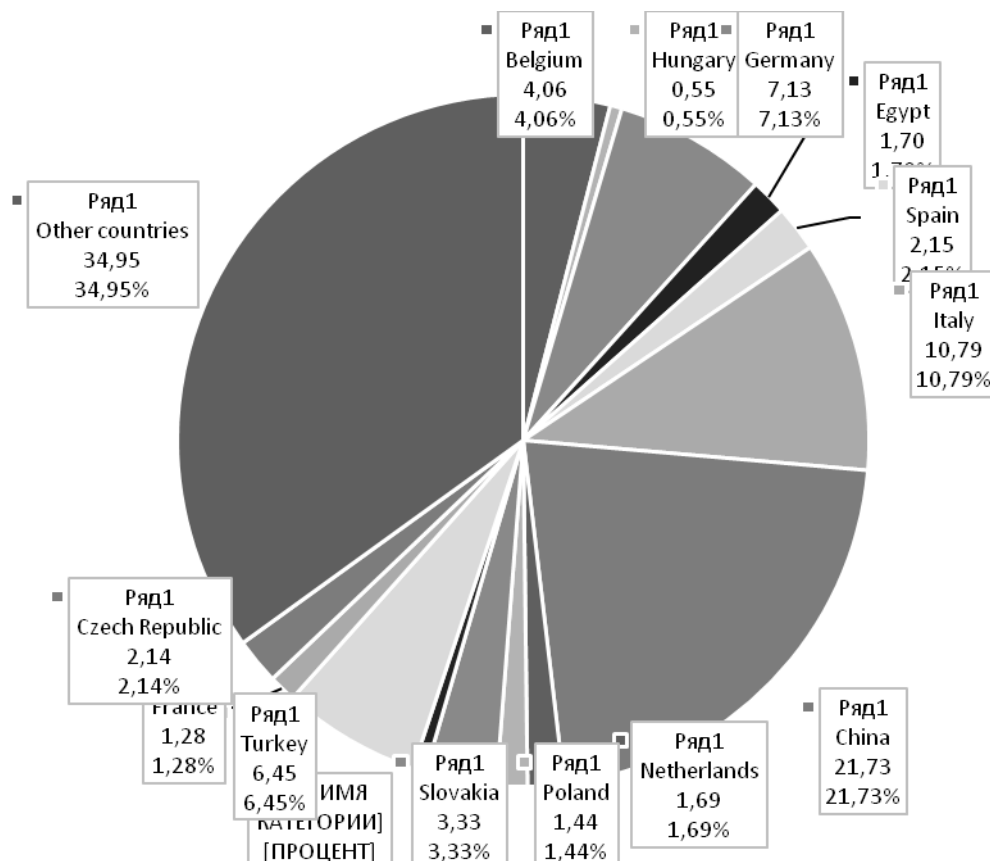


Figure 2. Geographic structure of export of Belgorod region to non-CIS countries in 2020, %

Based on the data in Figure 2, it can be noted that the main trading partners of Belgorod region among non-CIS countries are China (21.73% of the total volume or 507.2 million US dollars), Italy (10.79% or 251.9 million US dollars), Germany (7.13% or 166.4 million US dollars), Turkey (6.45% or 150.6 million US

dollars). These countries are more distant from the region than, for example, Romania, Serbia, Hungary and Poland, whose share is insignificant, but the benefits from trade with the region cover their transport costs.

Despite the sanctions imposed on our country and countermeasures taken by Russia, European partners remain the main ones for the region. At the same time, cooperation with APEC member countries is developing [Chernyaeva, 2019].

Next, the geographical structure of export of Belgorod region to the CIS countries in 2020 is considered on Figure 3 (Compiled by the author) [<https://belg.gks.ru/>].

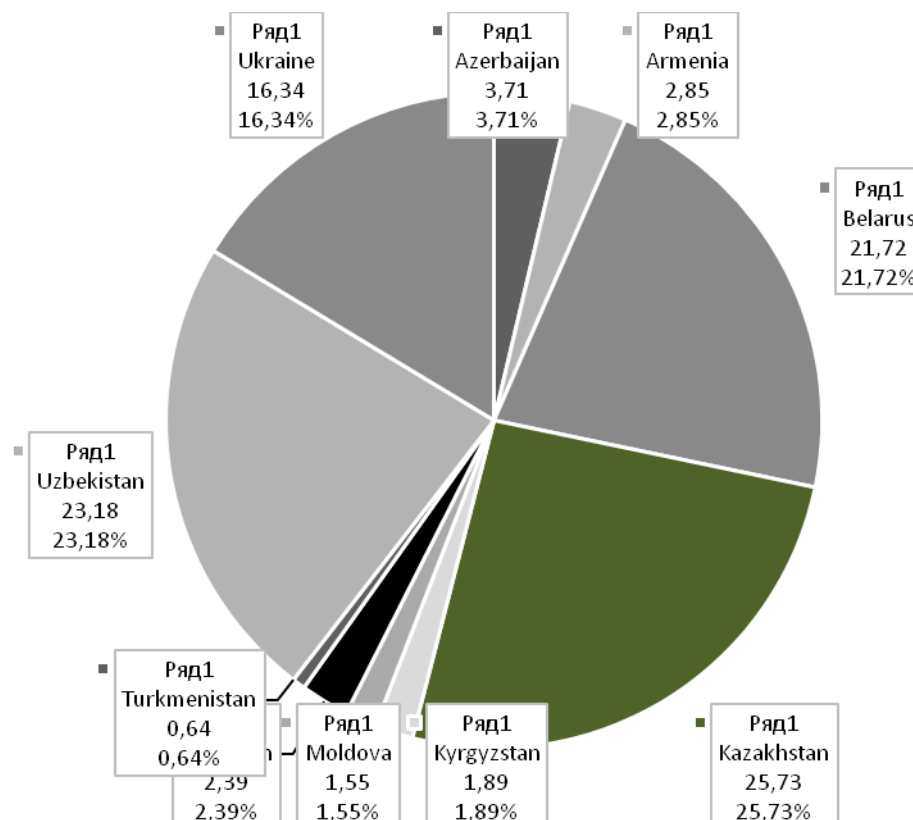


Figure 3. Geographic structure of export of Belgorod region to the CIS countries in 2020

According to Figure 3, export flows of Belgorod goods to the CIS countries in 2020 were mainly directed to Kazakhstan (25.73% of the total volume or 208.8 million US dollars), Belarus (21.72% or 176.2 million US dollars), Uzbekistan (23.18% or 188.1 million US dollars), Ukraine (16.34% or 132.6 million US dollars) It is noteworthy that, for example, in 2013 the share export deliveries to Ukraine amounted to 86.73% and decreased by 5.3 times over 7 years.

Consequently, there is a reorientation of the main directions of sales of goods in Belgorod region. It is fair to say that Ukraine, which borders half of the region's territory, remains the largest importer of goods to the region.

Thus, based on the above analysis, it is possible to conclude that Belgorod region is a financially stable region, which in the study period showed the development and strengthening of export relations with various countries of the

world, despite the unstable economic and political situation on the world stage. Due to the degradation of trade relations with Ukraine, exporting enterprises managed to reorient themselves to other partners, as well as maintain and increase the volume of foreign trade.

The analysis made it possible to identify problems specific to the export of Belgorod region. Firstly, it is almost entirely raw materials, therefore, the volume of exporters' cash income depends on the volatility of prices in the commodity markets high production leads to the depletion of natural resources, environmental pollution and does not ensure trade security in the future.

The rest of the industries are developing on a residual basis, light industry products of the region are often uncompetitive even on the national market, due to low prices and quality they are in demand only in the CIS countries.

In addition, the export policy of Belgorod region is influenced by the unfavorable political situation in the world, which is expressed in the form of sanctions against Russia.

For the further development of relations, exporting enterprises need to pursue a broad investment policy, upgrade production facilities, introduce modern technologies, improve marketing strategies and improve product quality. Government should develop existing measures of concessional lending, subsidies and state guarantees for exporters, and it is also possible to tax the structure of the regional exports in the case of applying differentiated customs duty rates for non-commodity and raw materials in order to limit the export of raw materials [Chernyaeva, 2019: 51].

It is worth noting that the region is developing an environment to support exporters. Thus, within the framework of the national project “International Cooperation and Export”, the Export Strategy of the region is being implemented, the regional brand „Made in Belgorod” has been created, a separate division of JSC “Russian Export Center” and ANO “Center for Coordinating Support for Export-Oriented SMEs in the Region” operate.

According to the results of January – September 2021, 47 new export contracts were concluded with the participation of the Regional Export Support Center. The volume of supported exports amounted to more than 8.8 million US dollars, 236 companies received non-financial support [<http://derbo.ru/deyatelnost/promyshlennost-i-vneshneekonomicheskaya-deyatelnost/>].

Thus, Belgorod region has a high export potential and is a significant trading partner for some states.

Favorable geographical position and wealth of biological resources predetermine the place of the region in the system of the international division of labor.

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DIGITALIZATION AS A MODERN STAGE OF THE BANKING SECTOR DEVELOPMENT

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Abstract. *The article is devoted to the analysis of the digitalization process within the framework of the functioning at the current stage of the banking sector development. This paper analyzes the main stages in the development of digitalization, changes in the provision of banking services, and ways to accelerate modernization processes. The study of domestic and foreign sources made it possible to formulate proposals for improving the banking system within the framework of the process under consideration. The study allows us to draw the following conclusion – digital transformation is an inevitable stage in the*

evolution of certain areas, including the economy in general and the banking sector in particular.

Keywords: *digitalization, banking sector, financial technologies, digital strategy, banking sector*

Information technology in the XXI century is a part of most people's lives. Digitalization, as a way of converting information into digital form, has a great impact on the development of some industries and spheres, including the economic system in general, and the banking sector in particular. The use of information technology makes it possible to reach a new stage of interaction between individuals. Individuals get an opportunity to automate the execution of tasks available with banking services. Banking organizations are adapting technology to the needs of users, developing business ways to find more efficient and effective company infrastructure technologies.

According to the study by the world-famous management and economics organization (IBM Institute for Business Value), the process of digitalization of the banking sector consists of 5 stages: definition of a digital strategy; evaluating current digital opportunities and identifying faults; development of a target model for the modernization of system elements; development of the plan “Road map”; implementation of the developed plan [<https://www.ibm.com/downloads/cas/YDOWYKYG>].

The purpose of this paper is to analyze the indicators of digitalization of the banking sector in the Russian Federation and develop ways to improve the efficiency of the banking system in modern realities.

The Russian banking system is purposefully developing at the global rate. Customer service models are prone to change due to the impact of various innovations associated with the digitalization process. These innovations include: P2P lending, blockchain, robo-building, artificial intelligence, machine learning, etc. [Svon, 2020: 215].

The banking sector is a typical example of a consumer archetype [Petrova, 2020: 95]. Consumers of banking services are a kind of beneficiaries within this sector. The main requirements of clients in banking:

- to reduce the time for banking operations;
- to be able to carry out banking operations 24/7;
- to provide alternative opportunities for using banking products and services;
- to create a single interface to provide access to online banking services.

These requirements, which are a manifestation of demand for the optimization of banking operations, generate a supply from banks [Megargel, 2020: 314].

It should be emphasized that positive changes in the process of digitalization must be accompanied by a change in the usual work processes [Kuusisto, 2020: 348]. Of course, this modernization is able to change the established models and procedures. Adaptation to modern technology can lead to separation of the employees of the organization. These changes can be considered as advantages of

the process, but for some people the technologies can be quite complex and require adaptation [Saputra, 2020: 248]. The use of digitalization can cause problems with the indirect costs of the company. In addition, there are likely to be internal inconsistencies [Bogodistov, 2021: 5].

The successful development of the banking sector must be accompanied by the presence of long-term goals and the adherence to a specific development strategy. The presence of a constructive dialogue and partnerships is a mandatory component of the timely provision of new services within the banking system. While realizing the goal of building a productive business model, it is important to focus on stimulating the growth of non-bank sources of income, as well as developing our own ecosystems and partnerships [Megargel, 2020: 318].

Financial technologies are the provision of financial services and services with using innovative technologies. These methods are used in almost all monetary industries.

For the development of financial technologies, it is necessary to achieve a number of goals in the framework of improving the quality of banking services provided. The leading goal is the activity aimed at further development of competition in the financial markets within the framework of improving the range and quality of the offered financial services along with a user-friendly interface. Furthermore, it is necessary to emphasize the importance of constant monitoring of the security of financial transactions carried out as part of a competent policy to increase the competitiveness of Russian technologies and minimize both risks and costs in banking operations [<https://cbr.ru/fintech/>].

The modernization of the banking sector with the help of financial technologies has provided opportunities for the implementation of remote control systems: websites and mobile applications on a smartphone. Using these methods of electronic banking, many financial transactions are available to the user, such as:

- storing funds in electronic wallets,
- using cryptocurrency,
- opening and maintaining a brokerage account on the stock market,
- topping up the phone balance,
- recording loans and bank deposits, etc.

At the moment, there are more than 250 organizations registered in the Russian financial technology sector. The Central Bank of the Russian Federation plays an important role in the development of financial technologies.

The Central Bank of the Russian Federation strives to promote the development of competition in the financial market; tries to improve the availability, quality, range of financial services; purposefully reduces risks and minimizes costs in the financial sector. Particular attention is paid to the strategy of increasing the competitiveness of Russian technologies [<https://cbr.ru/fintech/>].

The Central Bank of the Russian Federation, in cooperation with fintech companies, government agencies and financial market participants, has been working to achieve these goals. The digital infrastructure is being developed using

a number of other projects. Some technologies that are part of the digital infrastructure are given in Table 1 [<https://cbr.ru/fintech/>].

Table 1. Digital infrastructure technologies

Technology	Explanation
Remote identification	Biometric identification
Quick payment system	Instant money transfers
Distributed Registry technologies	Digital mortgage, letters of credit and bank guarantees
Financial marketplace and registrar of financial transactions	Supermarket of the financial services
Digital profile	Digital information and consent management

According to a study by the Analytical Center of National Agency Of Financial Research within the framework of a joint project of the Finance Ministry of Russia and the World Bank, more than half of Russian citizens (56%) use mobile banking or Internet banking systems [<https://www.banki.ru/news/lenta/?id=10930356/>].

As of 2020-2021, more than half of Russian citizens use mobile applications of banks. Over the past few years, the number of citizens using Internet banking has been steadily growing (in 2018, the number of people using digital technologies in the banking sector was estimated at 26%).

Internet banking services are less popular among Russians than bank mobile applications. About 37% of citizens prefer Internet banking, while the number of clients using banking applications is 51%. In 2018, the number of Internet banking users was about 16% of Russians [<https://www.banki.ru/news/lenta/?id=10930356/>].

It should be noted that the level of penetration of remote banking services in the Russian Federation demonstrates low rates in comparison with the level of Internet penetration. As a result, there is significant growth potential [Oganesjan, 2020: 103].

One of the leaders in the pace of digitalization of banking processes in Russia is VTB Bank. VTB Bank is a Russian universal commercial bank with state participation, the first bank in the Russian Federation in terms of authorized capital and the second largest in terms of assets [http://www.cbr.ru/banking_sector/credit/]. At the end of 2020, VTB Bank became the leader in the rating in terms of the level of digitalization of banks among the 50 best banking organizations in Russia. VTB Online is one of the fastest growing and most popular mobile banks in the Russian Federation.

According to the latest data, 2020 was the year of full-scale IT changes that made it possible to launch an updated version of VTB Online. The new version made it possible to speed up the launch of updated products and services for customers by 8 times, provide access to an expanded range of digital banking services [<https://www.vtb.ru/o-banke/press-centr/novosti-i-press-relizy/2021/05/2021-05-21--vtb-stal-liderom-reytinga-bankov-po-tsifrovizatsii/>].

The coronavirus pandemic has caused a rapid change in demand for digital banking services. Vadim Kulik, Deputy President-Chairman of the Board, emphasized that the coronavirus epidemic had significantly brought closer the onset of the digital era associated with the launch of banking products that can be obtained without visiting a branch. This practice has already been implemented earlier than planned, at least a year ahead of schedule [https://www.cnews.ru/news/top/2020-06-11_vtb_napravit_bolee_poloviny].

To sum up, digital transformation is a modern way of developing the banking sector, which provides banking organizations with the opportunity to optimize processes, and corporate clients with the opportunity to remotely perform a number of services without visiting bank branches.

The process of innovative ways of developing the banking sector by the method of business digitalization depends on a large number of various factors. Large credit institutions should strive to successfully automate processes, develop online banking and introduce new services that together create ecosystems. Regarding smaller banks, they should probably cooperate with larger companies to promote their products.

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**LEBENSMITTELBRANCHE
VON RUSSLAND UNTER DEN BEDINGUNGEN DER
IMPORTSUBSTITUTION**

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Annotation. *Der Artikel beschreibt die objektive Natur der Imports substitution in Russland im Bereich der Lebensmittelbranche. Basierend auf der durchgeführten Analyse statistischer Daten wurden die Hauptrichtungen der Entwicklung der agro-industriellen Sektoren Russlands beschrieben. Die Perspektiven der Imports substitution in der Lebensmittelindustrie sowie in den Schlüsselfaktoren für die Ernährungssicherheit Russlands wurden verdeutlicht.*

Schlagwörter: *Lebensmittelbranche, Imports substitution, Lebensmittel-Embargo, entwicklungspolitische Strategie der Imports substitution, objektive Natur der Imports substitution in Russland, wirtschaftliche Sanktionen*

Die Einführung der Sanktionen gegen russische Konzerne und Banken einerseits und Russlands selbst auferlegtes Lebensmittel-Embargo andererseits haben ein neues Wort in den russischen Sprachgebrauch eingeführt: Imports substitution. Einfach gesagt sollten von August 2014 an einheimische Produkte Importe ersetzen. Die Regierung der Russischen Föderation entwarf Pläne, startete Programme zur Lösung dieses Problems. Am schnellsten und spürbarsten wurde die Substitution in der Lebensmittelbranche umgesetzt. Russland versucht gezielt besonders seit der Krim-Krise im März 2014 die Einfuhr ausländischer Produkte zu reduzieren und diese durch heimische Produkte zu ersetzen.

Mit dem Begriff „**Lebensmittelbranche**“ bezeichnet man eine Branche, die direkt mit der Versorgung der Weltbevölkerung von lebensnotwendigen Nahrungsmitteln verbunden ist. Wie andere Industrien bedecken die Lebensmittelwaren den täglichen Bedarf an Lebensmitteln. Diese Waren werden auf dem heimischen Markt verkauft oder in andere Länder der Welt exportiert.

Der Begriff „**Imports substitution**“ bedeutet nach dem Wirtschaftslexikon: a) *Allgemein:* Ersetzen von Importen durch inländische Produktion; b) Imports substitution liegt (*nach Chenery*) vor, wenn der Importanteil am inländischen Gesamtangebot sinkt. Im Fall einer wachsenden Wirtschaft kann Imports substitution also auch bei absolut zunehmenden Importen als gegeben angesehen werden [Gabler Wirtschaftslexikon].

Zu unterscheiden ist in der Wirtschaft:

a) *Natürliche Imports substitution:* Ergebnis des Strukturwandels unter Freihandelsbedingungen, verursacht durch internationale Verschiebungen der Angebots- und Nachfragebedingungen.

b) *Wirtschaftspolitisch induzierte Imports substitution* (Imports substitution-Strategie): I.d.R. (wie auch im Folgenden) mit dem Begriff gemeint; v.a. für Entwicklungsländer diskutiert.

Unter den modernen Bedingungen gilt der Importersatz als die Hauptrichtung der russischen Lebensmittelbranche. Die propagierte Erhöhung der im Inland produzierten Güter und Waren unterscheidet sich von der traditionellen entwicklungspolitischen Strategie einer Imports substitution, die auf die Entwicklung des Industriesektors abzielt. In Russland schließt sie auch den Agrarsektor, darunter wird insbesondere die Nahrungsmittelproduktion gemeint. Die Politik verfolgt in Teilen keinen Importersatz durch heimische Güter, sondern

strebt eine neue geografische Ausrichtung der Handelsströme an. Diese Ausrichtung bedeutet weg von den Ländern zu sein, die sich an den Sanktionen beteiligen bis hin zu Ländern, mit denen die politischen Beziehungen weniger sensibel sind.

Lebensmittelbranche ist eine der wichtigsten Marktteilnehmer des industriellen Produktionskomplexes Russlands. Das Niveau ihrer Entwicklung charakterisiert die Ernährungs- und Wirtschaftssicherheit des ganzen Staates. In diesem Zusammenhang wäre es vernünftig darauf hinzuweisen, dass die Lebensmittelbranche direkt das autonome Überleben eines Staates unter kritischen makroökonomischen Bedingungen ermöglicht. Das wird dadurch erreicht, dass die Aufgabe, die Bevölkerung mit Lebensmitteln zu versorgen, erfüllt wird. Dabei sollen die Lebensmittel den Standards und den Anforderungen gesunder Ernährung entsprechen.

Das oben genannte lässt die Aufmerksamkeit auf die Entwicklung der Lebensmittelindustrie Russlands in der Zeit der Importsubstitution leisten, die als vorrangige Aufgabe der Gewährleistung der nationalen Sicherheit Russlands und von großer Bedeutung ist.

Der Schwerpunkt der Importsubstitution liegt in erster Linie auf dem Agrarsektor. Die Gegensanktionen Russlands im Zuge des Ukraine-Konflikts verbieten Importe von Nahrungsmitteln und landwirtschaftlichen Produkten aus einer Reihe von den Ländern. Die Güter können aus anderen als auch den sanktionierten Ländern bezogen werden. Dementsprechend wird der Entwicklung des realen effektiven Wechselkurses der ausschlaggebende Effekt zugeschrieben, der die Wettbewerbsfähigkeit russischer landwirtschaftlicher Produkte verbessert. Was den Produzenten angeht, so müssen sie hinreichend flexibel sein, um sich an die veränderte Nachfragestruktur auf dem heimischen und internationalen Markt anpassen.

Unter „*Importsubstitutionspolitik*“ versteht man den gezielten Einsatz von entwicklungspolitischen Instrumenten auf eine Ersetzung von Importen durch Inlandserzeugnisse [Stauch, 1998]. Sie umfasst neben der Protektionspolitik verschiedene weitere wirtschaftspolitische Instrumente.

Der Begriff „*Importsubstitution*“ wird als wissenschaftlicher Terminus in der Literatur insbesondere hinsichtlich der erzielten empirischen Messergebnisse unterschiedlich verwendet [Hemmer, 1978]. Im Allgemeinen bezeichnet die Importsubstitution einen Prozess, in dem bisher importierte Güter durch Inlandsprodukte ersetzt werden. Folglich wird die inländische Produktion diversifiziert und die Spezialisierung auf wenige Güter aufgegeben, wobei Importsubstitution keineswegs Autarkie bedeutet.

Die Dekrete des Präsidenten der Russischen Föderation über die Anwendung bestimmter wirtschaftlicher Sondermaßnahmen zur Sicherheit der Russischen Föderation haben die offizielle Ankündigung eines totalen Verbots der Lieferung wichtiger Produktgruppen aus den Staaten der Europäischen Union, den USA, Australien, Kanada und dem Königreich Norwegen gestartet.

Im Artikel wird weiter die objektive Natur des Phänomens der Importsubstitution im Bereich der Lebensmittelindustrie erläutert, die durch das

Auftreten und die Zunahme der Importabhängigkeit des Landes hervorgerufen wird. Die Notwendigkeit Russlands und seiner Regionen eine Importsubstitutionspolitik durchzuführen, tritt natürlich im Fall auf, wenn das zunehmende Volumen der Importe eine Bedrohung für die wirtschaftliche Sicherheit des russischen Territoriums darstellt. Die Intensivierung und Fortsetzung der begonnenen Arbeit zur Stimulierung wirtschaftlichen Aktivitäten kann mit positiver Dynamik bestimmte negative Auswirkungen glätten [Bekchyan, 2015].

Anti-russischen Sanktionen könnte man in dieser Situation als Anreiz zur Lösung einer Reihe von Problemen in der Entwicklung der russischen Wirtschaft bewerten. Darunter ist in erster Linie die Modernisierung angesichts der sich entwickelnden makroökonomischen Ereignisse von größter Relevanz.

Wir sind der Meinung, dass bei Aufrechterhaltung des Prozesses der Importsubstitution der Lebensmittelindustrie in Russland kann die Bildung von Zonen der internationalen wirtschaftlichen Zusammenarbeit im Rahmen der Lebensmittelproduktion eine große Rolle spielen. Die Ernährungssicherheit ist und wird ein zentrales Thema der regionalen und ausländischen Wirtschaftsforen. Die wirtschaftliche Zusammenarbeit wird dazu beitragen, die gegenseitige wirtschaftliche Entwicklung zu gewährleisten und von beiden Seiten wirtschaftliche Vorteile zu erzielen

Fazit

Zusammenfassend sind die Fragen der Ernährungssicherheit als Vorläufer der nationalen Sicherheit in der aktuellen geopolitischen Situation für die Russische Föderation sehr wichtig. Die Strategie, die Importsubstitution von Lebensmitteln zu reduzieren, bleibt äußerst relevant. Die Importsubstitutionsstrategie hat bereits erhebliche positive Ergebnisse erzielt, aber es gibt eine Reihe von Problemen, die es schwierig machen, die gestellte Ziele zu erreichen. Die Lösung dieser Probleme erfordert sofortige Maßnahmen, um die Investitionsattraktivität der Lebensmittelindustrie und die Wettbewerbsfähigkeit der hergestellten Produkte zu erhöhen.

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STUDIUM DER ORGANISATIONSSTRUKTUR DES MANAGEMENTS

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Annotation. *Dieser Artikel widmet sich dem Thema der Organisationsstruktur des Unternehmens. Es behandelt sich um die Möglichkeiten, die die Wirksamkeit der Organisationsstruktur zu bewerten helfen. Der Artikel beschreibt detailliert die Leistungsindikatoren der Struktur der Organisation. Der Autor des Artikels klärt die praktische Anwendung der Methode der Organisationsstrukturforschung und ihre Bedeutung für Unternehmensorganisation.*

Schlagwörter: *Management, Organisationsstruktur des Unternehmens, Organisation des Managementsystems, Managementeffektivität, Wirksamkeit der Organisationsstruktur der Unternehmensführung, Bewertung des Zustands der Organisationsstruktur des Managements*

Die Organisationsstruktur des Unternehmens ist der wichtigste Managementmechanismus, der erlaubt am meisten die Ziele effektiv zu erreichen. Die Analysen der Änderungen in der Organisationsstruktur des Unternehmens sind unter modernen Marktbedingungen für das erfolgreiche Funktionieren eines jeden Unternehmens erforderlich. Es ist zu beachten, dass die Organisationsstruktur und das Managementschema des Unternehmens sowie die Personalausstattung des Unternehmens sein erfolgreiches Funktionieren widerspiegeln. Die richtige Verteilung der Funktionen zwischen Abteilungen und Mitarbeiter des Unternehmens ist die Grundlage für die Erreichung der Ziele [Wichanskij, 2000].

Die Steigerung der Effizienz des Unternehmens wird maßgeblich durch die Organisation des Managementsystems bestimmt, die von der klaren Struktur des

Unternehmens und den Aktivitäten aller seiner Elemente in Richtung des gewählten Ziels abhängt. Die Struktur kann mit dem Rahmenwerk des Aufbaus des Managementsystems verglichen werden, das darauf gezielt ist, sicherzustellen, dass alle darin ablaufenden Prozesse zeitnah und mit hoher Qualität durchgeführt werden.

Die Notwendigkeit, das Managementsystem in der gegenwärtigen Phase zu verbessern, wird von vielen Faktoren bestimmt. Dazu gehört die Optimierung der Größe des Verwaltungsapparates und seiner Funktionen, die Einführung automatisierter Kontrollsysteme und die Entwicklung von Entscheidungssystemen u.s.w.

Das moderne Verständnis der Position eines Managers basiert sich auf der Tatsache, dass eine Person, die eine Führungsposition auf irgendeiner Ebene in Organisationen, Unternehmen, Institutionen und Firmen einnimmt, kann für eine erfolgreiche und langfristige Tätigkeit nicht auf Teamarbeit verzichten.

Das Vorhandensein der Perfektion der Organisationsstruktur manifestiert sich laut N. Ya. Kabushkin in der Geschwindigkeit des Managementsystems und in den höheren Abteilungen der operativen Organe [Kabushkin, 2001]. Nach I. Ansoff ist die Unternehmensführungsstruktur eine statische „Anatomie“ des Managementprozesses und das Managementsystem eine dynamische „Physiologie“ [Ansoff, 1989].

Die Ebene der Bewertung der Wirksamkeit der Organisationsstruktur der Unternehmensführung umfasst die Analyse der folgenden Ergebnisse:

1. Norm der Kontrollierbarkeit. In einer Organisation wird davon ausgegangen, dass die Führungskraft schnell handeln kann. Die Anzahl der Unterebenen pro Administrator hängt von seiner Erfahrung und Dienstalter sowie von der Art des Unternehmens und den Besonderheiten von Produkten und Restaurants ab.

2. Homogenität der Struktur. Bei einer hohen Organisationsfrequenz bleibt die Anzahl der Verbindungen zwischen Kunden und Mitarbeitern für jeden Mitarbeiter und jede Abteilung ungefähr gleich.

3. Fehlende Duplizierung von Management- und Kontrollfunktionen von Top-Managern. Es ist wichtig, dass solche Positionen und andere Fälle der Notwendigkeit, Funktionen zu reduzieren oder auszuführen, identifiziert werden müssen, wobei die Verantwortlichkeiten klar festgelegt werden müssen.

4. Die optimale Anzahl an Führungskräften. Es wird davon ausgegangen, dass die Anzahl der Administratoren 30 % aller Mitarbeiter des Unternehmens nicht überschreiten sollte.

Die Verwendung dieser auf Indikatoren basierenden Methoden zur Bewertung des Zustands der Organisationsstruktur des Managements hilft dabei, Mängel und negative Trends zu erkennen, die die effektive Erreichung der Organisationsziele, die schnelle Reaktion auf Änderungen im externen und internen Umfeld und die Schaffung eines Optimums behindern Managementmodell für das Funktionieren der Organisation.

Die Organisationsstruktur ist die Gestaltung des Unternehmens mit formeller oder informeller Ausprägung, auf deren Grundlage es geführt wird. Es umfasst die

Machtkanäle zwischen verschiedenen Verwaltungsdiensten und Mitarbeitern sowie den Informationsfluss, der über diese Kanäle übermittelt wird [Kuznetsova, 1999].

Mit anderen Worten, die Organisationsstruktur des Managements spiegelt die organisatorische Seite der Managementbeziehungen wider und gewährleistet die Einheit der Ebenen und Verbindungen des Managements in ihrem Zusammenhang. Je vollkommener also die Organisationsstruktur der Unternehmensleitung ist, desto wirksamer wird der Einfluss der Unternehmensleitung auf den Tätigkeitsprozess eines Wirtschaftsunternehmens sein.

Eine operative Bewertung der Wirksamkeit der Organisationsstruktur der Unternehmensführung kann mit der üblichen Methodik durchgeführt werden [Luzanowa, 1990]. Es liegt in der Tatsache, dass, wie oben gesagt wurde, drei relative Indikatoren zur Durchführung der Bewertung verwendet werden. Darunter sind folgende:

- 1) Effizienzkoeffizient der Organisationsstruktur der Unternehmensführung;
- 2) Kosten-Effizienz-Verhältnis für die Unternehmensführung;
- 3) Kosteneffizienzverhältnis für die Wartung des Unternehmensverwaltungsapparats.

Dieser methodische Ansatz ermöglicht es, nicht nur indirekte Wirkung des Unternehmensmanagementsystems zu bestimmen, das auf eine allgemeine Bewertung des Zustands der Organisationsstruktur seines Managements abzielt, sondern auch die Mängel seiner einzelnen Bestandteile zu identifizieren, um die Wirksamkeit der Verwaltung zu verbessern.

Ein wichtiger Bestandteil des Managementsystems jeder Organisation sind ihre Mitarbeiter, d.h. die Manager verschiedener Managementebenen. Für ihre qualitative und quantitative Bewertung wird eine numerische Anzahl von Indikatoren (Koeffizienten) vorgeschlagen. Dies erfordert von der Person, die eine solche Bewertung durchführt, einen erheblichen Zeitaufwand [Organisationsstruktur der Unternehmensführung, 2003]. Um dies zu vermeiden, ist es für die betriebliche Beurteilung der Personalkomponente des Managementsystems wichtig, das Qualifikationsniveau der Führungskräfte und deren Stabilität über einen bestimmten Zeitraum zu wissen.

Daher wird es legitim und ausreichend sein, für die obige Bewertung, wie oben bereits angedeutet wurde, die Koeffizienten zu verwenden, die das Qualifikationsniveau und das Niveau der Stabilität von Führungskräften in quantitativer Hinsicht charakterisieren.

Unter Berücksichtigung der detaillierten Beschreibung des Inhalts jeder Stufe des Algorithmus zur Bewertung des Systems der Organisationsstruktur von Unternehmen kann man daher auf die Einfachheit und Klarheit seiner praktischen Anwendung hinweisen.

Letzteres ist darauf zurückzuführen, dass der Algorithmus partielle und verallgemeinernde geschätzte Indikatoren enthält, die schnell berechnet werden können, ohne dass der Aufwand zur Bestimmung ihrer Komponenten erforderlich ist.

Für die praktische Umsetzung der oben erwähnten Grundsätze und Hauptbestimmungen wird ein methodischer Ansatz zur Verbesserung der Organisationsstruktur der Unternehmensführung vorgeschlagen. Die Überprüfung der Angemessenheit des Vorhersagemodells der Organisationsstruktur gemäß dem methodischen Ansatz reduziert die Fehlerwahrscheinlichkeit und damit verbundene unnötige Kosten in der Praxis.

Abschließend kann man folgende Schlussfolgerungen ziehen: die Strategie, die Organisationsstruktur beeinflusst, verändert und beeinflusst das Verhalten der Mitarbeiter. Es gibt keine einheitliche Strategie für alle Unternehmen, genauso wie kein universelles strategisches Management. Jedes Unternehmen ist in seiner Art einzigartig, und daher ist der Prozess der Strategieentwicklung für jedes Unternehmen universal. Er hängt von der Position des Unternehmens auf dem Markt, von der Dynamik seiner Entwicklung, seinem Potenzial, dem Verhalten der Wettbewerber, den Merkmalen, der von ihm hergestellten Waren oder Dienstleistungen, der Wirtschaftslage, dem kulturellen Umfeld und vielen andere Faktoren.

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UNTERNEHMENSPERSONAL UND MÖGLICHKEITEN ZUR STEIGERUNG DER ARBEITSKRÄFTEEFFIZIENZ

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Annotation. *Dieser Artikel widmet sich dem Unternehmenspersonal und der Möglichkeiten zur Steigerung der Arbeitskräteeffizienz. Im Artikel werden verschiedene Methoden und Wege, die die Effizienz des Arbeitseinsatzes im Unternehmen verbessern. Der Artikel analysiert und beschreibt diese Methoden und zeigt ihre Vorteile.*

Schlagwörter: *Personal, Mitarbeiter des Unternehmens, Arbeitskraft, Arbeitsproduktivität, Motivation im Arbeitsprozess, Produktionsprozess, innovative Technologien, Qualifikation der Arbeitskräfte, Arbeitslohn*

Die Rolle des Personals im Unternehmen ist sehr wichtig für das Lebensfunktionieren der Organisation. Das Personal des Unternehmens ist die Gesamtheit der Mitarbeiter des Unternehmens, die sich mit der Arbeitstätigkeit befassen. Die Hauptaufgabe des Personals ist es, den reibungslosen Produktionsprozess der Organisation zu gewährleisten und sowohl persönliche als auch Unternehmensziele zu erreichen [Yarkina, 2005: 16-21].

Die Aktualität des Themas dieses Artikels wird durch die Tatsache bestimmt, dass sich die Wirtschaft des Landes jeden Tag entwickelt. Daher beeinflussen die aufkommenden Trends die gesamte Gesamtheit der auf dem Markt verfügbaren Unternehmen. Daraus ergeben sich Probleme, die mit der effektiven Auswahl und der Verwendung vom Personal verbunden sind. Das Erreichen der gestellten Ziele der Organisation hängt nicht nur von dem Vorhanden der Arbeitskräfteresourcen des Unternehmens ab, sondern auch von der Effektivität des Personaleinsatzes.

Heute ist unter den Bedingungen der Entwicklung der Marktwirtschaft die Versorgung eines Unternehmens mit Arbeitskräften und die Effizienz ihres Einsatzes die notwendigen Bedingungen für das effektive Funktionieren der Organisation wichtig.

Das Humankapital ist ein menschlicher Faktor in der Organisation. Darunter werden Intelligenz, Fähigkeiten und spezielle Kenntnisse, die der Organisation einen unverwechselbaren Charakter verleihen, gemeint. Die Menschen sind die Elemente einer Organisation, die in der Lage sind zu lernen und sich zu verändern, etwas Neues einzuführen und einen kreativen Geist zu schaffen. Wenn man sie

richtig motiviert, so können sie einer Organisation ein langes Leben ermöglichen [Armstrong, 2018: 3].

Keine Organisation kommt ohne Personal aus. Die Mitarbeiter sind der Hauptbestandteil des Unternehmenslebens. Die Personalressourcen müssen sinnvoll und vernünftig eingesetzt werden. Wie effektiv sie eingesetzt werden, hängt vom Erfolg der Organisation ab. Schwieriger wird es mit Mitarbeiterführung bei einer personellen Erweiterung. In diesem Fall können gewisse Konflikte entstehen, die den Produktionsprozess aus dem normalen Funktionieren herauschlagen.

Die Wege zur Steigerung der Arbeitseffizienz sind eine Reihe von Methoden, Möglichkeiten und Aktivitäten, die ordnungsgemäße Verteilung und Verwaltung der Humanressourcen innerhalb einer Organisation fördern. Die Effizienzsteigerung ist gleichbedeutend mit Produktivitätssteigerung.

Um die Arbeitseffizienz zu verbessern, wird eine Reihe von Maßnahmen angewendet. Die wichtigsten von diesen Maßnahmen sind: die Steigerung der Motivation; die Einführung innovativer Technologien in den Produktionsprozess; die Verbesserung der Qualifikation der Mitarbeiter und der Arbeit mit dem Personal; die Verbesserung des Prämiensystems und der Bezahlung. Jede von diesen Methoden erhöht die Arbeitsproduktivität und macht die Effizienz der Arbeitskräfte besser [Gerschanok, 2019: 117-121].

Was die Motivation eines Mitarbeiters angeht, so wird sie sowohl durch den Enthusiasmus, das Energieniveau als auch durch das Engagement und die Menge an Kreativität bestimmt, die ein Mitarbeiter täglich in die Organisation einbringt. Die meisten Unternehmen motivieren Mitarbeiter durch materielle Vergütung und Möglichkeit des Karrierewachstums. Das sind die effektivsten Methoden des Personalmanagements. Sie helfen die Arbeitsproduktivität zu erhöhen und die Humanressourcen rationeller zu benutzen.

Die Einführung innovativer Technologien in den Produktionsprozess, ist darauf abgezielt, die Produktivität durch neue Ausrüstung und Arbeitsbedingungen zu erhöhen. In diesem Zusammenhang ist es ratsam über die Erhöhung des Interesses der Mitarbeiter an der ordnungsgemäßen und qualitativ-effektiven Erfüllung ihrer beruflichen Aufgaben und der vom Management gestellten Aufgaben zu sprechen.

Aus dem oben gesagten folgt, dass neue Technologien auch dazu beitragen, das Qualifikationsniveau der Mitarbeiter zu erhöhen. Damit das Personal die Ergebnisse liefert, muss es über gewisse fachliche Kompetenz verfügen. Viele Organisationen sind auf die Entwicklung ihrer Mitarbeiter abgezielt, deshalb erfolgt die Ausbildung und Weiterbildung auf Kosten des Unternehmens. Jeder hochqualifizierte Mitarbeiter ist verpflichtet, die Wettbewerbsfähigkeit der Organisation auf dem Markt zu erhöhen.

Dabei muss man noch betonen, dass jeder Mitarbeiter nicht nur auf die Entwicklung des Unternehmens ausgerichtet ist, sondern vor allem auf die Selbstentwicklung und den beruflichen Aufstieg. Dazu sollte die Organisation die folgenden Aspekte nutzen: die Bedingungen für persönliches Wachstum schaffen, berufliche und individuelle Leistungen berücksichtigen, ein angemessenes

Arbeitsumfeld schaffen und vor allem die ungehinderte Entwicklung des Mitarbeiters sicherstellen. Diese Elemente sind die Bestandteile der Methode zur Verbesserung der Arbeit mit dem Personal.

Die letzte Methode zur Steigerung der Arbeitskräteeffizienz ist die Verbesserung des Prämien- und Entgeltsystems. Ein wesentliches Element der Verbesserung des Entgeltsystems ist die Standardisierung der Arbeit, die eine Übereinstimmung zwischen der Höhe der Entgeltkosten und der Höhe ihrer Entlohnung unter bestimmten Bedingungen ermöglicht. Und noch ein Vergütungselement ist sehr wichtig –Prämien, die in Unternehmen entwickelt wurden und darauf abzielen, das Produktionswachstum zu stimulieren oder dieses Wachstum zu begrenzen. Es ist noch zu beachten, dass den Arbeitnehmern in jedem Fall die Prämien gezahlt werden sollten, wenn sie den festgelegten Arbeitsstandard bei hohem Arbeitstempo erreichen oder überschreiten.

Bestehende Systeme im Unternehmen sollten so gestaltet werden, dass sie die Integration der Mitarbeiter in die Organisation und nicht ihre Trennung gewährleisten können. Es ist dabei notwendig, die Zusammenarbeit und nicht die Konflikte zwischen den Mitarbeitern zu fördern.

Fazit

Wie die Studie gezeigt hat, kommt keine Organisation ohne Humanressourcen aus. Die Mitarbeiter sind der Hauptbestandteil des Unternehmenslebens. Es ist wichtig zu beachten, dass die Humanressourcen kompetent angewendet werden müssen. Das Personal ist, wie jedes andere Element der Organisation, sowohl externen als auch internen Faktoren ausgesetzt.

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MANIPULATION DES VERBRAUCHERVERHALTENS IM MARKETING

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Annotation. *Dieser Artikel widmet sich dem Thema „Manipulation des Verbraucherverhaltens im Marketing“. Der Artikel beschreibt verschiedene Methoden zur Manipulation des Verbraucherverhaltens, die heute sehr häufig vorkommen. In diesem Artikel werden diese Methoden beschrieben und das Verbraucherverhalten analysiert. Der Autor des Artikels klärt den Begriff "Verbraucherverhalten" auf.*

Schlagwörter: *Marketing, Analyse des Verbraucherverhaltens, Manipulation von Verbraucherverhalten, Verbraucherverhalten, Werbung und Marketing*

Die Tätigkeit der Handels- und Produktionsunternehmen in der gegenwärtigen Phase impliziert die Umstrukturierung der Hauptfunktionsbereiche und Bereiche der Vermarktung von Fertigprodukten. Unter den Bedingungen eines harten Wettbewerbs besteht die Hauptaufgabe des Marktregulierungssystems in der Analyse des Verbraucherverhaltens und der Methoden zu seiner Steuerung.

Mit einer detaillierten und gründlichen Analyse der Bedürfnisse der Bevölkerung, der Untersuchung von Angebot und Nachfrage, des Geschmacks und der Nachfrage der Bevölkerung sowie der Kaufabsichten ist es möglich, das wirtschaftliche Hauptziel, die Gewinnmaximierung jeder kommerziellen Organisation zu erreichen. Die Handelsorganisationen können unter korrekter Berücksichtigung der aktuellen voraussichtlichen Bedürfnisse das erforderliche Produktprofil der Produktion, Absatzmärkte und deren Kapazität bestimmen.

Die Fähigkeit, den Verstand des Verbrauchers zu manipulieren, ist zweifellos der Wunsch jedes Unternehmens. Da eine Person ein emotionales Wesen ist, die ständig verschiedenen impulsiven Impulsen ausgesetzt ist und sich dementsprechend nicht vor dem Einfluss von Verkäufern schützen kann, fällt sie auf alle möglichen psychologischen Tricks herein. Die Manipulation von Verbrauchern bestimmt weitgehend die Taktik der Verkaufsförderung eines Produkts. Öffentlichkeitsarbeit/Werbung sind die wichtigsten Instrumente, um das Produkt der Zielgruppe vorzuführen.

Weiter werden im Artikel einige Manipulationswerkzeuge behandelt.

1) Negative Werbung

Auch negative Werbung ist Werbung. In der Tat kann eine solche Werbung dem Unternehmen schaden, aber sie kann auch den Umsatz steigern. Im Laufe der Geschichte gab es viele Beispiele dafür, dass schlechte Publicity den Umsatz verringerte oder sogar das Markenimage eines Unternehmens ruinierte.

Im Jahre 2015 sah sich Volkswagen mit der Situation konfrontiert, falsche Informationen über die Bauart des Motors zu verbreiten. So hatten 11 Millionen Autos auf der ganzen Welt ein falsches Dieselmotor-Design. Der Volkswagen-Konzern hat die Daten über die Menge der schädlichen Emissionen seiner Autos bewusst unterschätzt. Dieser Skandal verbreitete sich auf der ganzen Welt. Man erhielt eine Geldstrafe von rund 18 Milliarden Dollar. Dies war nicht die einzige beunruhigende Tatsache. Neben dem Positionsverlust bei Volkswagen haben sich viele Führungskräfte auch ein negatives Markenimage zugelegt. Für ein Unternehmen, das auf Aktionäre als Hauptinvestoren angewiesen ist, war dies in der Tat eine schwierige Zeit.

Es sei erwähnt werden, dass sich lange Zeit die Theorie hielt, dass negative Werbung dem Unternehmen nur schaden kann. „Aktuell gibt es Beispiele, die dieser Theorie widersprechen. So stieg zum Beispiel nach der Veröffentlichung des Films „Borat“, der sich über Kasachstan lustig macht, die Zahl der Hotels in Kasachstan und ihrer Besucher um etwa 300%“ [Berger, 2017].

Je öfter ein Produkt in den Nachrichten erscheint, desto größer wird die Bekanntheit des Produkts. Zudem wächst die Verfügbarkeit des Produkts. Da die Aufmerksamkeit der Verbraucher begrenzt ist, können sie nicht alle auf dem Markt erhältlichen Produkte bewerten. Sie wählen unbewusst aus, was ihnen in den Sinn kommt. Die ständige Erwähnung in den Nachrichten hinterlässt einen großen Eindruck in den Köpfen der Verbraucher. Ausländische Marktforscher haben die Auswirkungen solcher Werbung auf den Buchverkauf untersucht [Berger, 2017].

Positive Werbung steigert den Verkauf von Büchern aller Autoren, egal ob sie anerkannt oder nicht anerkannt sind. Negative Werbung führt zu einem anderen Ergebnis. Bekannte Autoren leiden sehr unter solcher Werbung und verlieren den Umsatz, während unbekannte Autoren bekommen bis zu 45 % des Umsatzes. Aufgrund dieses Ergebnisses lässt sich argumentieren, dass negative Werbung auch Werbung ist und auch Verbraucher so manipulieren kann, dass der Umsatz steigt.

2) *Unterbewusste Suggestionen*

Werbung kann als Form der Manipulation eingesetzt werden. Sie wirkt sich auf das Gehirn aus. Im Journal of Business Ethics steht: „Der offensichtliche Einwand gegen persuasive Werbung ist, dass sie irgendwie die Autonomie der Verbraucher verletzt“ [Crisp, 1987:13].

Verbraucherautonomie bezeichnet in diesem Zusammenhang die Möglichkeit, eine Entscheidung zu treffen. Das Verlangen wird unbewusst in den Köpfen der Verbraucher geboren. Unterbewusste Suggestionen sind eine Form dieses Phänomens. Eine unterschwellige Suggestion ist eine Nachricht, die im Hintergrund, unter Stimmen oder Hintergrundgeräuschen versteckt oder als blinkendes Bild präsentiert wird, das so schnell flimmert, dass der Benutzer sich nicht daran erinnern kann, es bewusst gesehen zu haben.

3) „Aufgeblasene Werbung“

Eine weitere Form der Werbung, von der angenommen wird, dass sie die Wahlmöglichkeiten der Verbraucher manipuliert, besteht darin, eine Botschaft zu wiederholen und sie mit bestimmten Bildern zu verknüpfen. Dieses sogenannte „Aufblasen“ funktioniert wie folgt: „Indem ein Produkt, das der Kunde möglicherweise nicht benötigt, mit Symbolen verknüpft wird, die die Befriedigung oft verborgener Interessen widerspiegeln, kann Werbung schnell eine große Anzahl von Verbrauchern anziehen, die das beworbene Produkt kaufen möchten“ [Massara, 2018].

Aus diesem Grund werden in Autospots oft Lifestyles gezeigt. Die Autos von Rover sind für Abenteuer gebaut, und Sportwagenwerbung zeigt Szenen mit schönen, auffälligen Frauen. Die Menschen wollen den beworbenen Lebensstil oft mehr als das Auto. So assoziieren die Verbraucher das Auto unbewusst mit den Bildern, die sie sehen. Die Wiederholung ähnlicher Bilder bei diesen Produkten wird für die Käufer glaubwürdiger und sie kaufen das Produkt nicht wegen der Notwendigkeit, sondern wegen des beworbenen Lebensstils mit diesem Produkt.

Arrington spricht von den Wünschen erster und zweiter Ordnung. Autonomes Verlangen ist Verlangen erster Ordnung, das normalerweise an der Oberfläche liegt. Der Wunsch, ein Produkt zu kaufen – das zweite – ist das, wo diese Art von Werbung funktioniert. Dies ist eine tiefere Ebene des Verlangens, nicht nach dem Produkt selbst, sondern nach Schlüsselementen wie Macht und Sex, und sie sind nicht autonom [Simonson et al., 2004].

4) Marke

Branding ist eine Form der einfachen Darstellung, bei der ein Unternehmen die Präferenzen der Verbraucher beeinflussen kann. Dies ist die häufigste Form der Manipulation des Verbraucherverhaltens. Das häufigste und modernste Beispiel für Menschen mit hoher Markentreue sind Apple-Kunden. Apple hat eine Atmosphäre geschaffen, in der es für Verbraucher nicht einfach ist, die Marke zu verlassen oder durch eine andere zu ersetzen [Massara, 2018].

Wenn Menschen auf Dinge wie Logos, Slogans, Bleimagnete, Angebote oder sogar Bilder von immer wieder gleichen Gesichtern stoßen, kommen sie diesen Dingen unbewusst näher. Diese Nähe bewirkt eine unbewusste Präferenz für diese Marke und schafft somit einen Kaufanreiz. Es ist zu beachten, dass nicht nur die Anzahl der Expositionen wichtig ist, sondern auch deren Dauer. Eine zeitlich ausgedehnte Exposition kann sich negativ auf das Unterbewusstsein des Klienten auswirken. Menschen können sich durch eine langfristige Exposition gegenüber einem Reiz ärgern und die Marke daher nicht richtig wahrnehmen. So ist es wichtig, die richtige Belichtungszeit zu wählen, die jedoch in jeder Situation anders ist.

Arten des Brandings sind am Beispiel von Adidas zu sehen. Die erste Art des verwendeten Brandings ist das Branding von Einzelhandelsprodukten. Adidas zeichnet sich durch seinen Namen und sein Logo aus. Das Logo und die Streifen auf der Kleidung sind die wichtigsten unverwechselbaren Symbole des Unternehmens und regen die Verbraucher zum Kauf von Produkten an. Die zweite und dritte Art von Marken sind individuelles und korporatives Branding. Adidas

sponsert seine Zielgruppe. Sie verkaufen Sportbekleidung und sponsern berühmte Sportler und Mannschaften wie Arjan Robben, Lionel Messi, Bayern München und die argentinische Nationalmannschaft. Corporate Branding bezeichnet die Aktivitäten, mit denen eine Marke ihren Namen verbindet. Adidas nutzt dies oft bei Sportveranstaltungen wie der FIFA Fussball-Weltmeisterschaft, um die Aufmerksamkeit der Zielgruppe auf sich zu ziehen. Es kann aber auch dem Unternehmen schaden. So wurde die FIFA beispielsweise wiederholt in den Zeitungen wegen Korruptionsvorwürfen erwähnt. Für ein Unternehmen ist es wichtig, die Ereignisse nicht zu vergessen, mit denen es seine Marke als Organisation verbindet.

5) Preise

Im Rahmen der Preisgestaltung kann auf vielfältige Weise agiert werden. Von konstant hohen Preisen bis hin zu Ausverkäufen und allen möglichen Tricks, mit denen Verbraucher im Kopf eine Preisspanne festlegen können, zu der sie immer glauben, das Produkt zum attraktivsten Preis erhalten zu haben. Ein Beispiel hierfür ist „verbindlich“.

Der Ankereffekt ist ein Effekt, bei dem Menschen basierend auf dem ersten Kaufimpuls, auf den sie stoßen, eine Basislinie für sich selbst festlegen, z. B. die durchschnittlichen Kosten von Produkten in einem Geschäft. Dies ist eine Form der kognitiven Verzerrung. Dieses Grundprinzip wird dann verwendet, um andere Artikel im Geschäft zu bewerten.

Dieser Effekt kann in vielen Situationen genutzt werden. Da das Gehirn ständig schnappt, können Geschäfte dies zu ihrem Vorteil nutzen. Wenn Sie einen teureren Artikel in das Schaufenster stellen, das Ihnen zuerst ins Auge fällt, können Sie die Preise anderer Artikel im Geschäft aus einer profitableren und attraktiveren Perspektive sehen.

6) Dringender Bedarf

Für jedes Unternehmen ist es wertvoll, wenn der Verbraucher sofort und unwillkürlich auf sein Produkt reagiert. Sie können das Produkt sehen und sofort kaufen, wenn Sie dieses impulsive Verhalten irgendwie anregen. Kurzfristige Verkäufe, Artikel in limitierter Auflage und Artikel mit begrenztem Lagerbestand wie Konzertkarten sind alles Beispiele, die impulsives Verhalten fördern.

Diese Taktik funktioniert oft, weil sie den Risikofaktor hat, keinen Kauf tätigen zu können. Dringlichkeit kann in positiv und negativ unterteilt werden und bezieht sich auf die Emotionen und Handlungen, die sie hervorruft. Diese starken Emotionen, ob positiv oder negativ, destabilisieren die Fähigkeit, rational zu denken, und erhöhen dadurch die Zugänglichkeit und Anfälligkeit für impulsives Verhalten. Impulsives Verhalten führt dazu, dass eine Person Ecstasy erlebt, eine sofortige wütende Dopamin-Reaktion im Gehirn [Simonson et al., 2004]. Nach einer Weile wird der Verbraucher diese impulsive Wahl wahrscheinlich bereuen, da die Freude, die er bei einem impulsiven Kauf in seinem normalen, vertrauten Zustand empfand, viel geringer sein wird als im Extremen.

Menschen können gemäß ihrem Geisteszustand manipuliert werden, ebenso wie gemäß den Stereotypen, die in der sozialen Gruppe, zu der sie gehören, akzeptiert werden. Bungee-Jumping ist also eine impulsive Aktivität, die Teenager

im Urlaub machen. Hier kommt das Notfalltool ins Spiel. Und Sonderangebote sind ein Beispiel für Dringlichkeit, da sie zeitlich begrenzte Angebote bieten, die wirklich ekstatisch sind. In diesem Fall wird der Kauf wirklich impulsiv getätigt. Aber in dem Moment, in dem ein Mensch zur Rationalität zurückkehrt und die Such- und Vergleichsfähigkeit wiederhergestellt ist, merkt er, dass die Dringlichkeit überhandgenommen hat.

7) Festsetzung eines hohen Preises

Wie Ökonomen festgestellt haben, gilt: Je höher der Preis, desto geringer die verkaufte Menge. Aber stimmt das und wie halten sich Marken wie Burberry und Louis Vuitton am Markt? In diesem Fall funktioniert der Branding-Effekt.

Menschen interessieren sich dafür, wie andere sie sehen. Lifestyle-Werbung spielt, wie bereits erwähnt, eine große Rolle. Verbraucher dieser Luxusmarken versuchen, anderen zu vermitteln, zu welchem Lebensstil sie gehören oder welchen sie bewundern. Der Luxus-Lifestyle einiger Marken soll die Zahlungsbereitschaft der Verbraucher für Produkte erhöhen. Der Betrag, der für Markenprodukte festgesetzt wird, hängt davon ab, an welches Publikum die Produkte verkauft werden und wie die Marke den Verbrauchern erscheint – am luxuriösesten oder mittelmäßigsten [Massara, 2018]. Anzeigen mit Weltmarktführern in den Bereichen Sport, Kino oder Mode können die Markenpreise noch weiter in die Höhe treiben. Dies wird Co-Branding genannt oder die Macht der Autorität einer berühmten Person nutzen, um die Marke besser zu positionieren.

Zum Schluß, die Studie zeigt, dass es dem Unternehmen, das sich in seiner Tätigkeit vor allem auf den Verbraucher konzentriert, gelingt es meistens eine führende Position auf dem Markt einzunehmen. Die häufigsten und am weitesten verbreiteten Methoden zur Manipulation des Verbraucherverhaltens zeigen, dass durch die Anwendung solcher Manipulationsmethoden die Unternehmen die Qualität des Produktvertriebs verbessern können und solcherweise den Erfolg auf dem Markt sichern leisten.

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SECTION 3. CHEMICAL AND BIOLOGICAL SCIENCES

DIE AUTOMATISIERUNG BEI DER HERSTELLUNG VON JOGURT UND DESSERTS IM EFKO-UNTERNEHMEN

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Annotation. *Der Artikel widmet sich dem Thema der Produktionsautomatisierung bei der Herstellung von Joghurt im Unternehmen. Der Autor berichtet über automatisierte Produktionsprozesse, die heute in der AG EFKO sehr nachgefragt sind. Im Artikel beschreibt man die Notwendigkeit dieser Produktionsprozesse und zeigt man ihre Vor- und Nachteile.*

Schlafwörter: *Joghurt, Dessert, Automatisierung der Produktion von Joghurt, Produktion von Joghurt und Desserts, Linie von Milchprodukten*

Der globale Wettbewerb, der digitale Wandel, demografische Entwicklungen und Ressourcenknappheit: All das und mehr erhöht den Druck auf produzierende Unternehmen und verlangt flexible Lösungen für durchdachte Produktionsprozesse. Als Lösung hilft die industrielle Automatisierung.

Der Markt ist zurzeit dynamischer denn je, das heißt die Produktneuheiten und -variationen erscheinen immer schneller. Zugleich ist die Erwartung der Kunden an die Produktion von Gütern zunehmend gestiegen. Der Wettbewerb wächst ständig und das Internet schafft transparente Vergleichs- und Auswahlmöglichkeiten. Es gilt diesen Ansprüchen gerecht zu werden.

Viele Hersteller stehen vor der Herausforderung, eine große Vielfalt an Produkten bei gleichzeitig schwankenden Losgrößen sicherstellen zu müssen. Und das ist noch nicht alles. Auch der demografische Wandel und der somit entstehende Fachkräftemangel in der Industrie, steigende Lohnkosten, strikte Gesundheits- sowie Sicherheitsanforderungen oder auch die Ressourcenknappheit, sind zu berücksichtigen [Throm, 2016].

Es bedarf daher einer flexiblen Produktion als adäquate Antwort auf die drängenden Fragen der Zukunft der Produktion. Der Schlüssel: Automatisierung in Industrie. Unter „**Automatisierung in der Produktion**“ versteht man die Verbesserung aller Prozesse durch den Einsatz von Maschinen und modernen Technologien. Sie ist die höchste Form der Organisation der modernen Massenproduktion. Die Automatisierung der Produktion ist die Anwendung von Geräten, Vorrichtungen und Maschinen in den Fertigprozessen ohne direkte

Beteiligung des Menschen. Der Mensch hat in diesem Zusammenhang nur Kontrollfunktionen.

Nach dem Umfang der Automatisierung unterscheidet man:

- 1) Automatisierung einzelner Aggregate und Maschinen (Kleinautomatisierung),
- 2) Automatisierung eines ganzen Maschinensystems (automatische Linien),
- 3) Komplex- oder Vollautomatisierung (automatische Verwirklichung des ganzen Fertigungsprozesses von der Vorbereitung des Rohmaterials bis zur Fertigstellung des Produktes).

So umfasst die Automatisierung in der Produktionstechnologie alle Prozessschritte vom Rohstoff bis zum fertigen Produkt, wie zum Beispiel Verarbeitungs-, Fermentations- und Abfüllprozesse. Der Vorläufer der Automatisierung ist die Mechanisierung. Für die Mechanisierung ist die Verwendung technischer Hilfsenergie charakteristisch. Das Management des Workflows bleibt der Person überlassen.

Die Milchproduktion ist eine der wichtigsten Branchen im Agrarsektor, die die Bevölkerung mit Milchprodukten bedürft. Moderne Molkereien oder Fabriken führen komplexe Rohstoffverarbeitung durch, produzieren eine breite Palette von Produkten, sind mit mechanisierten und automatisierten Fülllinien für Flaschen, Beutel und andere Arten von Verpackungen, Pasteurisatoren und Kühlern, Separatoren und Verpackungsautomaten ausgestattet [Ermakowa, 2014].

Heutzutage realisiert man bei der Aleksejewka Filiale AG EFKO viele Automatisierungslösungen für die Produktion von Joghurt und Desserts. Das Unternehmen hat die modernste Ausrüstung, die den Einsatz von schonenden Fertigungstechnologien ermöglicht. Die Projektkapazität des Unternehmens beträgt bis zu 400 Tonnen Rohmaterial und 200 Tonnen Fertigprodukt pro Tag.

Die Herstellung von Joghurts und pflanzlichen Desserts ist in der Aleksejewka Filiale AG EFKO durch entsprechende Automatisierung optimiert, insbesondere im Bereich der Rohstoffversorgung. Die Automatisierung betrifft das Rohstoffhandling für Zucker und Magermilchpulver [Pharma+Food, 2016]. Der trockene Rohstoff wird manuell entleert, aber ergonomisch optimiert, dann gesiebt und automatisch in den entsprechenden Trichter transportiert, um ihn mit anderen Komponenten zu vermischen. Von hier aus gelangen diese Rohstoffe automatisch über ein Saugsystem in die Flüssigkeitsmischer. Die Zugabe aller anderen Zutaten erfolgt direkt an der Übergabestelle zu den flüssigen Mischern. Diese Zutaten werden mit der BMU Station vorgewogen und gescannt.

Das Verpacken von Joghurt ist eine der Phasen der Herstellung von Fertigprodukten. Um diesen Teil des Produktionsprozesses effizient umsetzen zu können, muss eine moderne Abfülllinie verwendet werden. EFKO verfügt über eine breite Palette von externen automatisierten Geräten. Alle Installationen sind modern und neu. Sie stammen aus Deutschland, Frankreich, Italien, Serbien. Diese Ausrüstung trägt der Produktivität und Optimierung bei. Hier sind einige Beispiele zu nennen. Mit Hilfe von deutschen Geräten *Waldner 1* und *Waldner 2* werden bis zu 8000 Joghurt packungen pro Stunde produziert. Bis zu 40.000 Stück Joghurt pro Stunde werden mit französischer Ausrüstung *Arsil* hergestellt. Die *Erka-*

Füllmaschine aus Frankreich produziert rund 13.000 Stück Joghurt pro Stunde. Mit *Technometall* aus Serbien werden rund 15.000 Flaschen Joghurt pro Stunde hergestellt. Der italienische *Index* produziert etwa 6.000 Dosen Thermoat joghurt pro Stunde. Ab 2021 werden im Unternehmen auch automatisch Desserts an der *Dosamat-Abfüllmaschine* hergestellt.

In der Aleksejewka Filiale AG EFKO werden verschiedene Arten von Joghurt nach Konsistenz hergestellt, z. B. Trinkjoghurt in Flaschen, Dessertjoghurt in Wannen und Gläsern und Thermoatjoghurt, der sofort in der Verpackung fermentiert wird.

Wie jede technologische Innovation verursacht die Automatisierung viele Kontroversen. Diese Idee hat sowohl Befürworter als auch Gegner, die die folgenden Vor- und Nachteile nennen.

Effiziente industrielle Automatisierung garantiert:

- Verbesserung der Produktqualität;
- Steigerung der Produktivität;
- Verbesserung der Unternehmenseffizienz;
- steigende Sicherheitsstufe.

Die Vorteile der Automatisierung umfassen daneben auch einige andere Indikatoren: höhere Unternehmensgewinne, geringere Produktkosten, produktive Kontrolle über die Produktqualität, geringere Produktausfälle, zunehmende Dynamik neuer Kunden durch die Steigerung der Produktqualität, den Austausch von Menschen in schweren und gefährlichen Situationen, die Erfüllung von Aufgaben, die für den Menschen nicht möglich sind.

Neben den positiven Aspekten hat die Automatisierung jedoch auch negative. Darunter sind folgende: die Komplexität des Produktionssystems, die Notwendigkeit, das Personal neu zu qualifizieren, die steigende Arbeitslosenquote. Trotz dieser Nachteile können ihre Auswirkungen durch ein effizientes Produktionskontrollsystem minimiert werden [Chlebenschich, 2017].

Die Automatisierung der Produktion hat sowohl positive als auch negative Aspekte in der Filiale von Alekseevsky der EFKO AG. Als positiv schätzen wir die Möglichkeit, mehrere Chargen mit unterschiedlichen Geschmacksrichtungen gleichzeitig zu verpacken. Im Moment erreicht das Sortiment der hergestellten Produkte mehr als 90 Namen. Heute gibt es 10 Abfülllinien, aber das ist nicht die Grenze. Bereits im Jahre 2022 soll noch eine Tetra Pak Flex-Abfülllinie A/3 mit einer Kapazität von 7000 Packungen pro Stunde installiert werden.

Daneben gibt es auch die Nachteile: Personalabbau, teure Kosten für Wartung der Produktionsausrüstung, lange Wartezeiten auf die Lieferung von Komponenten aus dem Ausland.

Fazit

Die Automatisierung der Produktion, ganz oder teilweise, ist eine der Folgen des technischen Fortschritts und zumindest nicht das Schlimmste. Die einzigen Hindernisse für die Automatisierung zur vollständigen Dominanz der Produktion sind die wirtschaftlichen, daher ist es nicht verwunderlich, dass viele die wirtschaftlichen Verluste in der Gegenwart aus Gründen des illusorischen Erfolgs in der Zukunft aufgeben. Tatsächlich erfordert Automatisierung wirtschaftliches

und unternehmerisches Geschick – nur dann kann es Gewinne bringen, keine Verluste.

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PARASITOLOGISCHE UNTERSUCHUNGEN VON PFLANZLICHEN PRODUKTEN

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Annotation. *Nach Angaben der Weltgesundheitsorganisation ist fast die Hälfte der Weltbevölkerung mit verschiedenen Parasiten infiziert. Helminthien und andere Befälle sind in der gesamten Bevölkerung weit verbreitet. Die Kontrolle der importierten Produkte sowie die Aufklärungstätigkeit der Bevölkerung sind notwendig, um die Infektionsfälle zu reduzieren. Der Artikel enthält Informationen über die am häufigsten vorkommenden Arten von Geogelminthiasis, beschreibt die Methoden zur Erkennung von ihnen und ernennt die vorbeugenden Maßnahmen der Infizierung. Man wird im Artikel die biologische Sicherheit und Qualität von Pflanzenprodukten anhand parasitologischer Indikatoren untersucht.*

Schlagwörter: *Helminthien, Geogelminthiasis, parasitologische Indikatoren, pflanzliche Produkte, Ascarirose, Toxocarose, biologische Sicherheit und Qualität von Pflanzenprodukten*

Derzeit schätzt die Weltgesundheitsorganisation, dass etwa 2 Milliarden Menschen von Geogelminthen und etwa 4,5 Milliarden Menschen von

verschiedenen Parasiten befallen sind. Etwa 40.000 Fälle von Helminthiasis werden jährlich in Russland registriert. Die Infektion erfolgt durch Eier und Wurmzysten, die durch pflanzliche Produkte, Boden und Wasser übertragen werden.

Am häufigsten werden in Russland *Geogelminthiasis* wie *Ascariasis*, *Toxocariasis*, *Trichocephalose*, *Ancilostomidosis* registriert. Ascaridose tritt in 90,2% und Toxocarose in 8,7% auf. Der Anteil der Trichocephalose beträgt 1,0% der Infizierten und für andere Geogelminthien (Strongyloidose, Ankylostomidose) ist das etwa 0,1%. Jedes Jahr steigt die Zahl der ascaridose infizierten Leute. Im Jahre 2015 wurden ca. 24 115 Fälle registriert. 2016 war es mehr, und zwar 26 864 Fälle. Etwa 68% der Erkrankten sind Kinder unter 14 Jahren [O zabolevaemosti geogel`mintozami v Rossijskoj Federazii v 2013 godu, 2014].

Wenn wir die Gründe der Infektion herausfinden, so kann man sagen, dass die Infektion in der Hälfte von Fällen als Verzehr von schlecht gewaschenem Gemüse, Obst, Grün und Beeren entsteht. Ein Viertel der Fälle ist mit der Arbeit an Inlandsflächen und mit direktem Bodenkontakt verbunden [Dawydowa, 2017; Kriwopustow, 2011].

Eine deutlich geringere Anzahl von Menschen ist mit *Toxocarose* infiziert. Im Jahre 2015 wurden insgesamt 2.507 Fälle von Infektionen registriert. Am häufigsten sind das die städtischen Bewohner. Zu diesem Zeitpunkt war die Diagnose der Krankheit nicht ausreichend ausgearbeitet, deshalb können diese Statistiken erheblich unterschätzt werden.

Toxocarose wird durch das Larvenstadium der Helminthen von Hunden verursacht. Die Infezierung des Menschen erfolgt durch Kot kontaminierten Boden, aber auch durch pflanzliche Produkte, die mit Toxarose-Eiern kontaminiert sind [Dawydowa, 2017; Kriwopustow, 2011].

Trichocephalose tritt aufgrund des ungünstigen Klimas in der Russischen Föderation viel seltener auf. Diese *Geogelminthiasis* ist jedoch anfällig für einen chronischen Verlauf. Die Wurmeier, die erst nach 25 Tagen in den Boden gelangen, erwerben invasive Eigenschaften. Der Parasit dringt von der Oberfläche von schlecht gewaschenem Obst und Gemüse in den menschlichen Körper ein. *Trichocephalose* kann bis zu 5 Jahre im menschlichen Verdauungstrakt parasitieren [Dawydowa, 2017].

Neben Geogelminthen gibt es verschiedene Mikroorganismen auf der Oberfläche von Schwimmerprodukten. In den meisten Fällen tritt der Befall auf, wenn Gemüse und Früchte mit Fäkalien gedüngten Feldern und Gemüsegärten angebaut werden und wenn pflanzliche Produkte transportiert werden (Kontakt mit kontaminierten Behältern und den Händen mit Baziloträgern) [Moskina, 2016].

Die Verletzung der Lagerungs- und Verarbeitungsbedingungen von landwirtschaftlichen Produkten führt zur Ansammlung von pathogenen Mikroorganismen und Produkten ihrer Lebenstätigkeit. Am häufigsten werden Ruhrstäbchen, Enteroviren, Salmonellen, Botulismus- und Staphylokokken-Erreger auf Obst, Gemüse, Kräutern und anderen pflanzlichen Produkten

gefunden. Um den Befall zu neutralisieren, müssen die Produkte unbedingt einer Wärmebehandlung unterworfen sein [Müller, 1977].

Die Entwicklung des Verbrauchermarktes und die Zunahme der Produktpalette verursachen jährlich einen größeren Zustrom von pflanzlichen Produkten, die aus dem Ausland importiert und auf dem Territorium der Russischen Föderation hergestellt werden. Bevor sie in die Geschäfte gelangen und den Einkäufern verkauft werden, müssen die Produkte mehreren Kontrollen unterworfen werden.

Das Ziel der Studie ist die biologische Sicherheit und Qualität von Pflanzenprodukten anhand parasitologischer Indikatoren zu untersuchen.

Die Aufgaben der Studie sind:

- pflanzliche Produkte anhand parasitologischer Indikatoren zu bewerten;
- die veterinär-hygienische Bewertung der untersuchten Produkte pflanzlichen Ursprungs zu machen.

Um die Notwendigkeit einer besseren Kontrolle der Lebensmittelsicherheit nach parasitologischen Indikatoren zu verstehen und das Risiko einer Parasiteninfektion der Bevölkerung zu reduzieren, wurde daran gearbeitet, die wichtigsten Parasiten pflanzlicher Produkte und den Schutz der Bevölkerung vor Helminthien bekannt zu machen [O zaboлеваemosti geogel`mintozami v Rossijskoj Federazii v 2013 godu, 2014; Kriwopustow, 2011].

Man muss sagen, dass bei der Bildung eines gesunden Lebensstils die Prophylaxe bei der Behandlung von Helminthiasis eine große Rolle spielt. Wichtig bleibt dabei die Einhaltung der hygienischen Normen, der Verzehr von nur gut gewaschenem Gemüse und Obst, die Wärmebehandlung von Lebensmitteln.

Das rechtzeitige Händewaschen, der Verzehr von abgekochtem oder gefiltertem Wasser, die Vermeidung von Umweltverschmutzung durch Fäkalien, die richtige Pflege und Pflege von Haustieren, die Identifizierung von Patienten und die rechtzeitige Behandlung sind notwendig.

Um die Situation mit der Geogelminthiasis zu untersuchen, wurden Obst-, Obst- und pflanzliche Produkte wie Gemüse (Karotten, Rüben, Zwiebeln, Kartoffeln), Früchte (Äpfel, Birnen, Mandarinen, Aprikosen, Bananen, Kiwis, Wassermelonen, Melonen), Tafelgrün untersucht. Die Proben für die parasitologische Kontrolle wurden in Übereinstimmung mit dem MUK (Methodische Hinweisungen) 4.2.3016-12 „Sanitär-parasitologische Untersuchungen von Frucht-, Obst- und Beerenprodukten“ durchgeführt. Zur Probennahme wurden zufällige Stichproben vom Gemüsemarkt in Kursk genommen [MUK, 2012].

Alle Studienuntersuchungen wurden an der Staatlichen Universität Kursk im Labor auf der Grundlage des Forschungsinstituts für Parasitologie durchgeführt. Die folgenden Methoden wurden angewendet:

1) Methode der einfachen Spülung. Es wurden 50 Proben untersucht und nur in 1 Probe wurde ein Spulenei gefunden. Der Prozentsatz der Entdeckung betrug - 2%.

2) Einweiche Methode. Bei der Untersuchung von 50 Proben wurden in 3 Proben 1 Ei Toxocarose und 2 Ei Ascarida gefunden. Der Prozentsatz der Entdeckung betrug – 6% [MUK, 2012; Senchenkow, 1998].

Tabelle 1. Probenahme von frischen und frisch gefrorenen Früchten, Gemüse, Beeren und Tafelgrün

Erzeugnisart	Volumen, Gewicht der kombinierten Probe für die Studie
EsszimmerGrüns Blattgemüse	Mindestens 0,1 kg aus jedem Verbraucherbehälter. Die Probenahme von Kohl, Salaten ist mit oberflächlichen (basalen) Blättern erlaubt
Gemüse, Obst	Mindestens 0,5 kg pro 100 kg Produkt
Beerenprodukte	0,2 kg pro 100 kg Produkt
FrischgepressteSäfte	0,1 L
Große Melonenfrüchte mit glatter Oberfläche	Abwasch von der Oberfläche von mindestens 20-25 Exemplaren von Früchten

Fazit

Die erhaltenen Ergebnisse wurden verarbeitet und analysiert. Die Ergebnisse der vergleichenden Studien haben gezeigt, dass die Methoden der instrumentalen Spülung und Einweichen für die Überwachung von Frucht-, Obst- und Beerenprodukten nach parasitologischen Kennziffern wirksam sind.

Die durchgeführten Studien haben bestätigt, dass die am häufigsten vorkommende Art von Geogelminthen Ascarida ist.

Die größte Intensität der Kontamination von Obst-, Beeren- und pflanzlichen Produkten mit Geogelminth-Eiern wurde durch Einweichen nachgewiesen.

Man kann behaupten, dass jedes Jahr die Anzahl der in das Gebiet der Region Kursk importierten pflanzlichen Produkte zunimmt. Die Untersuchungen in Lebensmittelabteilungen zur Einhaltung etablierter Normen und parasitologischer Häufigkeit sind ein Garant für das gesundheitliche Wohlergehen der Bevölkerung.

Durch Protozoen und Würmer verursachte Krankheiten können durch Nahrung in den menschlichen Körper gelangen. Zysten und Larven können auf der Oberfläche von Obst, Gemüse und Obstprodukten lokalisiert werden, manchmal in Pflanzengewebe versteckt. Dies bestätigt die Dringlichkeit der ständigen Überwachung der Qualität der importierten Produkte und die Notwendigkeit einer Untersuchung zu parasitologischen Indikatoren.

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AMINOSÄURE ALS WICHTIGE BAUSTEINE DES LEBENS UND DES MENSCHLICHEN ORGANISMUS

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***Annotation:** Dieser Artikel widmet sich dem Thema „Aminosäuren“. Im Artikel wird die Klassifizierung der chemischen Gruppe von Aminosäuren gegeben. Der Autor gibt einen kurzen Überblick über essentielle Aminosäuren und*

ihre Einwirkung auf den menschlichen Organismus. Die Funktionen und Anzeichen eines Aminosäuremangels werden vom Autor berücksichtigt und beschrieben. Darüber hinaus werden Empfehlungen für die tägliche Proteinzufuhr gegeben.

Schlagwörter: Aminosäuren, essentielle Aminosäure, nicht-essentielle Aminosäuren, Protein, Aminosäuremangel

In der Gesundheits- und Fitnesswelt gilt Protein oftmals als einer der wichtigsten Nährstoffe für Erfolg beim Muskelaufbau. Was oftmals übersehen wird, ist, dass hochwertiges Protein aus essentiellen Aminosäuren besteht. Das Ziel des beiliegenden Artikels ist die Rolle der Aminosäuren für das Leben und den menschlichen Organismus zu zeigen.

Zuerst deuten wir den Begriff „**Aminosäuren**“. Laut der Definition sind Aminosäuren die Carbonsäuren, bei denen ein alpha-ständiges Wasserstoff-Atom durch eine Aminogruppe (NH₂) ersetzt ist [Petrowskiy, 1974]. Unbestritten ist, dass essentielle Aminosäuren für den Körper wichtig sind.

Es ist bekannt, dass der menschliche Körper im Durchschnitt zu 20% aus Proteinen (Proteinen) besteht, und jede Zelle des Körpers enthält bis zu 50-80% dieser Verbindungen. Proteine wiederum sind das Ergebnis der Synthese, einer Mischung zwischen 20 Hauptaminosäuren. Ihre Sequenz im Verlauf der Verbindungen wird in Übereinstimmung mit einer Reihe von Genen in der DNA variiert, was für Unterschiede in der Funktionalität von Proteinen sorgt: Gebäude, Transport, Schutz usw.

Die chemische Gruppe der Aminosäuren kann nach unterschiedlichen Gesichtspunkten klassifiziert werden.

1. In Bezug auf die Proteinsynthese unterscheidet man **proteinogene** und **nicht-proteinogene Aminosäuren**. Im engeren Sinn versteht man unter dem Begriff „**proteinogen**“ oft die 20 verschiedenen kanonischen Aminosäuren, aus denen die menschlichen Eiweiße zusammengesetzt sind.

Alle proteinogenen Aminosäuren tragen am alpha-C-Atom (dem der Carboxylgruppe nächsten Kohlenstoffatom) eine Aminogruppe und liegen in der L-Form vor. **Selenocystein**, die 21. proteinogene Aminosäure, nimmt eine Sonderrolle ein, da sie nicht direkt in der DNA kodiert ist. Stattdessen wird der Einbau von Selenocystein über ein UGA-Codon und eine Selenocystein-Insertionssequenz (SECIS) gesteuert. Beim Menschen sind mehrere Enzyme bekannt, die Selenocystein enthalten.

Die Aminosäure **Pyrrolysin** kommt im Menschen nicht vor, aber wird allerdings in einigen Bakterien- und Archeenarten zur Proteinsynthese verwendet und wird somit ebenfalls als proteinogene Aminosäure definiert.

In der Natur existieren mehrere Hunderte weiterer Aminosäuren, die bei der Proteinsynthese keine Rolle spielen. Das sind die sogenannten nicht-proteinogene Aminosäuren. Trotzdem erfüllen sie wichtige Funktionen im Organismus und sind an verschiedenen metabolischen Vorgängen beteiligt.

Die Rolle der verschiedenen Aminosäuren unterscheidet sich bei verschiedenen Spezies. Beim Menschen gehören zu den nicht-proteinogenen AS u.a. der inhibitorische Neurotransmitter GABA, Ornithin und Citrullin aus dem Harnstoffzyklus sowie Homocystein und das Schilddrüsenhormon Thyroxin.

2. In Bezug auf die Verfügbarkeit unterscheidet man **essentielle und nicht-essentielle Aminosäuren**. Die nicht-essentielle Aminosäuren können vom Organismus selbst synthetisiert werden, während die essentiellen Aminosäuren aus externen Quellen – vor allem durch Nahrungsaufnahme – zugeführt werden müssen. Diese Einteilung ist aber nicht 100 %ig trennscharf, da die Verfügbarkeit einer bestimmten Aminosäure im Stoffwechsel situationsabhängig ist. Aus diesem Grund ordnet man einige Aminosäuren den bedingt-essentiellen Aminosäuren zu. Beim Menschen ergibt sich folgende Aufteilung:

a) Essentielle Aminosäuren sind: L-Isoleucin, L-Leucin, L-Lysin, L-Methionin, L-Phenylalanin, L-Threonin, L-Tryptophan, L-Valin.

b) Nicht-essentielle Aminosäuren sind folgende: L-Alanin, L-Arginin, L-Asparaginsäure, L-Asparagin, L-Cystein, L-Glutamin, L-Glutaminsäure, L-Glycin, L-Histidin, L-Prolin, L-Serin, L-Tyrosin (essentiell für Kinder).

3. Daneben gibt es die **bedingt-essentielle Aminosäuren** oder **semi-essentielle Aminosäuren**. Das sind Aminosäuren, die normalerweise nicht-essentiell sind und nur in bestimmten Situationen mit der Nahrung aufgenommen werden müssen. Das ist zum Beispiel bei gesteigertem Proteinbedarf (Wachstum, Rekonvaleszenz, Schwangerschaft) oder bestimmten Stoffwechselerkrankungen der Fall. In diese Gruppe fallen unter anderem L-Arginin, L-Histidin, L-Cystein und L-Tyrosin.

Weiter wird im Artikel eine kurze Übersicht über die essentiellen Aminosäuren gemacht.

Isoleucin gehört zu den verzweigt-kettigen Aminosäuren, auch BCAA genannt (aus dem Englischen für **B**ranch**e**d-**C**hain **A**mino **A**cids), die für den Muskelerhalt wichtig sind. Diese Aminosäure ist auch in anderen Strukturproteinen stark vertreten, die in Nerven, Bindegewebe und Knochen vorkommen. Auch Hämoglobin, der rote Blutfarbstoff, der Sauerstoff transportiert, hat einen hohen Anteil an Isoleucin.

Leucin gehört ebenfalls zu den BCAAs. Antikörper, Enzyme und Transportproteine haben einen hohen Leucin-Anteil. Außerdem ist Leucin für den Hormonhaushalt wichtig: Es ist beispielsweise an der Insulin-Ausschüttung in der Bauchspeicheldrüse beteiligt.

Lysin ist stark in Proteinen des Immunsystems vertreten. Außerdem ist Lysin für ein starkes Bindegewebe wichtig, da es am Aufbau von Kollagen beteiligt ist. Bei einem Mangel kommt es daher zu brüchigen Nägeln, Hautproblemen und Haarausfall.

Methionin ist die Start-Aminosäure von Proteinen. Die Herstellung eines Proteins beginnt immer mit Methionin. Eine modifizierte Variante von Methionin, S-Adenosylmethionin (SAM), liefert die Methylgruppe zur Methylierung von DNA. Dadurch wird die epigenetische Genregulation gesteuert. Außerdem wird Methionin für die Synthese des Stresshormons Adrenalin benötigt.

Phenylalanin ist Ausgangsstoff vieler Moleküle, die an der Stressantwort beteiligt sind. Zum Beispiel wird Phenylalanin für die Herstellung der Neurotransmitter Adrenalin und Dopamin benötigt. Bei Depressionen und Alkoholentzug ist der Bedarf an dieser Aminosäure besonders hoch.

Threonin hat wichtige Funktionen im Harnsäurestoffwechsel und wird für den Aufbau von Kollagen benötigt. Außerdem ist Threonin Bestandteil von Glykoproteinen, die der Schleimschicht von Schleimhäuten die typische Oberfläche verleihen.

Tryptophan nimmt eine besondere Stellung unter den essentiellen Aminosäuren ein. Es ist nicht nur ein Proteinbaustein, sondern wird auch für die Synthese des Neurotransmitters Serotonin benötigt, der auch als Gute-Laune-Macher bekannt ist. Außerdem dient Tryptophan als Vorstufe für das Schlafhormon Melatonin und ist für die Herstellung von Vitamin B3 wichtig.

Valin ist die dritte verzweigt-kettige Aminosäure (BCAA). Die Aminosäure dient als Ausgangsstoff für viele Neurotransmitter, die Signale von einer Nervenzelle zur nächsten übertragen, und ist somit für die Nervenfunktion wichtig. Das Bindegewebsprotein Elastin ist sehr reich an Valin [Kolman, Rem, 2000].

Aus der Tabelle 1 werden die Funktionen und Anzeichen eines Mangels an essenziellen Aminosäuren ersichtlich [Lehninger, 1985].

Tabelle 1. Funktionen und Anzeichen eines Mangels an essenziellen Aminosäuren

Aminosäure	Funktion	Manglerscheinungen
Valin	Leicht transaminiert und verloren, stellt die Muskeln nach dem Training wieder her	Bluthochdruck, Ataxie
Histidin	Die Synthese von Folsäure, Nukleinsäuren, Hämoglobin und Carnosin, wichtig bei Urämie, verstärkt die Sekretion von Salzsäure und Pepsin	Anämie, Mangel an Carnosin, beeinträchtigte geistige Entwicklung bei Kindern
Isoleucin	Viele in der Zusammensetzung von Immunglobulinen spielen eine Schlüsselrolle bei der Verwertung von Lebensmitteln	Gewichtsverlust, hohe Urinausscheidung
Leucin	Aktiviert das endokrine System, eine wichtige Rolle für das Immunsystem	Verkümmertes Wachstum und körperliche Entwicklung
Lysin	In allen Proteinen enthalten, sorgt für Wachstum des Knochengewebes, stimuliert die Mitose, unterstützt die sexuelle Funktion bei Frauen, senkt	Kopfschmerzen, Übelkeit, Hörverlust, langsames Knochenwachstum

	den Triglyceridspiegel, wirkt antiviral	
Methionin	Leberschutz, Körperentgiftung, Schutz vor Toxikose bei Schwangeren, antioxidative Wirkung, Hämoglobinsynthese, Schilddrüsenfunktion, Wachstum	Fettleibigkeit, Leberzirrhose, Anämie, Blutungen, Muskelatrophie
Threonin	Assimilation von Nahrungsprotein, lipotroper Effekt, Kollagen- und Elastinstoffwechsel, verbessert die Immunität	Gewichtsverlust, hohe Urinausscheidung
Phenylalanin	50% gehen an Proteinsynthese, Adrenalin- und Tyrosinsynthese, geistige Aktivität, Gedächtnis, verbessert die Leber- und Bauchspeicheldrüsenfunktion	Schilddrüsen- und Nebennierenfunktionsstörungen, Hypotonie

Essentielle Aminosäuren findet man in proteinreichen Lebensmitteln, also in Hülsenfrüchten, Nüssen, Samen, Fleisch, Fisch, Eiern und Milchprodukten. Aber auch Getreide und grünes Gemüse wie Brokkoli und Spinat enthalten etwas Protein und auch essentielle Aminosäuren. Es sei dabei betont werden, dass die tierischen Lebensmittel alle 8 essentiellen Aminosäuren enthalten. Daher sagt man auch, dass tierisches Protein „komplett“ ist.

Einzelne pflanzliche Lebensmittel enthalten nicht alle essentiellen Aminosäuren. Allerdings kann und sollte man verschiedene pflanzliche Lebensmittel so kombinieren, dass sie zusammen alle essentiellen Aminosäuren liefern. Aus diesem Grund ist eine ausgewogene und vielseitige Ernährung so wichtig, gerade für Veganer.

Tabelle 2. Lebensmittel, die essentielle Aminosäuren enthalten

Aminosäure	Pflanzliche Lebensmittel	Tierische Lebensmittel
Isoleucin	Reis, Sonnenblumenkerne	Geflügel, Wild
Leucin	Erbsen, Leinsamen, Reis	Thunfisch, Eier
Lysin	Erbsen, Sonnenblumenkerne	Rindfleisch, Käse
Methionin	Hanfsamen, Chiasamen	Eier, Rindfleisch
Phenylalanin	Leinsamen, Reis, Hanfsamen	Geflügel, Schweinefleisch
Threonin	Reis, Chiasamen, Kürbiskerne	Wild, Geflügel
Tryptophan	Leinsamen	Wild, Eier
Valin	Leinsamen, Reis, Sonnenblumenkerne	Geflügel, Fisch

Eine super Ergänzung stellen hochwertige Proteinshakes dar. Bei Proteinpulver mit pflanzlichem Protein solltest du unbedingt darauf achten, dass sie viele verschiedene Eiweißquellen enthalten. Tabelle 2 zeigt die Lebensmittel, die essentielle Aminosäuren enthalten.

Damit die Spurenelemente ausreichen und der Körper fehlerfrei arbeitet, muss man verstehen, wo die essentiellen Aminosäuren enthalten sind, die für den Menschen wichtig zu konsumieren sind und welche Norm notwendig ist. Ebenso wie und wo Proteine enthalten sind und in welchem Lebensmittel.

Das Moskauer Institut für Ernährung RAMS spricht von einer Norm für einen Erwachsenen mit geringer oder mittlerer körperlicher Aktivität – 1.5 Gramm Protein pro 1 kg Gewicht [Wysotsky, 1978]. Tabelle 3 macht anschaulich, wie hoch der Gehalt von Proteinen in verschiedenen Lebensmitteln ist.

Tabelle3. Proteinein Lebensmitteln

Lebensmitteln	Proteingehalt, %
Eier, Milch und Milchprodukte	95%
Fisch (besonders Kabeljau) und Fleisch (Huhn, Rindfleisch)	90-70%
mehlige Produkte	70-40%
Getreide, Reis, Nüsse, Gemüse und Hülsenfrüchte	60-30%

Die Deutsche Gesellschaft für Ernährung (DGE) empfiehlt eine Proteinzufuhr von 0,8 g/kg Körpergewicht am Tag. In der nationalen Verzehrstudie II vom Jahr 2008 wurde veröffentlicht, dass etwa 11 % der Männer und 15 % der Frauen diese schon sehr geringe Zufuhr nicht erreichen. Protein ist notwendig, um Gewicht zu verlieren, während des Trainings und für maximale geistige Leistungsfähigkeit.

Die DGE orientiert sich mit ihren Empfehlungen bekanntermaßen nicht an wissenschaftlich aktuellen Erkenntnissen – die neuesten Forschungen (und die Erfahrung) zeigen wieder und wieder, dass 100-200 g hochwertige Proteine täglich ideal für die meisten Menschen sind. Wichtig ist, die Leber kann ca. 250–300 g Protein am Tag verarbeiten – das ist das biologische Maximum.

Die Wissenschaftler haben berechnet, dass für aktive Menschen eine Proteinzufuhr von 1,5–2,5 g/kg Körpergewicht angemessen ist. Dies entspricht bei einer 70 kg schweren Person 105–175 g Protein am Tag. In Nahrungsmitteln sind das ca. 500–900 g Fleisch, Fisch, Käse, 10–17 Eier oder ca. 150 g Protein am Tag. Der Mangel an Aminosäuren im Körper kann durch Nahrungsergänzungsmittel mit erhöhtem Proteingehalt ausgeglichen werden. Aber es ist nicht notwendig, sich nur auf eine Produktgruppe zu konzentrieren, weil dies zu einem Ungleichgewicht führt.

Aber um das Nervensystem zu erhalten und Bindegewebe zu bilden, ist es wichtig, den Körper mit den notwendigen Aminosäuren zu sättigen, da irgendwann

Müdigkeit auftritt, die Haare ausfallen und sich der Zustand der Haut verschlechtert. Oft ändert sich die Stimmung und das Gedächtnis sinkt dramatisch. All dies sind Anzeichen für einen Mangel an Aminosäuren. Der Verzehr von viel Protein aus proteinreichen Nahrungsquellen verursacht negative Nebenwirkungen. Man kann auch Protein aus Proteinpräparaten einnehmen. Sie existieren sowohl in Form von Tabletten, Kapseln, Lösungen oder Pulvern. Mögliche Nebenwirkungen einer proteinreichen Ernährung sind Gewichtszunahme, Nierenprobleme, Verstopfung und Mundgeruch.

Fazit

Essentielle Aminosäuren sind ein wichtiger Baustein für den Körper. Aus diesem Grund muss man immer darauf achten, dass man genug dieser Aminos zu sich nimmt.

Essentielle Aminosäuren sind für viele Aspekte der Gesundheit unerlässlich, und ihr Mangel kann eine lange Liste schwerwiegender Nebenwirkungen und Symptome verursachen. Eine ausgewogene Ernährung mit vielen essentiellen Nährstoffen und proteinreichen Lebensmitteln ist der Schlüssel zur Vorbeugung eines Aminosäure mangels.

Unbedingt ist es wichtig zu wissen, welche Aminosäuren genau in welchen Mengen sind. Nahrungsergänzungsmittel und Supplemente sind natürlich eine Möglichkeit Defizite in der Ernährung ein Stück weit zu kompensieren.

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BIOLOGISCHE MERKMALE VON SCHÄDLINGEN DER WURZELN VON HOLZ-, STRAUCH- UND BLÜTENPFLANZEN

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Annotation. Dieser Artikel ist den Wurzelschädlingen gewidmet. Im Artikel beschreibt man die biologischen Merkmale von häufigsten Pflanzenwurzelschädlingen im Belgorod Region. Der Autor analysiert sie und zeigt ihren Schaden für die Pflanzen. Es ist wichtig für eine erfolgreiche Bekämpfung die Schädlinge zu erkennen.

Schlagwörter: Wurzelschädlinge der Pflanzen, bodenbewohnenden Insekten, Pflanzenschutz, biologische Merkmale von Schädlingen der Wurzeln von holz-, strauch- und Blütenpflanzen, Schädigung der Wurzelpflanzen

Die Schädlinge schwächen die Pflanzen. Die Wurzelpflanzenschädlinge gehören zur Gruppe der bodenbewohnenden Insekten. Die Wurzeln werden von den Larven zahlreicher Arten von Stechfliegen aus der Familie der Sclerotidae, Kriebelmücken, Rüsselkäfern und Lamellenkäfern geschädigt. Die Wurzelhäuse von Pflanzen werden von den Raupen einiger Motten aus der Familie der Nachtfalter, Unterfamilie der Unterfamilie der Nage- oder Regenwürmer, beschädigt.

Die Pflanzenwurzelschädlinge sind die heimtückischsten Insekten. Indem sie den Pflanzensaft aussaugen und die Wurzeln ausgraben, entziehen diese Insekten den Pflanzen die Nährstoffe aus dem Boden. Die Blätter und junge Triebe sterben allmählich ab, die Pflanze selbst verwelkt und stirbt ab. Es ist schwer die fortpflanzenden Schädlinge zu beseitigen [Dyakow, Elanskyi, 2016].

Manche Pflanzenschädlinge kann man auf den ersten Blick identifizieren, andere wiederum ähneln sich so stark, dass man schon mal genauer hinschauen muss. Einige von ihnen erkennt man vor allem am typischen Schadbild, dass sie an einer Pflanze hinterlassen. Weiter betrachten wir im Artikel die häufigsten Schädlinge der Pflanzenwurzeln und ihre biologischen Merkmale.

Der bekannteste Schädling an holzigen Pflanzenwurzeln in unserem Gebiet ist der Orientalische Maikäfer mit einer Körperlänge von 20-29 mm. Die männlichen Maikäfer sind kleiner als die weiblichen. Ihr Körper ist groß, lang-oval und konvex. Die Färbung ist sehr variabel. Der Kopf ist ziemlich dicht und ist mit langen, abstehenden hellgelbgrauen Haaren besetzt. Ihre Augen sind mittelgroß, eher konvex [Gritsenko, Stroykov´w, Tretyakow, 2010]. Die Pfoten der Maikäfer sind dünn. Von den Nadelbäumen ernähren sie sich von Lärchen und Kiefern. Die Weibchen legen bis zu 70 Eier in 3-4 Partien in 20-30 cm Tiefe in den Boden.

Der Schwarze Nussknacker ist noch ein Schädling von Baumwurzeln. Der Käfer ist 10-14 mm lang. Er ist komplett schwarz und hat einen leichten metallischen Schimmer. Die Drahtwurmlarve erreicht eine Länge von 27 mm und entwickelt sich 3 bis 5 Jahre lang im Boden.

Die Erdkrabbe ist ein großes Insekt mit einer Körperlänge (ohne Schnurrhaare und Kreise) von bis zu 5 cm. Das Abdomen ist etwa dreimal so groß wie der Thorax, weich, spindelförmig, bei Erwachsenen zählt es etwa 1 cm im Durchmesser. Am Ende des Hinterleibs befinden sich paarige fadenförmige

Anhängsel, Cerci, die bis zu 1 cm lang sind. Die Brustschale ist hart und so strukturiert, dass sich der Kopf unter ihrem Schutz teilweise zurückziehen kann. Am Kopf sind zwei große Facettenaugen, lange Antennenhaare und zwei Paar Tentakel, die ein nagendes Mundstück einrahmen, deutlich zu erkennen. Das vordere Gliedmaßenpaar der Erdkrabbe ist im Vergleich zu den beiden anderen modifiziert und dient als hervorragendes Werkzeug zum Graben im Boden. Die Flügel erwachsener Erdkrabbe haben im gefalteten Zustand die Form von zwei langen, dünnen Schuppen, die oft die Länge des Hinterleibs überschreiten. Die Körperfärbung: der Bauch ist auf der Oberseite dunkelbraun, zur Unterseite hin heller oder bis olivfarben, die Gliedmaßen in der gleichen Färbung. Der Kopf und Thorax sind dunkelbraun [Gritsenko, Stroykow, Tretyakow, 2010].

Der Rüsselkäfer ist 8-10 mm lang, schwarz, mit einem dicken, kurzen Kopf; die Flügeldecken sind mit tiefen Querrillen versehen. Die Larven sind bis zu 12 mm lang, weiß, mit braunem Kopf, leicht gekrümmt. Im Frühjahr fressen diese Rüsselkäfer die Blätter von den Rändern her ab, manchmal die Knospen, und knabbern die Rinde, so dass die Pflanzen nicht mehr so schön aussehen. Sie ernähren sich nachts und verstecken sich tagsüber in der oberen Bodenschicht unter Pflanzen und an anderen versteckten Orten. Im Sommer legen die Weibchen ihre Eier büschelweise in Erde oder Kompost ab. Die Fruchtbarkeit liegt bei bis zu 1000 Eiern. Der Schädling dringt in die Gewächshäuser und Pflanzgefäße ein, meist mit Erde, die Eier oder Larven enthält [Gritsenko, Stroykow, Tretyakow, 2010].

Die Wurzelblattlaus ist ein winziger, eng spezialisierter Schädling, der die kleinen Wurzeln von Pflanzen befällt. Jede Art ist auf eine einzige Kulturpflanze beschränkt. Im Frühjahr schlüpft der Koloniegründer aus dem Ei. Er zeichnet sich durch das Fehlen von Flügeln und einen dicken Körper auf kurzen Beinen aus. Sein Kopf hat kurze Fühler. Die Färbung variiert sich von milchig-weiß, gelb bis oliv-grün. Die Karottenwurzelblattlaus zeichnet sich durch ihre rötliche Körperfarbe aus.

Die Zwiebelschwebfliege. Die erwachsenen Insekten können bis zu 10 mm lang werden und sind grau-grün gefärbt. Der gesamte Körper des Insekts ist mit einem kurzen Flor bedeckt und auf dem Hinterleib sind 6 parallele Flecken zu sehen. Die Hinterbeine der Schwebfliegen sind länger als die Vorderbeine. Das Larvenstadium des Schädling kann in Zwiebeln überwintern, die nicht aus dem Beet geerntet wurden, oder in Zwiebelrüben, die im Winterlager gelagert werden. Wenn der Frühling kommt, fressen die überwinterten Larven und verpuppen sich bald. Im Sommer zwischen Juni und Juli schlüpfen die jungen Schwebfliegen aus ihren Puppen und beginnen ihren Flug [Gritsenko, Stroykow, Tretyakow, 2010].

Die Zwiebelmilbe kommt in offenen und geschlossenen Böden, in Gewächshäusern, in Ernte- und Saatgutlagern vor. Junge Insekten haben ovale Struktur mit hellgelber Färbung und das Beinpaar nicht größer als 0,4-0,6 mm. Die Larven und Nymphen sind gelb mit drei Beinpaaren und erreichen eine Größe von 0,6 mm. Das erwachsene Insekt hat einen wohlgeformten Körper. Die männlichen Insekten sind 0,7-0,8 mm groß und die weiblichen Insekten sind bis zu 1,2 mm.

Der Gladiolenthrips ist ein kleines, 1,5-2 mm großes, geflügeltes Insekt mit dunkelbrauner Farbe. Die Larven der Thripse sind zu Beginn ihrer Entwicklung durchscheinend weiß und werden dann hellgelb. Sowohl die erwachsenen Insekten als auch die Larven durchbohren das Gladiolengewebe und saugen den Saft aus den Blättern, Stängeln und Knollen. Das weibliche Insekt legt mehr als 20 Eier. Vor der Eiablage stellt das weibliche Insekt die Nahrungsaufnahme ein und lebt unterirdisch, so dass es fast unmöglich ist, dieses Insekt zu töten, genau wie sein Gelege. Die Lebenserwartung beträgt 25 bis 45 Tage. Wenn die Gladiole von diesem Schädling befallen ist, erscheinen weißliche Flecken auf den Blättern, und die Blätter schrumpfen ein. Während des Austriebs der Blütenknospen dringen die Thripse in die Blüten ein und befallen sie. Nach Regenfällen verfärben sich die Blüten und an den Rändern der Blütenblätter sind kleine Löcher deutlich sichtbar. Stark befallene Blüten öffnen sich möglicherweise überhaupt nicht.

Fazit

Auf der Grundlage der vorstehenden Ausführungen kann der Schluss gezogen werden, dass die Pflanzen durch Wurzelschädlinge stark geschädigt werden. Schwere Schäden können zu einem teilweisen oder vollständigen Absterben der Pflanzen führen.

Die Wurzelschädlinge sind in Baumschulen besonders gefährlich, weil Sämlinge und Jungpflanzen noch zu klein sind, um kleinen, zahlreichen Räubern in der gleichen Weise zu widerstehen, wie das große Bäume mit einem gewissen Sicherheitsabstand tun.

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ZUR FRAGE DER KLASSIFIZIERUNG UND HERSTELLUNG VON WURSTWAREN

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***Annotation.** Dieser Artikel widmet sich dem Thema „Klassifizierung und Herstellung von Würsten und Wurstwaren“. Der Artikel berichtet über die Produktion der Wurstwaren, die heute sehr verbreitet sind. Der Autor erzählt über den Einfluss der Wurstwaren auf den menschlichen Körper. In dem Artikel werden die Wurstwaren klassifiziert und beschrieben.*

***Schlagwörter:** Wurstwaren, Qualität von Wurstwaren, Klassifizierung von Wurstwaren, Herstellung von Wurstwaren, technische Anforderungen zur Herstellung von Würsten und Wurstwaren, Fleischerzeugnisse*

Die Geschichte von Fleisch- und Wurstwaren ist bereits mehrere tausend Jahre alt. Bereits im alten China um circa 600 vor Christi Geburt fanden chinesische Fleischwaren, die aus Lamm- oder Ziegenfleisch hergestellt wurden, ihre erste Erwähnung.

Die Wurstwaren gibt es seit der Zeit, seitdem Salz zur Konservierung von Lebensmitteln benutzt wird. Mit Salz konservierte oder gepökelte Lebensmittel werden bereits im Jahr 3000 v. Chr.

Die ersten Würste im heutigen Sinn wurden in Schottland hergestellt. Das schottische Nationalgericht Haggis quasi gilt als Urvater für die heutige Wurst. Die Fleisch- und Wurstwaren wurden früher zunächst aus Resten von verwerteten Tieren hergestellt, während die guten Fleisch- oder Filetstücke in der Regel sofort verzehrt wurden. Durch diverse Methoden der Haltbarmachung entwickelten sich Stück für Stück Fleisch- und Wurstwaren.

Auch in der griechischen Mythologie ist bereits die Rede von Blutwurst, die aus mit Blut gefüllten Tierdärmen hergestellt wurde. Eine Weiterentwicklung von Fleisch- und Wurstwaren erfolgte dann im Mittelalter, als die Technik des Pökels von Fleisch erfunden wurde. Hierbei wurde das Fleisch erstmals mit verschiedenen Pökelsalzen haltbar gemacht und konnte so selbst nach Wochen oder Monaten noch problemlos verspeist werden.

Neben dem eigentlichen Herstellungsprozess entwickelten sich im Lauf der Jahrhunderte zahlreiche Verpackungs- und Lagerungs-Formen für Fleisch- und Wurstwaren wie zum Beispiel die Wurstkrone. Heutzutage werden Fleisch- und Wurstwaren entweder direkt frisch oder industriell in Glas oder Plastik verpackt im Einzelhandel angeboten. Fleisch- und Wurstwaren sind ganzjährig im Einzelhandel erhältlich.

Gemäß der europäischen Hygieneverordnung sind Fleischerzeugnisse, oft als Fleisch- oder Wurstwaren bezeichnen, Produkte, die aus Fleisch oder seinen verarbeiteten Erzeugnissen gewonnen werden. Unter dem Begriff „Wurstwaren“ sind Fleischerzeugnissen zu verstehen, die mechanisch und chemisch mit der Zugabe von einigen anderen Produkten bearbeitet werden. Die Würste sind hochwertige Produkte. Diese Produkte werden aus Hackfleisch (in oder ohne Schale) hergestellt und wärmebehandelt werden [GOST 18236-85 Mezhgosudarstvennyy standart „Izdeliya kolbasnyye varennyye myasnyye“].

„Wurst“ ist der Oberbegriff für Fleischerzeugnisse, die aus einem Gemenge von zerkleinertem Fleisch, Fettgewebe und würzenden Zutaten sowie gegebenenfalls Innereien, Trinkwasser und Zusatzstoffen bestehen.

Um als Fleisch- oder Wurstware zu gelten, müssen die Erzeugnisse aus Fleisch von deklarierten Nutztieren bestehen. Weiterhin müssen zahlreiche, typische Merkmale vorherrschen, nach denen das Fleisch als solches auch noch erkennbar ist.

Die Herstellung von Wurstwaren ist eine der führenden Unternehmen der Lebensmittelindustrie in Russland. Die Bedeutung dieser Branche ist schwer zu überschätzen, da die stabile Entwicklung der Profilproduktion eine Reihe von unbestreitbaren Vorteilen bietet:

- die Entstehung von hochwertigen und preiswerten inländischen Produkten;
- die Schaffung neuer Arbeitsplätze;
- stabile Beiträge zum Budget;
- die Möglichkeit in ausländische Absatzmärkte einzusteigen;
- teilweiser oder vollständiger Verzicht auf importierte Rohstoffe oder ähnliche Produkte;
- die Unterstützung für die Entwicklung von konjugierten Industrien (Viehzucht);
- der Aufbau transparenter Wettbewerbsbeziehungen zwischen den Herstellern auf dem Markt;
- die Verbesserung der Produktqualität und Erhöhung der Produktpalette.

Nach den angegebenen Vorteilen kann man behaupten, dass die Produktion von Wurstwaren in Russland gute Chancen für die schnelle Entwicklung und stabile Expansion hat.

Heutzutage ist es für den Verbraucher wichtig zu wissen, woraus und wie das Produkt entsteht. Die Wurstwaren müssen der Qualität nach den Anforderungen von GOST 18236-85 „Gekochte Schweinefleischprodukte. Technische Daten“ und GOST 18256-85 „Geräucherte und gebackene Schweinefleischprodukte. Technische Bedingungen“ entsprechen.

Wenn der Hersteller die Vorschriften nicht einhält, kann ein minderwertiges Produkt erhalten werden, das dem Körper keinen Nutzen bringt. Deshalb wird das Problem der Rohstoffeigenschaft und der Bewertung verschiedener Arten von Ästen aktuell.

Der Nährwert von Wurstprodukten ist höher als der Wert des ursprünglichen Wurstprodukts und der meisten anderen Fleischprodukte. Dies liegt daran, dass bei der Herstellung von Würsten, die am wenigsten wertvollen Stoffe aus dem Rohmaterial entfernt werden. Die Zugabe von Milch, Butter und Eiern erhöht nicht nur den Nährwert, sondern verbessert auch den Geschmack von Wurstprodukten erheblich.

Heute gibt es viele Sorten von Wurstwaren. Sie werden in folgende Arten unterteilt:

- nach der Art der Produkte (gekochte Würste, Würstchen, Fleischbrote, halb geräucherte Würste, geräucherte und gekochte Würste, geräucherte und roh geräucherte Würste, Leberwurst, gefüllte Würste, Gelees, Tränke, Pastete usw.);

- nach der Zusammensetzung der Rohstoffe (die Würste mit Fleisch, Blut, Innereien, diätetische Würste;
- nach Art der Schale (natürliche und künstliche Würste, sowie die Würste ohne Schale);
- nach dem Muster der Füllung im Schnitt (die Würste mit einer homogenen Struktur und nichthomogener Struktur (Stücke von Zunge, Speck, anderen Rohstoffen);
- nach Art von Fleisch (die die Würste aus Rind, Schwein, Lamm, Pferd, Kamel, aus Fleisch anderer Tiere und Geflügel), Rind, Schwein und Pferd in einer Mischung mit Schweinefleisch und Speck;
- in Bezug auf die Qualität des Rohstoffs – (die Würste höchster Qualität, erster, zweiter, dritter Klasse.

Die Wurstwaren im Einzelnen sind:

- schnittfeste oder streichfähige Rohwürste, wie z. B. Salami oder Mettwurst
- Kochwürste in Form von Kochstreichwurst, wie beispielsweise Leberwurst oder Blut- und Sülzwurst;
- Brühwürste in den Sorten Brühwürstchen, wie der altbekannten Bockwurst, fein zerkleinerte Brühwürste, wie bei der Fleischwurst, grobe Brühwürste, wie bei der Jagdwurst oder Brühwürste mit Einlagen, wie beim Bierschinken.

Die für die Herstellung von Wurstprodukten verwendeten Lebensmittelzusatzstoffe, Aromen und komplexen Nahrungsergänzungsmittel müssen für den Einsatz in der Fleischproduktion geeignet sein und aus Sicherheitsgründen den Anforderungen oder den in dem Standardstaat geltenden gesetzlichen Vorschriften entsprechen [GOST 23670-2019 Mezghosudarstvennyy standart „Izdeliya kolbasnyye varenyye myasnyye“].

Für die Produktion von Wurstwaren ist die Verwendung von Fleischrohstoffen (einschließlich Geflügelfleisch) nicht zulässig:

- mehr als einmal eingefroren;
- abgestanden, einschließlich Anzeichen von oxidativem Fettgewebe verderben (Vergilbung, Belagerung, Ranzigkeit);
- aus Ebern gewonnen.

Fazit

Die Wurstwaren sind täglich gefragt und es ist wichtig für den Verbraucher, die Qualität dieses Produkts zu kennen. Diese Qualität gewährleistet GOST und Technische Bedingungen der Herstellung.

Es gibt streichfähige Würste (z. B. Leberwurst) und schnittfeste Würste (z. B. Salami). Würste werden in Naturdarm, Kunststoffhüllen, Gläser oder Dosen abgefüllt. Je nach Herstellungsweise unterscheidet man zwischen Rohwürsten, Brühwürsten und Kochwürsten. Die Produktion von Wurstwaren in Russland hat gute Chancen und Perspektiven für weitere Entwicklung und stabile Expansion.

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SECTION 4. PSYCHOLOGICAL SCIENCES

THE HARM OF VIRTUAL REALITY FOR THE HEALTH AND PSYCHE OF THE USER

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Abstract: *The article is devoted to the problem of virtual reality in modern realities. The problems faced by the user with excessive immersion in cyberspace and some of the consequences of such immersion are considered. The article examines the harm from virtual reality in three categories: spiritual, psychological and physical harm to the user. At the same time, the positive side of using virtual reality is also being considered.*

Keywords: *Virtual Reality, information systems, information technologies, cyberspace, escapism*

Virtual reality technologies harm the psychological, physical and spiritual heart of the user. The development of information technologies has made it possible to create a space that replicates the real world – virtual reality. In virtual reality, a person can do whatever he wants, which is why many users voluntarily abandon their real life in favor of the virtual one, which brings a lot of problems. A person becomes antisocial, begins to lead an unhealthy lifestyle and in some cases is dangerous to others. All this should alert us to reconsider our views on virtual reality.

The spiritual harm of virtual reality is considered to be the escapism – when a person tries to escape from the difficulties, boredom of life in a fictional world. Plunging into virtual reality, the user does not want to realize the fictitiousness of the surrounding world. Arising against the background of the abuse of virtual reality, such as depersonalization and maladaptation, it does not allow reconciling with reality.

However, despite all of the above, escapism is not a disease.

Moreover, many aspiring writers considered the phenomenon of escapism normal, since it was considered the development of a person and his inner world [Shapinskaya, 2013: 11].

On the other hand, escapism can become the basis for the emergence of more serious psychological diseases, for example, the destruction of personality. Getting used to the fact that strength, health and youth can be easily obtained or replenished by successfully completing a number of tasks, and in case of failure it is possible to start playing again, the user ceases to pay attention to the real state of his physical health. But it is worth noting that virtual reality can not only destroy a person, but also harden it.

To confirm this, we can cite the story of one of the participants in the experiment: „... during one session, the Pot Calder teaches Edwin to deal with his own paranoid assumptions. When Edwin saw the characters with angry faces, the doctor asked: “Why can he be angry if you exclude the desire to harm you in any way? Edwin said, “A person can get tired or have personal problems” [Kompus, 2018: 190].

After three months of VR therapy, according to Edwin, it became much easier for him to go outside. Edwin even told a poem to an audience of 500 people at a talent show that he definitely wouldn't have “dared” to do before. That was the positive result of the VR therapy.

On the other hand, it should be stressed that there is still physical harm from using a virtual reality device, which differs from previous problems in the way that very rarely useful properties appear to the user. Against the background of immersion in virtual reality, the user may experience astigmatism. The reason for astigmatism is that the user's eyes in virtual reality get used to looking at a screen located at the same distance from the user's eyes, and when removing the device, the user, looking at real objects, discovers that they are at different distances, as a result of which the eyes have to strain.

However, research conducted by scientists at the Osaka University School of Medicine in Japan in 2019 confirmed that using VR helmets is no more dangerous than viewing content on a flat 2D screen [Masakazu, 2019: 763].

The abuse of virtual reality can cause the development of one of the previously mentioned disorders. If you feel unwell or take medications, you should abandon the behavior of the evening in the virtual world. Thus, in order to get the maximum benefit, it is necessary to control and clearly delimit realities, but never allow virtual reality to become an illusory substitute for the real world.

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SECTION 5. PHILOLOGICAL SCIENCES

THE TRANSLATOR'S FALSE FRIENDS

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Abstract. *The interest in this topic is not accidental, since the number of mistakes made in this category of words is extremely high. Knowing the specifics of the phenomenon of "the translator's false friends" will help to avoid mistakes when translating from English into Russian.*

Keywords: *mistake, Russian language, English language, translation, spelling, meaning*

Few people know that the 21st century has been declared by UNESCO as the century of polyglots with the motto "Learning languages through the life". In difficult time people all over the world must understand the reasons for their differences; find mutual understanding and common ground. Knowledge of foreign languages will help better understand not only an individual person – a native speaker, but also the nation and its culture, customs, traditions and vision of the world. Therefore, it's important to learn foreign languages well.

"The translator's false friends" it is a pair of words in two languages, similar in spelling and pronunciation, but different in meaning. In this regard, when translating such words, false identifications should be focused on.

Everyone who studies a foreign language notice the fact that some words are already familiar to from the native language and often makes it easier to understand a foreign text, but sometimes they can turn out to be "the translator's false friends".

Often, these terms are a trap for students: seeing a similar meaning of a non-native word, they change its meaning and do not follow linguistic norms. But it is far from the fact that only those who do not know the language are taking the bait of "false friends".

The history of translation reminds the ancient past, the period when other languages began to appear from the proto-language, and people who knew several of them were needed as guides for people of different linguistic cultures. That's just because of several reasons; the independent science was translated only at the beginning of the 20th century.

Recently, the attention of researchers to an unusual category of words has increased, and it has come to be called "the translator's false friends". To understand the process of the emergence of this term, it's natural to study many books and look through the Internet resources.

It turned out that words in different languages that have similar spellings and sounds, but different meanings, have been of interest to linguists for a very long time.

The types of "the translator's false friends" are as the followings:

1) "Completely false" with similar spelling and diverging meaning. *For example: Application request, statement, not application.*

Compositor – typesetter, not composer;

Complexion it is face colour, not complexion.

Artist is a painter, not an artist.

2) "Partially false" with similar spelling and mainly with a common meaning. These are words that coincide with Russian ones in sound and spelling,

but have several meanings, one of which coincides with Russian, while others do not do. Here are some examples:

Record is not only a record, but also a personal matter [Proshina, 2008].

In the late 60s - early 70s, Russian scientists analyzed this group of terms. Special dictionaries began to be produced, called the dictionaries of "the translator's false friends".

With regard to the concept, many other names are currently used to define this category of words, such as: pseudo-internationalisms, false equivalents, inter-language homonyms.

The reasons for the need of "the translator's false friends" lie in the national originality of the vocabulary of each language. Historically, "the translator's false friends" is a product of the influence of foreign languages on each other, in several cases they can appear due to random coincidences, and especially very similar, and languages are based on terms that they originate from common prototypes in the language basis [Yaylaci, Argynbayev, 2014].

Today scientists distinguish 4 possible ways of developing "the translator's false friends":

1. Coincidence. Two languages can be formed quite independently, and as a result, terms appear in them that are similar to each other in pronunciation and spelling, but with completely opposite meanings.

2. Borrowing words, when the real meaning is lost and new meaning appears in another language. This usually happens when a new word is sought for a definition in another language. Then the concepts are not used in their original meaning, but they come up with another, often completely dissimilar, meaning.

3. Parallel borrowing. Several languages have the same concept, but they are of different meanings. Then the terms from the very beginning have a different meaning, although the spelling and pronunciation may be the same.

4. Independent development of languages. If languages belong to one class, then from the very beginning the concepts have the same meaning, but then, due to migration, stratification and other historical processes, a change in meanings and displacement occurs.

When researching and using a non-native language, people often try to introduce native language habits into a foreign language system. The native language encourages the wrong analogies.

At first, it may seem that "the translator's false friends" can only confuse those who are poorly fluent in the language or beginners. In fact, according to many scientists, this linguistic phenomenon is dangerous for those who are fluent in a foreign language and have no doubt.

Problems of translating non-native vocabulary are that a translator, in particular, a beginner, often does not remember such a concept as "a word use" and, being influenced by feelings from the familiar capital form of a word, allows literalism in translation and distorts the norms of the target language (native language), in particular, in the field of word collocation.

At the same time, the concepts identified and associated (due to similarities in terms of expression) in two languages, in terms of use and content, partially coincide or even completely do not coincide with each other [O' Brien, 2013].

Translation of this vocabulary does not allow literal translation in any way. In several cases, the translator can convey the original meaning of the term verbatim, but only when experience and intuition help him to propose a translation variant for this case is a constructive transmission of the original thought.

In the meantime, such a provision (permission of literal translation in a number of rare cases) can also be a stumbling block in translation process.

In order to avoid mistakes when translating a text, there are the following tips:

1. When translating a text, people should always be vigilant and several times consider the suspicious and controversial meaning of the word.

2. It is not excluded that an expression can have a variety meanings and it is required to choose the correct one among them.

3. When looking for the correct translation variant, it is important to touch upon the theme, plot and style presentation of the translated text.

4. It is necessary to maintain “the translator's false friends” dictionary or seek help from already available dictionaries.

5. Everyone should enrich the vocabulary through communication to foreign friends, watch foreign films without translation and read literature in English.

Thus, despite the interest of many scientists, there is no detailed consideration of “the translator's false friends” in many languages.

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SECTION 6. LEGAL SCIENCES

FEATURES OF THE BLACK CIVIL RIGHTS MOVEMENT IN THE UNITED STATES

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Abstract. *The struggle of the black population of the United States for their rights has been going on for more than 150 years, during which African Americans have gone from slavery and segregation to the victory of a black candidate in presidential elections and broad representation in state bodies. But discrimination based on skin color still exists in the modern world.*

Keywords: *international law, civil society, civil rights, social inequality, slavery*

The image of the 1950s as a prosperous, conservative and stable era in the history of the United States is instantly shattered as soon as we step outside the sprawling cities. It was during the Eisenhower era of America that the civil rights movement spread. First it absorbed the non-Greek population in the southern part of the states, and then it spread throughout the country. Civil rights are inalienable rights that belong to every person. This term is mentioned in the works of modern scientists and journalists, such as Dodonov (2001), Klishas (2019), Nersesyants (2013), Cannon (2002), Douglas (2001) and some others.

To present information about the development of the Black Civil Rights movement in the United States, the following points should be discussed:

1. Historical aspect;
2. Modern cases of social inequality and the problems arising from it;
3. Prospects for the development of civil society.

On September 18, 1850 the Parliament of the United States of America issued the Fugitive Slaves Act, authorizing the search and arrest of fugitive slaves. The law forced the population of all states to take an active part in the capture of fugitive black slaves, and also provided for harsh sanctions for those who tried to hide them.

In April 1861 Abraham Lincoln, who came to power, began a civil war against 11 states that were rioting in the south of the country. These states did not recognize him and announced their withdrawal from the federation. The main issue of this war was slavery. Confrontations between the industrial north and the agricultural south began: the former demanded the abolition of slavery, the latter, whose labor was based on slaves, were against it.

The struggle continued until 1865. The North won, slavery was abolished by an amendment to the Constitution of the United States of America, which prohibited slavery and forced labor, in addition to sanctions for the offense. However, the abolition of slavery did not make white and black citizens equal.

In 1892 Homer Plessy, who was only one-eighth Black, boarded a train in a carriage for whites. According to the laws of Louisiana, he was detained. Plessy H. appealed to the court with a claim that the authorities neglect the Fourteenth Amendment to the US Constitution, which guarantees equality of all citizens before the law. However, the U.S. Supreme Court ruled in 1896 that the division of citizens into blacks and whites does not violate the Constitution.

This decision consolidated the manifestation of racial segregation in all states of America. African-Americans and white-skinned citizens lived in different parts of the country, moved in different train cars, interracial marriages were unacceptable. The illiterate, that is, almost absolutely all African Americans, were deprived of the right to vote by the laws.

The final elimination of racial discrimination at the legislative level in the United States happened only sixty years later. In 1963, the "March on Washington for Jobs and Freedom" took place, people demanded equal rights for blacks. In June of this year, President Kennedy, in an address to the people, announced the need for new legislation. In the same year, 1963, Kennedy was assassinated, but his numerous proposals were included in the Civil Rights Act of 1964, which prohibited discrimination.

After the events of the 1960s the first generation of black politicians emerged in the United States. Segregation was officially ended, but inequality, especially economic inequality, still persisted.

In 1991 Rodney King, a native of Los Angeles, was driving his car while intoxicated. The police, who noticed the speeding, ordered him to stop, but King only drove faster. Prior to this case, he had already been involved in robbery, was released from prison early and did not want to go to jail because of a new offense.

The police nevertheless caught up with King and began to beat him: he received many blows with a baton and several with a stun gun. All this was randomly filmed by a passerby who took the recording to television. But after the jury recognized the actions of the police officers as lawful on April 22, 1992, the largest racial conflicts in the entire 20th century broke out in the United States of America [Linder, 2007: 24].

The authorities estimated the damage from the pogroms at \$ 1 billion. And after the second trial, the policemen who beat King were found guilty. Rodney King, speaking to the protesters, uttered "why blacks and whites can't just get along" that continues to be quoted even now [Cannon, 2002: 12]. After all the events, King received compensation of several million dollars from the city's police department.

It is precisely the problem of violence by US law enforcement agencies that has been the cause of mass riots in recent years. In 2001, nineteen-year-old black Timothy Jones was shot by police, and then riots broke out again, and the authorities of the city of Cincinnati were even forced to impose a curfew.

On May 25, 2020, in Minneapolis, law enforcement officer Derek Chauvin strangled a black George Floyd with his foot for almost 9 minutes, who died from it. Floyd had already been tried before, and this time he was suspected of trying to pay with a fake bill in a store. Unrest, demonstrations and riots in this case continue even now. And they have already gone even beyond the borders of the United States of America. These protests enjoy unprecedented support not only in the United States, but already around the world. In some North American cities, police representatives got down on one knee, showing their own unity with the protesters. Not only black citizens, but representatives of different ethnic communities now took part in all the protests that took place. The hash tag Black Lives Matter [Buchanan, 2020: 2] was supported by politicians, Hollywood and show business stars, world-famous athletes. British footballers, instead of their names on the backs of T-shirts, played with this slogan. In general, the murder of George Floyd brought the issue of equality to a whole new level, for modern young people it has become a kind of political challenge – and all this happens for the first time. Since the beginning of the reign of President Donald Trump, the number of “hate groups” in which white-skinned racists unite has increased to 55%. Similar information is present in the report "Hatred and Extremism" for 2019, released by the Southern Poverty Law Center (SPLC). Racial discrimination in the law enforcement and judicial bodies of the country has become more pronounced. According to UN studies, the possibility of an African-American going to prison is approximately 7 times greater than that of a white American citizen.

The COVID-19 epidemic has further worsened the existing social inequality, created new difficulties for the government and society. The crime rate has increased. Society is quite polarized, and the socio-political discord is increasing. According to the results of a study conducted by the Pew Research Center, almost 80% of US residents believe that the country is now more divided than before the pandemic. A cultural war will rage, a movement that screams: our ancestors were racists, and now we are paying the price, has arisen and is already being paved. Efforts to provide new educational and cultural preferences to blacks will continue.

Thus, social inequality in the United States has peaked since the beginning of the 20th century. The crisis is also superimposed on this: as soon as the economy began to recover after a prolonged recession, the sudden corona virus threw it back. There are all, without exception, promises that the protest for the rights of African Americans will turn into a struggle of the poor against the rich.

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FEATURES OF EXECUTIVE PRODUCTION IN FOREIGN COUNTRIES

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Abstract. *The main idea of the work is to consider the features of executive production in foreign countries and the Russian Federation. In the article the author analyzes in detail whether enforcement in the Russian Federation needs modernization. The study found that the Russian system does not require changes.*

Keywords: *enforcement, enforcement, public system, French system, features of executive production in foreign countries*

In order to restore social justice at the legislative level, different countries have created their own unique special services, including bodies dealing with the enforcement of judicial acts because of the fact that enforcement proceedings is an important and final step towards the restoration of the rights and freedoms affected. The relevance of the chosen topic of the study is due to the fact that recently issues related to enforcement are widely discussed in the legal literature.

Today, scientists distinguish three main systems of forced production – public, private and mixed. Let's consider on concrete examples of efficiency of the system of executive production, and, based on them, there is or no need to modernize the system in the Russian Federation.

Bulgaria has a mixed enforcement system. According to the Bulgarian legal system, a private bailiff is a public official. It follows logically that the State has the power to impose on private judicial officers the execution of specific cases of public authority.

Taking into account that the majority is in private performers, the institution of private bodies in Bulgaria works quite efficiently. Since they were given a wide range of powers by law, they were entitled to pay for their services, which contributed to their effectiveness.

It must be noted that in addition to the above-represented persons, in Bulgaria, enforcement proceedings may also be carried out by public executives

who, in the exercise of their professional activities, are entitled to collect tax debts, fines and other penalties to the state treasury.

Thus, the Bulgarian enforcement system has its own characteristics. In this case, the private person has the functions of State representative, and the ability to charge for his services encourages him to work more effectively. Consider enforcement proceedings in Canada. Enforcement regulation in Canada occurs locally, in selected provinces. From this we can logically conclude that in a given country there is not as such a centralized system of enforcement proceedings at the federal level, and therefore, there is no single legislative regulation of the activity in question.

Enforcement in Canada is carried out by public servants – sheriffs and private enforcers or specialized firms. As in many other countries, private operators must obtain a licence from the State, and subsequently carry out the enforcement proceedings themselves.

Thus, the Canadian enforcement model is characterized by a private system in which the powers of enforcement are exercised by private individuals or agencies rather than by State authorities.

Consider the enforcement system in France. It is true that the French enforcement system has served as an example for many countries. It was partially adopted by Greece, the Netherlands and Belgium. France has a mixed system with liberal principles. Many scholars consider France a private system, as the French bailiff acts as an official. It carries out its activities on behalf of the State and has the power to resort to the methods of State coercion for the effective execution of court orders. The peculiarity of the French system according to D.A. Usmanova is that the French legal system separates both private and public law [Usmanova, 2014]. Civil and criminal courts, as well as administrative justice judges, are accordingly designated. The bailiff does not enforce decisions in favour of the State. For this purpose, there is a special system of judicial officers of the State Treasury, who are civil servants.

Thus, in France, the private performer acts on behalf of the State but not in favour of the State. A special feature is that the number of enforcers is limited and regulated by the Ministry of Justice of France [Dritz, 2017].

In the U.S. enforcement proceedings are public. They are conducted by the Special Marshals Service. Legislation is regulated separately by each state and is similar to the Canadian system. It must be said that court decisions made in one state must be legalized in all others. Legislation requires special measures, for example, in some states such legalization occurs through a lawsuit for a decision, in others – through a registration procedure [Payich, 2011]. The basis for any action is an executive order. It is issued by a judicial officer or sheriff. Decisions on private claims are enforced by sheriffs or other officials in accordance with the laws of each individual state.

The peculiarity of the American system is the fact that any error in the form of the order can be prosecuted. The prosecution will include the following wording – „Contempt of court”. It would be interesting to know that in such a situation, an employee of the Marshall Service is not responsible.

The experience of enforcement proceedings shows that the effectiveness of enforcement is higher in Russia and the United States, as the bodies carrying out enforcement measures have a coercive element in them.

It is true that, in addition to differences, there are commonalities among these systems. For example, they are identical in some principles of enforcement proceedings, such as equality of rights of creditor and debtor, and publicity of enforcement proceedings, etc. The idea of individualization of each enforcement system is traced in this, in our opinion, and is a feature of executive production not only in foreign countries, but also in Russia.

In order to carry out a comprehensive analysis, we need to consider the development of the enforcement system in Russia. The Russian system is classified as a state system, as the judicial bailiff service in our country is centralized and hierarchical, and all bailiffs have the status of federal civil servants [Federal Act of 21 July 1997, 118-FZ]. Today, many scholars consider the possibility of a change in the French private law enforcement system.

But it is imperative to answer the fundamental question. Does Russian forced production require modernization towards a mixed system? In our view, it does not. We argue that changes towards the private system are not feasible today, due to the socio-economic features of Russia, the mentality of citizens and many other features. And also on the following grounds:

- in the Russian Federation a large number of socially significant executive enterprises, such as: housing, labour, pension and family. Their implementation in the French system would be materially disadvantageous and, as a result, the proceedings would not be carried out effectively to the detriment not only of the State but also of society;

- in the Russian Federation, the State system is rather centralized, and therefore it is not possible to give full powers to private operators in the application of coercive measures, as it would be inefficient.

Thus, the Russian system does not require a transition to a private system of compulsory production but requires local additions.

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CURRENT PROBLEMS OF IDENTIFICATION AND WAYS TO SOLVE THEM

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Abstract: *Scientific article is devoted to research of actual problems of identification and ways of their solution. The article draws attention to the most popular problems of legal regulation of presentation for identification by voice. The author criticizes the proposal of criminal and procedural regulation of identification by voice within the framework of the investigative experiment. In conclusion, the author of the article proposes to fix the criminal procedural purpose of identification and to expand the ways of identification.*

Keywords: *presentation for identification, identification, investigative experiment, investigative actions, criminal procedure, criminal procedure*

The procedural order of production of such investigative action as the presentation for identification is regulated by article 193 of the Code of criminal procedure of the Russian Federation [Ugolovno-protsessualnyi kodeks Rossiiskoi Federatsii, 2001], and considers identification of the witness, the victim, the suspect or the accused of the object which was more equally perceived by someone visually – the person, the object or the corpse.

The essence of the investigative action comes down to the fact that the identifier is necessary by the mental image, preserved in memory, to identify the object which he was previously observed with an identifiable person, object or a corpse [Mamedov, 2021: 123].

Specificity of the investigative action – identification, enshrined in the current Code of Criminal Procedure of the Russian Federation, is that the identification of an object takes place by reproducing from memory the image

which he remembered as a result of perception of the object earlier. The identification as an investigative action significantly differs from other investigative actions provided for by the Criminal Procedure Code of the Russian Federation.

For many years it has been noted in the legal literature that a significant disadvantage of criminal and procedural regulation of identification as an investigative action is the inadmissibility of identification by gait or voice. This problem has been repeatedly raised in the legal literature, in the scientific community, there is still an opinion that identification by voice or gait can be very useful for investigative practice, however, the legislator so far recognizes only one method of identification – visual. We do not consider it necessary to dwell in detail on this issue in the study, since the problem of inadmissibility of identification by voice and gait in criminal proceedings is already „hackneyed” and has no novelty. However, we by no means diminish the theoretical and practical importance for investigative activity of the possibility of identification by voice and gait. Therefore, we propose to consider the problem of legal regulation of “identification” by voice and gait from a slightly different perspective.

In the legal literature, the presentation for identification as an investigative action is often compared with an investigative experiment. Investigation experiment, in contrast to the presentation for identification, is purely experimental in nature and is aimed at modeling a specific situation, however the process of reproduction of searched events, which anyway happens during, identification brings these investigative actions closer together.

Fair comment of the author R.L. Akhmedshin about “... an experiment which is used as a method of cognition, but only testifies to the presence in the activity constituting the content of this investigative action, direct experimental modeling” [Akhmedshin, 2016: 183].

Undoubtedly, the situation of presentation for identification partly models a situation of perception of this or that object in conditions of the searched event at least in a part of perception and the accompanying psychological processes, and also realization of these processes by a concrete person concerning a concrete object. This statement acquires a special coloring if we apply it to the presentation for recognition, which is carried out on the basis of signs of a voice and speech.

In the process of identification, unlike in the case of an investigative experiment, no attention is paid to the process of modeling of the environment, which existed during the visual observation of the person identified. Art. 193 of the Russian Federation Code of Criminal Procedure does not fix the need for reproduction of the surroundings, for example, lighting, range of observation of the object of identification during the production of the identification. In case the legislator did recognize the possibility of identification by voice, the requirements of creating an environment as close as possible to that which existed at the time of recording in memory the voice of the person being identified would be extremely important, such as observing the distance of the person being identified from the person being identified as the source of sound, the presence of any obstacles

between the person being identified and the person being identified, the volume of the person being identified, extraneous noises, etc.

In the process of searching for optimal ways of solving the problem of identification by voice various and sometimes non-standard proposals are put forward by legal scholars. For example, A.A. Otarov sees the following solution of the problem: “In this regard and taking into account the absence of normative regulations of the procedure of identification by voice, and speech signs in order to expand the legal means of proof in the procedural activity of investigators (interrogators) we consider it appropriate to carry out the presentation for identification by voice and speech signs within the investigational experiment” [Otarov, 2020: 127].

Thus, despite the real possibility of identification by voice, the process of identification as identification loses its meaning and significance if it is carried out within an investigative experiment. The criminal and procedural purpose of the investigative experiment is to verify and clarify the data relevant to the criminal case. Through an investigative experiment it is possible to confirm or reject the possibility of committing an act. Presentation for identification is aimed at individual identification of a person or object. Therefore, mismatch of purposes of investigative experiment and presentation for identification does not allow carrying out identification within the investigative experiment.

Not ignoring the problem of absence of direct criminal procedure reference to the possibility of identification by voice, no less important problem is the lack of reference in the article 193 of the Russian Federation Code of Criminal Procedure to the aim of such investigative action as identification by voice. Probably, not paying attention to the purposes of identification and investigative experiment, in the legal literature are born the ideas of possibility of identification by voice in the framework of the investigative experiment. The perspectives of improvement of the article 193 of the Russian Federation Criminal Procedural Code are in the enshrinement of criminal procedural goals of identification and expansion of the ways of identification.

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ANTI-CORRUPTION IN THE ELECTORAL PROCESS

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Abstract. *This article deals with the issues of combating corruption in the electoral process. Based on the analysis of the current legislation and the practice of its application, it is proposed to transfer corruption crimes in the field of elections from the category of moderate severity to serious crimes. As the main means of combating electoral corruption in this article, it is worth considering the expansion of public control, increasing competition in filling regular positions in the system of election commissions, requirements for the availability of legal education for election organizers, and anti-corruption expertise of regulations.*

Keywords: *elections, bribery, distortion of the will, participants in the electoral process, obstruction of the exercise of voting rights*

Today corruption as a negative social phenomenon is the emergence of a factor in the political and administrative management system, the construction and impact on the environment. A corrupt state is identical to organized crime, since it itself creates a favorable environment for such illegal and anti-social incomes as illegal business, drug addiction, prostitution, banditry, abuse of power and authority.

Considering corruption in the electoral process, it is worth saying that its danger lies not only in distorting the content of political competition and the death of pluralism, but also in obstructing the free exercise of electoral rights by the main participants in the electoral process. The consequence of this is a drop in the level of citizens' confidence in the electoral process. "Corruption is a giant institutional trap. By the majority – in power and society – the costs associated with overcoming corruption are perceived as significantly exceeding the current costs of corruption" [Levin et al., 2012].

As the main means of combating corruption at the present stage of development of public and political life, the following can be distinguished:

- measures of social prevention;
- improvement of anti-corruption legislation, i.e. strengthening security in this direction;

- compensatory measures aimed at restoring social justice in the sphere of those social relations that were harmed as a result of the corruption component;
- creation of an effective mechanism for public observation of the electoral process, including polling the opinion of the population at the exit from polling stations on voting day and parallel counting of election results by opposition forces and public institutions. “Public election observation, which is carried out on an initiative basis by public and non-profit organizations specializing in such activities with the involvement of volunteers, is one of the key civil initiatives to combat political corruption and provides citizens with the opportunity to personally and directly demonstrate their civic activism in election campaigns and in politics” [Nisnevich, 2013];
- strengthening of measures of legal responsibility.

Anti-corruption activities must prevent corruption, including the identification and subsequent elimination of the causes of corruption (prevention of corruption); include detection, prevention, suppression, disclosure and investigation of corruption offenses (fight against corruption); minimize and (or) eliminate the consequences of corruption offenses.

A set of actions aimed at improving the level of legal and political culture of voters, the main participants in the electoral process and members of election commissions will serve as the basis for the work on combating corruption.

The main activities in this direction could be:

- 1) the majority of public observers and members of election commissions have a higher legal education;
- 2) introduction of qualification examinations for chairmen of election commissions for the right to fill the position provided;
- 3) strengthening the measures of anti-corruption expertise of normative legal acts in the field of electoral law;
- 4) improving the legal literacy of candidates and their proxies, representatives of political parties, as well as authorized representatives, observers, representatives of the media.

The importance of creating a full-fledged system of measures to combat corruption in the electoral process is to increase the anti-corruption potential of the current constitutional, administrative and criminal legislation.

An analysis of the existing criminal and administrative norms reveals a number of imperfections that allow the strengthening of the position of corruption in the modern electoral process. For example, the current criminal legislation, although it provides for liability for bribing a person with active and passive suffrage, does not allow controlling several negative phenomena of the electoral process at the same time: firstly, this is a corruption component that undermines the foundations of competitiveness, equality and reliability of elections, and secondly, it is the fact of falsification of the voting results. This is explained by the fact that in both the first and second cases, a citizen who has an active suffrage cannot fully exercise it, since his actually made choice does not correspond to his real will. The bribery of elected persons is rather latent in nature, since none of the participants in such a “deal” is interested in its disclosure. Most often, a candidate

for an elected position is bribed by his opponents in order to choose a certain line of struggle during the election campaign or to withdraw his candidacy from the elections, or not to be nominated in a particular constituency. The social value of elections lies in the fact that they are one of the essential moments of the political self-affirmation of citizens and the political self-organization of civil society.

The Criminal Code of the Russian Federation contains a number of articles providing for liability for violating the electoral rights of citizens: obstruction of the exercise of electoral rights or the work of election commissions, violation of the procedure for financing an election campaign, falsification of election documents, etc. However, if we consider the judicial practice of imposing penalties under these articles, we can see that the compositions are practically not used [Kleimenov, 2018]. And this is not due to the fact that these crimes have a sufficiently high level of latency, which gives rise to impunity for those, involved.

The practice of holding elections shows that today the issue of identifying an independent corpus delict of voter bribery remains relevant, as was done, for example, in the Code of Criminal and Correctional Punishments, 1845. It is necessary to change the status of bribery from the qualifying feature of the offense of obstructing the exercise of electoral rights to the constructive feature of the crime of bribing various participants in the electoral process.

Tightening criminal liability for persons reasonably suspected of corruption crimes in the field of electoral law will reduce these crimes. As indicated in the scientific literature, today crimes against voting rights are classified as crimes of small or medium gravity.

However, the existing sanctions, in our opinion, do not allow realizing the purpose of the criminal process - the correction of the convict. We believe that the above mentioned offenses should be transferred to the category of serious crimes, because corrupt actions during the election campaign:

- undermine the foundations of the functioning and normal existence of state bodies and the management system;
- violate the principles of electoral law and process;
- be able to influence the legality and legitimacy of newly elected officials and public authorities.

However, it should be noted that the improvement of criminal legislation should be of a qualitative nature. Timely detection of corruption components in the electoral process requires competent and accurate work of the legislator and law enforcer. The formation of anti-corruption sentiments in society in relation to corruption manifestations in the electoral process is possible only through active legal education and education of the population, carried out by both state and municipal bodies, with the comprehensive support of law enforcement agencies.

As a radical means of combating corruption, one can single out the restriction of the active and passive suffrage of those persons who were convicted of corrupt activities during the election campaign. Moreover, the introduction of this measure is possible both for a definite and for an indefinite period. But for the implementation of this means of combating corruption, significant changes are required to the regulatory legal acts in the field of electoral law.

Another area of combating corruption is the possibility of ensuring accessibility with familiarization with the processes of financing the electoral process in order to provide opportunities for detecting and suppressing acts of corruption. Work in this direction will allow the formation of another "supervising" body for the election campaign, but in the person of the voters. Public control will be effective only if every citizen can challenge the illegal actions of bodies and officials in an objective and independent court. The implementation of these opportunities will also make it possible to fully implement the constitutional right of citizens to receive reliable information, as well as to manage the affairs of the state.

There are many definitions of "corruption" in the scientific literature. However, considering these phenomena in the electoral process, it is worth noting that if the term "corruption in the electoral process" is legislated [Karpova, 2018], then this will significantly expand the theoretical possibilities for developing effective measures to combat corruption in this direction, with their subsequent implementation in practice activities.

The main successful means of fighting corruption is the interaction of social institutions of society and the state. That is why we can say that countering corruption in the electoral process is an important area of work for three actors: the legislator, law enforcement agencies and society. In the existing democratic realities, corruption is the main destructive tool. Corruption in the electoral process gives rise to illegal phenomena in the authorities, but, above all, distrust of the election results, distorts the true results of the will of the voters.

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**THE MAIN TYPICAL INVESTIGATIVE SITUATIONS AS A
REFLECTION OF THE INVESTIGATOR'S PROGRAM OF
ACTION IN INVESTIGATING CRIMES OF THEFT**

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Abstract. *The article deals with the main investigative situations that appear in the process of investigating thefts. Some features of thefts are also disclosed, which give the investigator the opportunity to choose the most effective way to investigate the crime. It is concluded that it is necessary to analyze this topic to formation of an investigative versions, improve the process of detecting and investigating crimes in each specific case.*

Keywords: *theft, investigative situations, investigative actions, procedural investigative actions, investigative versions*

The specificity of information about the features of the crime committed forms three main investigative situations. The first situation is when the identity of the suspect and his location are established; the second is when the identity of the suspect is established, but the alleged perpetrator fled the scene of the crime; the third is when the identity of the suspect has not been established [Averyanova et al., 2008]. It should be noticed that it is precisely taking into account the amount of information, their reliability and completeness that the whole process of further investigation is being built.

According to part 1 of Art. 158 of the Criminal Code of the Russian Federation, theft is the secret larceny of another's belongings. This kind of crime occurs quite often and in purely legal terms is different from the exclusive types of larcenies: robbery, robbing with violence, fraud and embezzlement. Along with this, the typical time for the commission of the theft cannot be indicated. Thus, housebreakings are usually observed during the daytime (the working days from 8 a.m. to 6 p.m., that is when people are away from home), and thefts from warehouses – at night [Logvinec et al., 2020].

In this aspect, it is necessary to mention the forensic versions. The forensic version is an assumption that is based solely on factual data about the nature or individual circumstances of an event with signs of a crime. This assumption is accepted for verification by the investigator or other authorized person when deciding on the initiation of a criminal case, investigation or trial in a criminal case. The investigative version is one of the types of forensic version. Such assumptions are put forward by the investigator to clarify the essence of the incident and all its circumstances.

So, circumstances to be determined:

- where, when, under what conditions the theft occurred;
- what belongings was stolen;
- signs of stolen belongings;
- what material damage was caused to its owner;
- the circle of person who can have any information about the stolen belongings;
- what measures were taken by the owner to ensure the safety of the belongings;
- what actions were taken by the offender to prepare for the commission of the crime;
- method of entry to the place of theft;
- who committed the theft;
- lifestyle, connections of the person who committed the theft, whether other crimes have been committed;
- when, under what circumstances, who turned out to have stolen belongings, etc.

In the case when the investigator has information regarding the identity of the suspect in the theft and his location, the investigator's program, first of all, consists of inspecting the scene. In parallel with this, procedural investigative actions, such as the detention of a suspect; interrogation of the victim, suspect and witness, are carried out. After that, it is necessary to conduct a search at the place of residence of the suspect. Particular attention should be paid to places where the offender theoretically could not hide stolen items guided by moral principles (baby cradles, beds for seriously ill people, wheelchairs, etc.).

The appointment and production of forensic examinations is regulated by Art. 195 of the Code of Criminal Procedure of the Russian Federation. The investigator's program ends with the presentation of items found during the search for identification. In this case, the victim will act as the identifying person. It should also be mentioned that the investigator must instruct the agency of inquiry to collect data characterizing the personality of the suspect, his lifestyle, and also check his possible involvement in the commission of unsolved thefts.

In a situation where the identity of the suspect is established, but it was impossible to catch the thief “by surprise” and he disappeared, it is advisable for the investigator to direct his efforts to collecting data that most fully characterizes the identity of the suspected person, identifying his relationships, establishing a possible location or appearance [Logvinet et al., 2020]. So, first of all the scene of the incident is examined, the victim and witnesses are interrogated, the procedures for appointing and conducting forensic examinations are carried out. In addition, it is necessary to give a written order to the agency of inquiry on the production of a search for a disappeared person [Averyanova et al., 2008]. It is necessary to determine the circle of persons among whom the criminal should be searched. The investigator's program here is distinguished by the compilation of identikits during the investigation; verification of trace data on forensic records; instructing the agency of inquiry to identify the person who committed the theft in an operative way.

In conclusion, thorough analysis of the aforementioned investigative situations that appear in the process of investigating thefts is actually necessary and relevant. It is according to the fact that situations predetermine the fullness and

features of investigative versions, legal procedure for the investigator's actions aimed at detecting and preventing crimes.

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THE LAWFUL STATE AS A PROMISING REFERENCE POINT FOR THE DEVELOPMENT OF MODERN SOCIETY

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Abstract. *The article deals with the phenomenon of lawful state. The analysis of the main components of the nation based on rule of law is conducted. The issues of formation and key prospects of the rule of law in the Russian Federation are investigated. Conclusions about its role in modern society are proposed.*

Keywords: *lawful state, rule of law, constitutional system, civil society, democratic nation*

Today, a lawful state is not only a product of the development of ideas about the most perfect polity structure, but also one of the basic characteristics of almost any developed country, enshrined at the legal level. It can be said that a law-abiding polity is an undeniable forward-looking guideline for the development of society, ensuring a balance between the interests of the individual and those of the nation.

It should be noted, that the German scientist K. Welcker first used the term „lawful state” in 1813 [Welcker, 2011]. However, Robert von Mol introduced this

concept into the scientific parlance and conducted its first legal study only 19 years later [Antonov, 2018]. Retrospective analysis shows that the theory of the lawful nation has deep historical roots. Therefore, the representatives of ancient Greek philosophy and political-legal thought – Plato and Aristotle, laid down concepts of legal statehood. The long history of the development of the term “*lawful polity*” along with its fundamental role in the formation of the “modern” state, that aimed at harmonious relations in society primarily, determinates the need for a detailed analysis of its content.

In general, the substantive aspects of the lawful state are:

- The existence of a domestic order that satisfies people’s expectations of justice,
- The reasonableness and legality of the actions of the state authorities in relations with citizens.

Thus, the lawful state is a “set” of certain elements.

The establishment of a constitutional order is a prerequisite for the existence of the lawful state. Literally, the law-based state is a polity, where the Constitution is the nucleus of the legal system.

For example, chapter 1 of the Constitution of the Russian Federation set up the legal status of our country, its main essential characteristics, foundations and principles, in accordance with which all major governmental and public institutions are organized [<http://www.pravo.gov.ru>]. The rules of this chapter are of particular importance because they as certain relationships affect the content of legislation and bylaws in general.

Wherein the foundations of the constitutional system are closely interrelated and inseparable from each other, i.e. they represent a single system that ensures the optimal functioning of all spheres of activity of our state. A number of norms of the Constitution of Russian Federation, which adopted in 1993, enshrines the main principles and purpose, strategic guidelines of the modern state first of all.

Thus, part 1 of article 1 of the nation’s Constitution defines the legal status of the Russian state. This norm contains three main elements of the nature of polity: a democratic political regime, a federal and a republican form of the government, and characterizes Russia as a state, governed by the rule of law [<http://www.pravo.gov.ru>].

A number of legal scholars consider that constitutional consolidation of the characteristics of the lawful state in our country is a promising norm that determines one of the main guidelines for social development. For example, G. D. Sadovnikova argues, that the implementation of the concept of the rule of law is rather an ideal that all civilized countries should strive [Sadovnikova, 2015]. Even so the formation of the lawful polity does not only consolidate the legal character of the state in the Constitution, but also suggests creation of the real system of political, legal and other guarantees, that ensure implementation of constitutional norms, equality of all before the law and the courts, and the mutual responsibility of the realm and people.

The law-based nation is a multi-level system. It accepts the independence of the court, the legality of administration and the legal protection of citizens from violations of their rights by polity authorities as features and institution.

A modern democratic lawful state supposes a developed civil society, where public organizations and political parties cooperate, and there is political and ideological pluralism. Any power, under which the relationships are founded only on force of coercion and violence in society, is always doomed to extinction and destruction, while liaison based on principles of justice between the government and people enable the interests of each individual. This, in turn, provides strength and stability of nation.

In summary, the lawful state officially recognizes and respects the separation of powers, the independence of the court, the legality of governance, the legal protection of citizens from violations of their rights and the compensation for damage, that caused by public authorities. However, the most important thing is that the lawful state should consistently carry out its main purpose – to guarantee every citizen the opportunity for comprehensive personal development and social justice. At the present stage of society development, human rights issues have reached the international and interstate level, which confirms their priority over the problems of the state, testifies to their global nature. They are increasingly becoming a reference point in national legal systems and legal regulation. It seems to us that Russia has been taking important and serious steps towards creating a full-fledged lawful state in recent years. Our country faces the most difficult task of self-identification of the population, the formation of a developed legal consciousness and legal worldview. The rule of law still needs to be built by mobilizing the efforts of the entire society. Idealization and blindly copying the models of law-abiding states established in the modern world are not permissible. The Russian Federation, supporting and developing the idea of the lawful polity in every possible way, will have to look for its own optimal way.

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NATURE AND METHODS OF LEGAL PROTECTION OF INTELLECTUAL PROPERTY RIGHTS

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Abstract. *This article discusses the concept and the main existing methods of legal protection of intellectual property rights in the Russian Federation. Separately, the state measures taken to protect intellectual property rights are examined. Based on the results of the study, options for supplementing the legislation are proposed.*

Keywords: *intellectual property rights, protection of intellectual property rights, counterfeit products, labeling, and infringement*

At present the life of every person is increasingly in contact with intellectual property. The number of objects covered by legal protection is increasing. For example, recently a new object was added to the list of legally protected results of intellectual activity stipulated in article 1225 of the Civil code of the Russian Federation [Civil code of the Russian Federation, 2006].

Federal law No. 230-FZ of 26.07.2019 „On amendments to part four of the Civil code of the Russian Federation and articles 1 and 23.1 of the Federal law “On state regulation of production and turnover of ethyl alcohol, alcoholic and alcohol-containing products and on restriction of consumption (drinking) of alcoholic products” added sub – item 14.1-geographical indications to clause 1 of article 1225 of the Civil code of the Russian Federation [Federal law No. 230-FZ 2019].

By contrast the legislation is trying to adapt to more dynamic social relations, increasingly often subjects with intellectual property rights face violations of their legitimate interests. The most striking example of frequent violations of the rights of copyright holders is counterfeit goods. According to the Federal customs service, more than eight million counterfeit products were detected as of October 2, 2020 [Federal customs service, 2020].

According to Novoselova L. A. a material carrier should be considered counterfeit if it expresses or uses a means of individualization or the result of intellectual activity protected by law, the use of which, including production, distribution, transportation, import, and storage, violates the exclusive rights of intellectual property owners [Novoselova, 2017].

Based on the above, it is necessary to analyze the existing methods of intellectual property rights protection and determine their effectiveness.

First, it is necessary to determine the definition of ways to protect intellectual property rights. Civil legislation does not contain the definition that interests us. However, we can find it in the doctrine, where the methods of

protecting intellectual rights are understood as coercive measures that are provided for by current legislation and are aimed at recognizing or restoring rights and legitimate interests, as well as preventing illegal actions that violate the rights of copyright holders.

Existing methods are divided into two large groups:

1) Methods that are related to the implementation of civil penalties. At the same time, it usually entails additional property sanctions for the violator of intellectual property rights. Among these methods, the most prominent are the following: redress for the non-pecuniary damage, recovery of losses and compensation. Sometimes jurisconsults also include in this category the forced liquidation of entities, as well as the termination of the activities of individual entrepreneurs in cases where they violated exclusive rights.

2) Methods that do not entail additional property sanctions for the perpetrator. Among these are the following: publication of a court decision on an infringement of a copyright, termination of titles to intellectual property, and suppression of actions that violate the rights to the results of intellectual activity or to equated means of individualization. The latter method is also used not only if there are actual actions, but also if there is a threat of violation of intellectual property rights.

The unifying factor for all conditions is the presence of illegal behavior of the person. An exception to this rule is the involvement of business entities and in the absence of guilt (Paragraph 3 of article 1250 of the Civil code).

If we turn to the legislation of foreign countries in the field of protection of intellectual rights, sometimes it is more developed and more effective. For example, France has adopted a special legal act – the intellectual property Code. This *jus* regulates the protection of copyright and related rights [Code de la propriété intellectuelle, 2020]. It should also be noted that the provisions of this codified act also affect the legal protection of industrial property objects. Most of the code's prescription includes order of international agreements.

The anti-Piracy law HADOPI of 2009 deserves special attention. The key feature of this act was the measure of responsibility for illegal downloading of products on the Internet that are protected by copyright: the entity (user) who is caught three times in this violation will not only be subject to property sanctions, but will also lose access to the global network. But, taking into consideration the current trends towards comprehensive informatization and natural human rights, this law was found to be inconsistent with the French Constitution. However, this practice itself is interesting in our opinion, although it looks extremely radical.

As mentioned above, one of the significant problems in Russia is the existence of a large number of counterfeit products, which not only violates the intellectual rights of subjects of legal entities, but also causes significant damage to the economy. The state uses a lot of measures to combat this phenomenon. The most interesting of it is the labeling of various products. For example, there is an Order of the Government of the Russian Federation dated 28.04.2018 No. 792-R “On approval of the list of individual goods subject to mandatory marking by means of identification” [The decree of the Government of the Russian Federation

No. 792-R 2018]. This act contains a list of 11 items to be marked. Marking is a way of assertion not only the rights of the copyright holder, but also the buyer, who can protect against unlicensed goods.

Relatively recently, an experiment was launched to study the effectiveness and feasibility of labeling packaged water. In accordance with the decree of the Government of the Russian Federation of 27.03.2020 No. 348 "On conducting an experiment on labeling with means of identification of packaged water on the territory of the Russian Federation" [Decree of the Government of the Russian Federation No. 348 2020], one of the goals is to analyze the feasibility of introducing mandatory labeling.

Given the above, we can draw the following conclusions: the current legislation provides for a lot of ways to protect intellectual property rights, moreover, the state implements various measures aimed at minimizing violations. However, legislation often does not keep up with the development of public relations, and the exhaustive nature of the list of objects that are granted legal protection, in turn, is a kind of brake on the development of intellectual property. In view of this, it is necessary to make up a list of objects fixed in article 1225 of the civil code of the Russian Federation, which can increase property sanctions applied to persons who violate the intellectual rights of copyright holders. It should be noted that aggravation of state control over imported commodities can help in combating the large volume of infringing goods on the Russian market.

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LEGAL NATURE OF THE MARRIAGE CONTRACT IN NATIONAL AND FOREIGN FAMILY LAW

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Abstract. *This article reviews such a legal phenomenon as a marriage contract, examines the statutes in this area. The author highlights the specific features of this document, reveals the advantages and disadvantages of a prenuptial agreement, examines the role of moral and property rights in the contract in the codes of the USA, Europe, Asia and Russian Federation.*

Keywords: *marriage contract, family law, legal relations, estate, prenuptial agreement*

The term „marriage contract” enshrined in the Family code of the Russian Federation, namely, article 40, which states that aprenuptial agreement is the consent of the persons entering into marriage [Semeynyy kodeks Rossiyskoy Federatsii, 1996]. This document is defining property rights and responsibilities of

spouses in wedlock and (or) in case of divorce. A contract can be concluded both in relation to the property currently available and in relation to the estate to be acquired in the future. Spouses have the opportunity to limit their title to the term specified in the marriage contract. When register the marriage contract it's important to mention the following:

- limit the capacity and competence of one of the partners (prohibition of appeal to court to protect his or her rights and interests, business activities, inheritance, registration of wills, to receive revenues);
 - the conditions for regulating personal relations between spouses;
 - determination of the personal rights and obligations of spouses in relation to their children;
 - restriction of the rights of a disabled spouse in need of maintenance.
- [Savostyanova, 2011].

Currently, practice shows that the conclusion of such an agreement is quite rare on the territory of the Russian Federation. In our country, the number of signed marriage contracts is slightly more than 4 % of the total number of registered marriages, while in Europe and the United States it is 70 %. Lawyers suggest that this situation is formed precisely because of the psychological attitude of individuals to this legal phenomenon [Smirnova, 2013].

The act of entering into a marriage contract is perceived as a sign of distrust and in advance “doomed” to the collapse of the Union [Nizamiyeva, 2010].

Insufficiently high legal culture of society also plays a role, namely in its lack of awareness about the existence of such a phenomenon. Unfortunately, many people do not think about the fact that property relations should be regulated not when a conflict is brewing, but “before it” – on a common sense.

At the same time, a number of experts, on the contrary, emphasize the positivism of marriage contract as it separates economic and personal relationships in family life. It will be especially relevant for persons who own a large amount of real estate, business, intellectual property, and so on, because one of the family law principles is the equality of spouses.

It means that the marriage contract does not have the right to impose duties only on one of the spouses. Since the marriage contract changes the legal regime of the spouses' property and is mutual, there are always counter-provisions in it. The prenuptial agreement takes on the features of retribution [Pliyeva, 2014].

Thus, by entering into a prenuptial agreement, people will be able to secure their position and be sure of what will happen to their financial status after the divorce. Also, it is necessary to protect third parties (for example, employees of enterprises that belong to spouses) from unpleasant consequences, since the process of dividing property can be quite lengthy. It should be noted that a prenuptial agreement cannot put one of the parties at an extreme disadvantage, which guarantees the parties economic security.

The national legal framework of Russia stipulates that a marriage contract can only regulate property relations. In contrast to this position, Western countries have developed a radically different practice where personal moral rights can be established in agreements in addition to ownerships.

The marriage contract is not similar in different regions. For example, in the United States, a prenuptial agreement is very popular. It must be signed in writing and in the presence of witnesses. Usually, before entering into a contract, the parties individually consult with lawyers to clarify their rights and obligations. In addition, the presence of both lawyers while signing is mandatory, since their absence may cast doubt on the validity of the document.

In China, for many centuries, a “red contract” was drawn up on red paper before marriage. It contained information about the dowry, but almost never defined the procedure for dividing the property. Only in 2003, the Chinese Supreme court decided that it was time to include in the marriage contract clauses on the rights to income from investments of one of the spouses and, of course, on intellectual property [Bychkov, 2011].

In Poland, relations between spouses are regulated by the family and guardianship Code. The marriage contract must be in the form of a notarial deed, otherwise the document will be considered invalid.

Important rules should include the prohibition of restrictions on the rights and responsibilities for the maintenance and upbringing of children, as well as the obligations of mutual loyalty, support and assistance. The prenuptial agreement is entered into a special register, which allows, for example, creditors to find out all the information they need [Bychkov, 2011].

A special feature of a marriage contract in Italy is that the contract may provide for the rights and obligations of a third part (for example, a creditor of one of the spouses), whose full personal data is included in the contract.

An interesting fact of the marriage contract concluded in Austria is the ability to set the amount and terms of payment of alimony, as well as the parent with whom the children will remain in the event of divorce. The aspect of alimony obligations included in the marriage contract is also provided for in the legislation of Ukraine. In addition, one of the spouses may be added to the subject of payment [Smirnova, 2013].

However, there are also states in which, in some cases, the marriage contract is mandatory, for example, in Thailand, if marriage is with a foreigner.

In the Bahamas, prenuptial agreements are not considered full legal documents, but are taken into account during court hearings as evidence of the spouses' intentions [Aliyeva, Zhumabekova, Ridel, 2017].

In France, a prenuptial agreement is concluded mainly before the registration of marriage, as the French are very cautious about the legal regime of ownership of real estate acquired before the status of spouses. In this case, each spouse retains the right to their own property, which they acquired before marriage.

There is also a guarantee to leave all personal debts and obligations to the spouse who is responsible for them. In addition, annulment of a marriage contract in France is a very expensive procedure.

Therefore, the French pay very careful attention to its initial conclusion.

Thus, the marriage contract in different countries has its own characteristics, which are provoked by the local mentality. It is in the Russian Federation that it enjoys the least popularity, which is caused by the historical features of the legal

system, as well as the psychological attitude to such an agreement. However, the marriage contract in Russian legislation separates personal non-property and property relations. In addition, in some cases, a prenuptial agreement is simply necessary to settle a relationship that involves large amounts of money.

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POWER AND PROPERTY AS FACTORS OF SOCIAL EVOLUTION AND INTERACTION

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Abstract. *The article examines the institution of power and property on the examples of analytical analysis of social historical evolution. The author reveals the relationship of power structures and components of property emphasizes the idea of rational interaction in the modern world. The author highlights the features of the process of transition from feudalism to capitalism.*

Keywords: *power, property, institution of power, state development, institution of property, social historical evolution, factors of historical development, the feudal state*

Historical evolution is an irreversible process of change, the development of nature and humanity, individual organs and systems. It can also be labeled a process that takes place over a long historical period and involves economic, political and legal, spiritual and moral, intellectual and many other changes. Social evolution presupposes a moment of continuity of the main social institutions, the state of which changes gradually, in accordance with the principles of development inherent in them. This means, above all, that extensive social transformations are carried out within the framework of existing social institutions, focusing on the key determinants in their configuration [Yakovleva, 2020: 130].

One of the most important factors of historical development are power and property, which, connecting, find numerous points of intersection throughout the historical path of humanity, having a significant impact on the state system and society as a whole.

The power structure is obligatory for every state, as there are always people who seek to achieve a leading position, they are ready to bear responsibility for others, as there are those who, on the contrary, ready to obey. Power is necessary for the organization of social production, which requires the subordination of all participants to a single will, as well as the creation and operation of the mechanism of regulation of social relations [Balanenko, 2020: 170]. The role of power in historical evolution can be traced when considering different stages of development of human society, historical types of state, from slave-holding to socialist ones.

The institute of property represents historically evolving social relations, which are connected with distribution, determining the ownership of the subject having the power to dispose, possess and use the object of property. It is on this

basis that interest in both, the phenomenon of power and the phenomenon of property, does not weaken at the present stage.

The institution of power and the institution of property are closely intertwined, as has been the case since the earliest stages of the development of statehood and social relations. For example, the characteristics of the slave-holding state were the rigid centralization and concentration of all state power, which was hereditary. Power belonged monopolistically to the ruling class, namely the slave-owners. In this case, the functions of the state were exercised in their interests, and the general social interests were realized only insofar as they did not conflict with the interests of the ruling class. The property of the slave-owners was not only to the instruments, but also to the slaves themselves.

In the feudal state most of the power belonged to feudal lords who owned land and material goods and this economic resource formed the base of feudal society, it was owned by feudal lords. As we know, the main assessment of the level of social differentiation and inequality was precisely property, which is closely linked to power. Thus, a characteristic feature of the feudal state was the combination of land ownership and political power in one hand.

The transition from feudalism to capitalism represented the destruction of the state power of the dominant class, the feudal lords, and the establishment of the political power of a new class, the bourgeoisie, as the leading force in the capitalist mode of production. A condition of capitalism was the existence of workers who do not have their own economy and are therefore forced to be hired by the capitalists. Here we see a striking connection between power and property. In the capitalist state the institution of power belongs to one political position, behind which either one person or a ruling group of persons stands, since this historical type of state is characterized by a dictatorial form of exercising state power. The institution of private property continued to develop but did not change fundamentally.

However, the real economy of particular countries was never based only on private property and could not give complete freedom to entrepreneurship. There were always features inherent in capitalism, such as state ownership or class privileges.

The transition period from capitalism to socialism is a special historical period, beginning with the winning of political power by the working class and ending with the building of socialism. In the socialist state, power belonged to the working class, the working class. Property existed in two forms: first, the form of state ownership, and second, the form of cooperative and collective farm ownership. However, state property was proclaimed as the patrimony of the people, while cooperative-kolkhoz property was group property or the property of individual collectives.

Thus, it can be noted that the institution of power, regardless of the historical type of state, most often belongs to the ruling elite, which is a minority. Only in the most modern states during the implementation of a democratic political regime does the institution of people's power appear, which represents the power of the people. But even in this case, power is representative and actually belongs to the

ruling elite, which is a minority. The policy of the ruling class toward the institution of property was twofold: on the one hand, the development of the economy was encouraged, but on the other hand, control over property rights was often established and confiscation took place.

The 21st century is seen as the century of the triumph of capitalism with its inherent characteristics and various modern modifications. The market economy today is most successfully implemented in a state governed by the rule of law, where the rights of citizens, including economic rights, are the highest value of the state, where social guarantees are implemented, elevated to the framework of the law, which has the supreme force in the state. With the establishment of market mechanisms in Russia there was an increase in economic indicators. The alliance of big business with government structures is becoming more and more organic inseparable, which accordingly affects the political decisions [Tambiyants, Shalin, 2020: 13].

Thus, Russian society has reached a new level of life, on a par with developed countries. Power and property existed and continue to exist in close interrelation, complementing each other. At the current stage of global capitalism, the trend towards a convergence of the elite of civil servants and big business continues to grow up to interpenetration and fusion. A common environment of politicians and top managers are being formed where class and, consequently, ideological unity is being established. In the future, new forms of manifestation and functioning of power, changes in the institution of property may appear, but, undoubtedly, *power and property will still be linked*.

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ACTUAL PROBLEMS OF THE INSTITUTE OF BAILIFFS

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Abstract. *The article is devoted to the activities of the Institute of Bailiffs in the Russian Federation. Bailiffs are an important element of our state. But today we have many problems both in science and in practice. The article deals with the problems of the legal nature of the institution of bailiffs in Russia, the problems of the workload of the institution of bailiffs in Russia and the problems of the shortage of workers in bailiffs of the Russian Federation.*

Keywords: *bailiffs, federal bailiff Service, legal nature, law enforcement agencies, enforcement*

Building the rule of law is one of the central tasks of the modern Russian state. Its implementation requires not only a logically coherent, consistent legislation and a qualitatively formed judicial system, but also an effective mechanism for the execution of court decisions, in other words, a developed institution of bailiffs. However, today it is possible to identify some both doctrinal and practical problems of the functioning of the institution of bailiffs.

It should be emphasized that the question of the nature of the institution of bailiffs has long remained controversial among representatives of the legal doctrine. The institution of bailiffs undoubtedly belongs to the executive body of state power. However, for quite a long period in the Russian legal science, uncertainty remained in the issue of its attribution to law enforcement agencies.

So, for example, A.A. Simonov previously expressed the position that a serious and positive stage in the development of the Federal Bailiff Service will be its attribution to law enforcement agencies, which once again confirms the relative complexity of the issue under consideration [Simonov, 2010: 115]. It is worth noting that the Russian legislator, together with the reform of the system of enforcement proceedings that began in 2019, actually equated the status of the Federal Bailiff Service to law enforcement agencies. In this regard, we come to the conclusion that the issue of the legal nature of the institution of bailiffs is now almost settled.

However, despite the granting of the status of a law enforcement agency, the conditions necessary for the effective implementation of the tasks of the institution of bailiffs still remain different in the constituent entities of the Russian Federation, which is an important practical problem [Tumakov, 2020: 259]. For example, the level of information support for the activities of enforcement agencies in the regions of Russia remains different, which in some cases worsens the effectiveness of their activities.

As rightly noted by I.P. Kravets and M.A. Bebnov the current level of information support does not meet the requirements of modern Russian realities [Kravets, 2016: 22]. This is primarily due to the fact that automated systems and other information support mechanisms are being implemented haphazardly. Another example of the manifestation of the problem under consideration may be the different technical equipment of the units. In this regard, in our opinion, it is

advisable to develop comprehensive federal and regional programs that will overcome the current problem.

The institution of bailiffs in the Russian Federation, as mentioned earlier– is a key component of ensuring the real operation of the mechanism for the protection of human and civil rights and freedoms, but this mechanism cannot function without highly qualified employees. In this regard, we consider it necessary to pay attention to the problems of staffing enforcement agencies in Russia.

Currently, the requirements imposed on employees of enforcement agencies are contained in disparate regulations, for example, in the Decree of the President of the Russian Federation, acts of the head of the relevant federal executive authority. This situation significantly complicates the staffing of the institute of bailiffs. In this case, in our opinion, it is necessary to systematize the requirements into a single codified act, which will be a significant step in improving the quality of the enforcement apparatus of the Russian Federation.

But the difficulties related to the personnel issue are not pumped into the above situation. The shortage of employees of enforcement agencies in the Russian Federation is a problem that is currently being resolved due to the fact that the Russian legislator has already made attempts to resolve it. However, as you know, solving a problem is always a long and painstaking process, and that is why the issue of personnel shortage still remains relevant today.

First of all, we note that the very activity of employees of enforcement agencies is quite dangerous, since it is inextricably linked with a possible threat to the life and health of employees. Working with debtors, ensuring the safe functioning of courts – all this leads to the need for frequent contacts with others, among whom not everyone is able to objectively assess the current situation. High risk is one of the factors provoking the growth of personnel shortage.

We believe that solving this problem requires an effective system of legal, social and material guarantees for the activities and protection of employees of enforcement agencies in the Russian Federation. It should be noted that the conditions ensuring the stable functioning of the institution of bailiffs are already enshrined in Chapter 4 of the Federal Law „On Enforcement Agencies of the Russian Federation”, however, there is an opinion in the legal literature that the currently provided level of guarantees is not sufficient for a more comprehensive functioning of the institution in question, in particular, still there is a lack of proper financial motivation of employees, which, in our opinion, we can agree with in general [Novgumanova, 2021: 122].

The Institute of Bailiffs is currently one of the busiest institutions of the Russian law enforcement system. We believe that this is an important problem that requires a comprehensive and integrated approach, since the effectiveness of the entire mechanism for ensuring human and civil rights and freedoms in Russia depends on the speed and correctness of the implementation of the functions assigned to the analyzed institute. Let's turn to the statistical data provided by the Federal Bailiff Service in the final report on the results of their activities. According to the provisions of the said final report, 110.5 million enforcement proceedings were under execution in 2020.

For comparison, in 2019, this figure was 102.9 million productions, which is lower than in 2020, by as much as 7.6 million enforcement proceedings. At the same time, due to the receipt of a large number of cases, the burden on officials has increased accordingly. Based on the data provided by the Federal Bailiff Service, we observe that the number of enforcement proceedings is 17.2 times higher than the norm of the burden imposed on the bailiff by federal legislation. About 4.5 thousand enforcement proceedings were determined to be under the jurisdiction of one bailiff. It is also necessary to pay attention to the number of criminal cases accepted by bailiffs-interrogators for their production over the past 2020.

In general, 46.4 thousand criminal cases were initiated for crimes under the jurisdiction of the Federal Bailiff Service. Based on the presented data, we can conclude that workload is one of the most acute problems of the institution of bailiffs in Russia. In our opinion, this problem requires a comprehensive approach, including the solution of another closely related problem - the shortage of personnel. Only in the aggregate of the measures taken, the activities of the Federal Bailiff Service in the legal environment of Russia can be improved.

In conclusion, we note that the institute of bailiffs in the Russian Federation is an important institution of our state. But today we have several scientific and practical problems. For example, the problem of the workload of the institute of bailiffs and the problem of staff shortage has not yet been solved. We believe that the Russian legislator needs to pay attention to them.

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PROCEEDINGS ON CASES OF ADMINISTRATIVE OFFENSES IN THE FIELD OF ROAD SAFETY

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Abstract. *The article explores a number of urgent problems that arise when applying measures of proceedings in the case of an administrative offense in the field of road safety. The paper also suggests possible ways to improve the regulatory framework to eliminate the identified problems of Russian legislation in this direction. The activity of the State Traffic Inspectorate in the implementation of control and supervisory functions directly in the process of movement of vehicles is considered. Special attention is paid to the organization of road safety in order to preserve the life and health of road users.*

Keywords: *state control, road safety, state inspection, preservation of life and health, vehicle inspection*

The proceedings in the case of an administrative offense are the activities of officials of the internal affairs bodies to identify and fix violations of traffic rules, initiate an administrative offense case, conduct an administrative investigation, consider an administrative offense case, identify the causes and conditions for committing an administrative offense. Legal regulation in this area is carried out by the Code of Administrative Offences of the Russian Federation [<http://www.consultant.ru/>].

Due to the growth of the automobile fleet in the Russian Federation, which in recent years has reached the seventh place in the world in terms of the number of cars per one thousand people of the population and, at the same time, the serious lag in the development of the relevant road infrastructure, the task of ensuring road safety, as well as compliance with the basic rules by participants, comes to the fore.

State control in the field of road traffic has always been and is under special control and, in these conditions, the prevention of deaths on the roads as a result of road accidents is of particular importance, and a special role in this belongs to the State Road Safety Inspectorate. The activities of the traffic police are aimed at identifying, preventing and suppressing illegal encroachments against road safety in order to improve road safety, protect the rights and legitimate interests of citizens – road users, reduce the number of road accidents and the severity of their

consequences. One of the main tasks of the State Traffic Inspectorate is the implementation of control and supervisory functions directly in the process of movement of vehicles and pedestrians on the roads, when the object of this activity are road users – drivers, pedestrians, passengers [Konin, 2020].

The relevance of the chosen topic of the scientific article can be explained by several factors: in the course of scientific and technological progress, the number of motor vehicles increases annually; the state of road safety leaves much to be desired, the road infrastructure is underdeveloped, there are constant reforms of bodies supervising in the field of road safety, the quality of driver training has decreased; according to statistics, there is an annual increase in road accidents, and the high mortality rate on the roads is also clearly visible.

In the modern world, there has been an imperfection of legislation in the field of proceedings in cases of an administrative offense in the field of traffic. In our opinion, the legislation pays little attention to the norms regulating this institution.

The general approach to road safety activities is based on decisions of state authorities, according to which road safety is an important state task, since it is about preserving the life and health of citizens of the country, in fact, improving the quality of life[Azarova, 2012].

In this regard, for road safety, it is necessary to involve the efforts of federal state authorities, state authorities of the constituent entities of the Russian Federation, local self-government bodies and public institutions, entities operating in the field of industry, as well as structures of the Russian business community.

Currently, there have been a large number of accidents involving drunk drivers. These persons lead to terrible consequences with the death of people and injuries, therefore it is necessary to toughen the punishment, as well as introduce new measures that can reduce the number of victims of accidents involving drunk drivers and contribute to the preservation of the lives of thousands of people. These problems, as a rule, indicate an increase in possible risks in road traffic, therefore there is a need to develop and implement a safer traffic environment.

The main problem in the field of road safety is the imperfection of the system of training drivers to participate in road traffic. Driving vehicles requires close attention to the skills acquired, so it is necessary to conduct driving in different seasons of the year for the practical experience of drivers. Thus, the chances of becoming a participant in an accident will decrease, and it will also avoid more serious consequences.

It should also be noted that there is a lack of time to draw up protocols for these categories of cases going to court, in the case when a person is delivered on weekends (48 hours) it is also one of their objective reasons. It would be advisable to develop a mechanism for considering cases of this category in court on weekends through the „duty” of judges whose competence is to consider cases of this category.

Vehicle inspection is also a problematic issue, for the implementation of this measure it seems necessary to formulate the grounds for the production of this measure. Employees during the production of this measure cannot exercise their

powers correctly and in full, since often these persons lack skills, special knowledge in communicating with the offender, there is also the fact of little preparation for practical actions if necessary, for example, with physical resistance of offenders. There are some legal problems in the implementation of this measure, for example, the concept of “vehicle inspection” is legally fixed, however, the legislator interprets this concept differently, and in accordance with this it is advisable to define a single formulation of this measure [Ziganshin, 2016].

Also, it is necessary to improve the skills of employees who inspect vehicles in order to exercise their full powers. Improving road safety, aimed at preserving the life, health and property of citizens of the Russian Federation, is one of the priorities of state policy and an important factor in ensuring sustainable socio-economic and demographic development of the country [Boshamdzhieva, 2015].

The field of road traffic and ensuring its safety is an area of public administration that can play one of the leading roles in the formation of the so-called global administrative law, since in the context of globalization the role of transport communication between states is increasing, which requires the continuation of the development of unified approaches to legal regulation in the field of road safety, the establishment of administratively punishable acts, the development of rules for their qualification and bringing the perpetrators to administrative responsibility.

Within the framework of solving problems in the field of road safety, it is necessary to implement a set of measures to improve the subsystems of organizational, legal, methodological, personnel, information and other types of support.

In conclusion, the administrative and legal norms in the field of traffic regulate a wide range of public relations. For a correct, accurate and one-time assessment of administrative offenses committed, it is necessary to improve the legislative framework in the field of traffic.

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**PROCEDURAL, ORGANIZATIONAL AND TACTICAL FORMS OF
INTERACTION BETWEEN THE INVESTIGATOR AND THE
BODIES CARRYING OUT OPERATIONAL – SEARCH
ACTIVITIES**

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***Abstract.** The article is devoted to the study of the specifics of the interaction between the investigator and the bodies that carry out operational-search activities in cases of terrorism and extremism. It is known that the effectiveness of the investigation of crimes of a terrorist nature largely depends on the well-coordinated conscientious work of investigative and operational bodies. Violent crime is currently increasing, with particular attention being paid to the increase in extremist crimes. Interaction in the activities of competent authorities during the disclosure and investigation of crimes is always based on regulations and the most rational combination of methods of activity of all subjects of interaction.*

***Keywords:** terrorism, extremism, investigator, operational-search activity, effectiveness, concerted actions, preliminary investigation, prevention, investigation*

Nowadays, every sixth crime against public order remains unsolved, the main reason can be considered the disunity of the actions of the preliminary investigation and inquiry bodies, as well as unproductive forms of interaction, insufficient professional training, and in some cases, dulling the sense of responsibility for the assigned case among investigators and employees of the bodies of inquiry, insufficient assistance from the criminal police officers [Gnedov, 2016].

This state of affairs is extremely unacceptable and, of course, is a topical issue at the present time. In addition, the high level of the terrorist threat, the high degree of organization, armament and professionalism of terrorists necessitates the proper organization of operational-search activities, which directly affects the effectiveness of law enforcement agencies in investigating terrorist crimes and identifying persons involved in them [http://www.consultant.ru/document/cons_doc_LAW_28399/].

The main task of countering extremist activity in all possible manifestations is to prevent a surge of violence and the formation of extremist movements, armed formations, terrorist organizations. Operational-search measures to identify acts of a terrorist nature include: interviewing informed persons, making inquiries, examining premises, buildings, structures, terrain and vehicles, identifying a person, examining objects and documents, etc. It should be borne in mind that special Important in the search for terrorists is the timely identification of eyewitnesses of the incident and other persons who can report the facts that preceded the shooting, explosion, the nature of the terrorist manifestation and suspected persons [http://www.consultant.ru/document/Cons_doc_law_10699/].

Thus, a sufficiently large amount of information about movements of an extremist orientation is subject to collection and generalization: the goals and objectives of the organization, expressed in their program documents, in distributed printed materials; proposed methods to achieve them; organizational structure, the degree of organizational formalization of the association, including the communication system between members of the organization; socio-psychological characteristics of the leaders and members of the organization; presence of paramilitaries and weapons; source of financial receipts; contacts with other organizations; popularization among certain masses of the population, including strata capable of supporting them.

In Article 13 of the Law „On Operative-Search Activities” lists the executive authorities vested with the authority to carry out operational-search activities [Goryainov, 2018]. In addition to the operational units of the internal affairs bodies, the bodies of inquiry also include: operational units of the FSB, federal state security agencies, customs authorities of the Russian Federation, operational units of the Foreign Intelligence Service of the Russian Federation and some other state bodies. Accordingly, the interaction of the investigator and the operational-search apparatuses is based on the law, coordinated in purpose, place and time, the activity of bodies that are administratively independent of each other, which is expressed in the most appropriate combination of the capabilities inherent in these bodies to achieve the goals of investigating crimes.

Coordination of interaction must be confirmed by the provisions of departmental regulations. The legislation of the Russian Federation establishes the powers of the investigator and his independence in matters of organizing the course of the investigation and using the capabilities of the bodies of inquiry. Here it is necessary to understand that the scope of powers of the participants in the interaction depends on the form of interaction [Bastrikin, 2017].

So, the investigator is obliged to know the entire scope of work, the direction of the investigation as a whole and his specific functional duties. In accordance with this, individual plans are drawn up for the distribution of duties, taking into account the nature of the investigative actions and the place where the crimes were committed [http://www.consultant.ru/document/Cons_doc_law_10699/]. These plans should provide for all the work of the investigator, and its coordination both with other investigators and with operational workers. The plan should follow a single strategic line for the use of evidence. In his line of evidence, the

investigator must take into account both his own versions and the private versions of other departments.

All versions must be accepted for review. The investigative actions themselves begin with a preliminary investigation, and, if necessary, search actions are carried out with the seizure of evidence. If the production of investigative actions provides for an inquiry in another district or city, then such actions, according to Article 152 Part 1 of the Code of Criminal Procedure, must be completed within 10 days. In accordance with the general plan of investigative actions, the investigator draws up assignments in which the investigator briefly sets out the circumstances of the commission of the crime, as well as the time, place, method and nature of the crime. This will be the initial information for the executor of the body carrying out operational-search activities.

A special place is occupied by the bodies of inquiry. Their participation in the investigation of the crimes of extremist groups, together with the work of the investigating authorities, leads to fruitful and effective results [Chechetina, 2014]. In the event that the investigator instructs to perform any investigative actions, for example, the body of inquiry, then the latter receives the status of a proper subject and the corresponding powers of the investigating bodies.

The order of the investigator clearly indicates what kind of investigative actions are ordered to be carried out. As part of the measures to identify persons involved in terrorist and extremist activities, it begins with notifying the investigator of the fact of the commission of a crime, after which the investigators draw up orders for the production of search and operational-search measures aimed at searching for the person who committed the crime (Article 38 of the Code of Criminal Procedure of the Russian Federation). And the body of inquiry in accordance with Art. 157 of the Code of Criminal Procedure of the Russian Federation initiates a criminal case.

At the same time, the bodies of inquiry are prohibited from taking actions related to the adoption of a decision on the direction of the investigation. And sometimes the interrogation of the accused, confrontation, identification, inspection of the scene, investigative experiment. Interrogation of a suspect can remain the sole prerogative of the investigator. The exclusive competence of the investigator may also include the selection of a measure of restraint, the filing of charges, the termination of proceedings on the case, the suspension, separation and consolidation of the case.

Transfer of physical evidence and original protocols of investigative actions to the employees of the operational apparatus, except for cases when these evidence or documents are necessary to fulfill the instructions of the investigator. Thus, in the direct conduct of investigative and procedural actions in the investigation of crimes of a terrorist nature, the use of the results of operational-search activities is mainly of an auxiliary and orienting nature [Pautova, 2017].

In connection with the most important organizing role of the investigator, he is entrusted with all the coordination of actions, and the organs of operational-search activity are responsible for the timely provision of all information. Since the investigator has an organizing role, he is responsible for investigating the crime. At

the same time, in some cases, a certain agreement is possible at the place of production of certain actions. For example, when entrusting the body of inquiry with the identification of persons who have committed a crime, the investigator is not entitled to associate the performance of such a task with a specific place of its execution.

At the same time, when instructing the inspection of the scene, the investigator has the right to specifically indicate the place of execution of the order. The coordination of actions and the integrated use of the results obtained implies a constant exchange of information on the results of the work, as well as on planned activities. The data obtained by the operational-search method allows not only timely and reasonably to carry out investigative actions, but also to carefully prepare for them, ensuring that the investigator is aware of the progress in the investigation of crimes of extremist activity. It is this combination of investigative actions and operational-search measures that also contributes to the timely suppression of impending terrorist crimes.

Thus, the basis for the interaction of the investigator and the bodies carrying out operational-search activities should be the delimitation of the competence of the interacting bodies established by law with the most appropriate combination of their inherent means and methods of work. At the same time, the duration of the preliminary investigation is reduced and the quality of the investigation as a whole is improved. All this ultimately makes it possible to successfully fight organizations with an extremist orientation. Operational-search measures are the only real and effective tool for realizing the purpose and objectives of criminal proceedings, timely detection of terrorist crimes, identifying their subjects, documenting criminal activity, ensuring the disclosure and investigation of crimes.

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INTERPOL: INTERNATIONAL CRIMINAL POLICE ORGANIZATION

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Abstract. *This article is devoted to the organization Interpol. The article focuses on the agencies that allow for the effective interaction of various states aimed at the administration of justice and the restoration of public order. The results show that one of these agencies is Interpol, which solves a number of serious problems related to international politics and crime. This organization is of great international importance.*

Keywords: *Interpol, international criminal police, cybercrime, terrorism, communication, database, crime, counteraction, notification, extradition*

There are a large number of international organizations in the world, thanks to which interacting states fight crime. Interpol is such an organization. Interpol was founded in 1923 in Vienna, Austria. The organization is headquartered in Lyon, France. Interpol also has 7 regional offices around the world.

In addition to the regional bureaus, the organization in question also has 194 national border bureau centers. Number of bureaus Interpol is always equal to the number of participating countries that cooperate with it. Currently, Interpol is the largest international police organization. Most effectively, this organization began to work immediately after the end of the cold War, which was launched between the United States of America and the Soviet Union in the XX century. The end of this confrontation allowed Interpol to significantly expand its influence, as well as develop methods and tools for implementing a number of tasks facing this organization.

The day-to-day operations of Interpol are managed by the General Secretariat under the direction of the Secretary-General, who is appointed by the General Assembly for a five-year term. The General Assembly, consisting of one

delegate from each member country, is the highest decision-making body of Interpol [Kotlyarov, 2016: 121].

The Executive Committee consists of 13 members, each representing a different region. Members of the Executive Committee may only be appointed by the General Assembly. The members of the Executive Committee are appointed at an annual meeting held by the General Assembly.

The Executive Committee performs a number of critical oversight functions. As the main focus of its activities, this body of Interpol considers monitoring the legality and expediency of decisions taken by the General Assembly and the Secretary-General.

The national central bureaus that we mentioned earlier allow the police officers of the participating countries to interact with each other without hindrance. The Bureau's data and telecommunications networks also allow police units in various countries to communicate directly with the Secretary-General. Such assistance allows us to realize a number of tasks that face Interpol.

The International Criminal Police Organization (Interpol) is a global police agency whose main tasks are:

1. Providing assistance to States through joint efforts to investigate international crimes and bring criminals to legal responsibility.
2. Timely implementation of measures to ensure global security.
3. Providing assistance to law enforcement agencies around the world, in cases when they can't independently cope with the performance of one of their main functions – the fight against crime.
4. Providing various types of assistance to other countries. In this case, we are talking about providing training opportunities for specialists who will work in the law enforcement agencies of their state in the future. Also, such assistance consists in providing the services of qualified experts who can perform a number of specific examinations, in cases where the relevant state authorities cannot do this independently.
5. Take various actions aimed at reducing the level of transnational crime, cybercrime and organized crime [Morgun, 2014: 76].

There are various ways to achieve all the tasks listed above. First of all, the implementation of the tasks assigned to Interpol was significantly facilitated by the development of digital technologies, which simplified the process of interaction between various national centers of this organization. The ubiquity of the Internet has made it possible to create a number of databases that store information about various crimes occurring in countries that cooperate with Interpol.

Interpol's activities focus on investigating the following crimes:

1. Terrorism and crimes against humanity, human health and property, including crimes against children, human trafficking, illegal immigration, car theft and art theft.
2. Economic, financial, and computer crimes, including bank fraud, money laundering, corruption, and forgery.
3. Illicit drug trafficking.
4. Creation of criminal organizations, including organized criminal groups.

It turns out that one of the main goals of Interpol is to ensure national security in various states, as well as to combat crime.

A number of authors claim that the very concept of national security is interpreted incorrectly. As a rule, this concept is usually understood as ensuring the security of the state from external interference made by other countries. However, in addition to this goal, in accordance with the opinion of these scientists, national security implies: food security, economic security, environmental security, internal order, educational security, and security in the event of natural disasters.

Other authors argue that national security should be understood as strengthening the State, promoting its interests and goals, curbing instability, combating crime, eradicating corruption, promoting effective development, progress and growth, and improving the well-being, well-being and quality of life of every citizen.

Each of the above positions takes place. The actions of Interpol allow us to ensure both environmental and economic security, described in the first position, as well as the eradication of corruption, curbing instability, improving well-being, etc. These goals are achieved primarily through the fight against crime. It is known that the lower the crimes rate in a state, the higher its prospects for further development. Widespread crime significantly hinders the development of the state.

At present, the level of global crime is growing, which, therefore, requires strict control and an adequate response from the competent international organization for combating crime. As the world enters a new era, it faces a transitional pattern of crime that affects developing, developed, and underdeveloped countries. It turns out that all states can face a rapid increase in crime, regardless of their level of development. Drug trafficking terror, arms trafficking and money laundering are the most destructive and destabilizing forms of crime, which significantly undermine the level of well-being of citizens and the stability of the current State system.

Contrary to the majority opinion, Interpol is not a law enforcement agency in the traditional sense of the term. The main difference between Interpol agents and other employees who serve within the law enforcement system of their state is that they do not have the right to arrest a suspect. Interpol is a kind of connecting link that allows law enforcement officers of various States to jointly investigate international crimes. Interpol allows police officers from different countries to communicate with each other, cooperate, and exchange the necessary information about crimes committed.

Interpol employees analyze the data they receive about crimes, transforming it into more valuable information that can help solve a specific case. These data are obtained from various sources, and the participating countries regularly update their databases. The information received concerns crimes of various kinds. All data is classified and structured. Databases allow you to detect criminals even if they regularly migrate to different countries. For example, in 2016, a Slovak citizen who had been on the international wanted list for about ten years was caught. It was discovered using a facial recognition system that was developed in

the same year. The criminal was detained by the police in Argentina, and his photo was sent to Interpol as part of the investigation.

Another example is the case of a Polish woman who was put on the wanted list for money laundering and drug trafficking. She lived under an assumed name and was a long-time fugitive from justice. After being caught in Buenos Aires, Argentina, her photo was sent to Interpol, whose database correctly identified the woman's identity.

As a result, she confessed to the crime, giving her real first and last name. At the moment, the Interpol database contains more than 44,000 images that were obtained from 137 countries around the world.

Cooperation with Interpol is very important for combating international crime, as linguistic, cultural and other differences make it difficult for police officers from different countries to work together. Interpol, as already mentioned, allows you to remove all obstacles to communication with the help of its centralized bodies located in each participating country.

Interpol also sends notifications to participating countries containing information about international crimes committed and persons who may be involved in them. This responsibility is assigned to the General Secretariat of Interpol. The notification is sent in the four official languages of the organization: English, French, Arabic and Spanish [Lukashin, 2012: 29].

Each notification is assigned a specific color. Each of the colors has a specific designation: blue – search for witnesses; yellow-search for persons who have been declared missing; orange-search for persons who are in danger to inform them that they are in danger; red – request to arrest and extradite the criminal.

Interpol is committed to reducing organized crime, cybercrime and drug trafficking. Arrests are made all over the world. Interpol's notices warn the general public that criminal syndicates are currently using food products to transport prohibited substances and materials.

The use of such methods of transportation of narcotic and other prohibited substances has become widespread due to COVID the COVID-19 pandemic and the closure of borders between different states. For example, in April 2020, the Spanish National Police identified and arrested seven criminals dressed as food delivery couriers in the city of Madrid, Alicante and Valencia. The suspects were caught transporting cocaine and marijuana on bicycles. Some of the drugs were hidden inside a fake bottom in a backpack for home delivery.

As one of the problems with the work of Interpol, some authors highlight the lack of authority of this organization, which in fact could allow the extradition of criminals to the countries that send the relevant request. Lorraine Davis, who was issued with a red notice, has been living in this status in the UK for more than 20 years. Canada, which, having sent the red notice, does not want to extradite the criminal, claiming that she herself must come, having personally paid all the relevant expenses. This example shows that Interpol can't provide any real actions that would allow the extradition of criminals, it only allows you to assign them a specific status and send a request to another State. This practice significantly complicates the fight against international crime.

Another problem is that a number of participating countries do not have the ability to use digital Interpol databases. This problem mainly concerns third world countries, which are only developing countries. They cannot adequately provide their law enforcement agencies with all the necessary equipment that could allow the use of Interpol databases.

However, this problem was also noticed by the international organization itself, and for this reason, assistance to developing countries was chosen as one of the areas of activity in 2020-2021, which is expressed in providing them with the necessary technical equipment and training for law enforcement officers.

Summing up, at the moment Interpol is the largest international law enforcement organization, which acts as an information link that allows police officers of various states to exchange the necessary information about crimes committed and the identity of alleged criminals. A number of aspects of Interpol's activities are associated with certain problems, but timely measures are being taken to resolve them.

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FEATURES OF CRIMINAL LIABILITY FOR CANNIBALISM IN THE RUSSIAN FEDERATION

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Abstract. *This article considers the problem of responsibility for committing such acts as cannibalism and the problem of their qualification. It examines the legal gap in criminal law and the most high-profile cases of anthropophagy in recent times and the conceptual and categorical range of this phenomenon. The purpose of this work is to identify a gap in the criminal law. The absence of an article on cannibalism in the criminal code of the Russian Federation creates problems for qualifying this act.*

Keywords: *cannibalism, Criminal Code of the Russian Federation, resonant case, cannibalism, criminal liability*

Cannibalism is an ethologic behavior widespread among human primates and non-human primates, Isabel Caceres, a paleoecologist at the University of RoviraiVirgili, told Discovery News. Caceres has studied the phenomenon going back up to 780,000 years ago in our ancestors.

Probably, the practice of cannibalism in the genus Homo appears due to lack of resources and competition for territory in critical moments, she added. There cent case was apparently a cruel twist on that strategy. The suspects confessed to murdering at least two women, eating parts of their bodies, and using the rest to make meat pies sold in the town of Pogorelovka near Moscow [Kuzmina, 2018].

There have always been people in the world who transcend the boundaries of moral norms and the law, because the eating of people like themselves has been practiced at all times. This article will be devoted to the topic of cannibalism (anthropophagy) and its legal assessment [Laypanova, 2018]. To review this topic, it is necessary to understand the categorical-conceptual apparatus of the phenomenon. Cannibalism is defined as an act that involves eating members of one's own species.

Scientific literature distinguishes different types of anthropophagy: forced (usually preceded by famine); domestic (the result is important for a person, the person has a mental disorder); criminal anthropophagy (the first reason is most often – criminal behavior, a tendency to violate moral attitudes, deviant behavior and a desire to commit an act of cannibalism); religious and ritual (the first reason is ideological, most often present in tribes). This list is not exhaustive [Suturina, 2017].

Society is developing rapidly, but the media sometimes publish news about such acts. According to many lawyers, this act should have a legal assessment,

since the lack of criminal liability for the act of eating human flesh is a kind of gap in the legislation, and we share this opinion. In our opinion, the introduction of an article in the Criminal Code of the Russian Federation defining cannibalism (anthropophagy) and establishing responsibility for its commission is a necessary measure, since at the moment this problem is relevant and there is a problem of qualifying this type of crime [Kuzmina, 2018].

Cases of anthropophagy still occur, despite the fact that at the moment cannibalism is an unacceptable phenomenon in the modern world. In confirmation of the above, we can cite the high-profile case of “Krasnodar cannibals”, which occurred in 2017, and the news of November 22, 2021 about 23-year-old Yegor Komarov, who confessed to cannibalism. “During the interrogation, Yegor Komarov confessed to another murder-a year ago. “His first victim was a 38-year-old stockbroker. In 2020, Komarov tracked it down in Sosnovka Park, killed it, and tasted human meat for the first time. “I didn't eat. One bite, “admitted Komarov, explaining that such a desire appeared to him spontaneously. He did not like the experience of cannibalism, but he would have liked to repeat it “– writes “Vesti.ru”. The above-mentioned, most up-to-date information suggests that cases of cannibalism should be regulated at the legislative level [Lukina, 2005].

It should be noted that the media widely covers cases of cannibalism. One of the most resonant stories in recent times is the case of the “Krasnodar Cannibals”– the Baksheevs' spouses, whose story was not only published on the Internet by various editors, but also broadcast on the federal channel. An important addition is the fact that photographic materials containing body parts of the deceased are shown. In the total number of concerned viewers and readers of such content materials, it is safe to include relatives of the victims, their friends and other people familiar with them [Zalivokhina, 2017]. Even if all the above-mentioned people have not independently read the new article of a journalist about a crime victim, others who have already read it can pass them information about the publication.

There is no doubt that cannibalism is a socially dangerous act that violates public morals as an object of criminal protection. In any case, the absence of established criminal liability in the Criminal Code for killing a person for the purpose of eating his flesh later creates many problems for lawyers in the qualification of this crime [Marinkin, 2020]. There is also an opinion that the fact that there is no such article in the Criminal Code of the Russian Federation indicates the incompleteness of law-making practice, which creates significant problems in the subsequent law enforcement activities of authorized subjects [http://www.consultant.ru/document/cons_doc_law_10699/?=utm_content=The%20Criminal%20Code].

At the moment, for the correct and accurate qualification of this act (cannibalism), the most important thing is to determine the moment of intent to eat human flesh:

– if this intent appeared before causing death, the act qualifies as murder for the purpose of using the organs or tissues of the victim in conjunction with abuse of the bodies of the deceased (paragraph „m” of Part 2 of Article 105, part 1 of Article 244 of the Criminal Code of the Russian Federation);

– if the body parts were eaten while the victim was still alive, this is murder with special cruelty (paragraph “d“ of Part 2 of Article 105 of the Criminal Code of the Russian Federation);

– if this intent arose after causing death, the act qualifies as murder (if there are grounds – with other signs), but in conjunction with Article 244 of the Criminal Code of the Russian Federation).

In our opinion, in cases of cannibalism, the object of criminal protection, in addition to the life and health of citizens, is mainly public morality.

Criminal cases on the fact of committing such an act as cannibalism are not widely distributed in public circles in order to avoid resonance [Lukina, 2005]. This is also due to the fact that it is important to avoid committing crimes of this nature by people who suffer from mental disorders and have a tendency to this kind of behavior. In addition, it is very important to keep the right social guidelines.

After reviewing the judicial practice available on the Internet on the official websites of courts in different regions, we came to the conclusion that the Criminal Code of the Russian Federation does not contain an article on the fact of anthropophagy.

Responsibility for the act of committing cannibalism was not contained in the Criminal Code of the RSFSR [Prokofyeva, 2020]. Based on this, there are difficulties in the process of qualifying an act.

As an option to overcome this difficulty, we consider it feasible to supplement the Criminal Code of the Russian Federation with Article 101.5 of the Criminal Code of the Russian Federation “Cannibalism”:

“Article 105.1. Cannibalism:

1. Cannibalism, that is, the deliberate eating of human flesh, is punishable by imprisonment for a term of eight to fifteen years, with or without restriction of liberty for a term of up to two years, or by life imprisonment.

2. Cannibalism committed as follows:

a) in relation to two or more persons;

b) a minor or other person who is obviously helpless for the perpetrator, as well as associated with the abduction of a person;

c) committed by a group of persons, a group of persons by prior agreement or an organized group;

d) out of hooligan motives;

e) for the purpose of concealing another crime or facilitating its commission, as well as involving rape or sexual violence;

f) motivated by political, ideological, racial, national or religious hatred or enmity, or motivated by hatred or enmity against any social group;

g) a person who is at an advanced age-is punishable by imprisonment for a term of fifteen to twenty years, with restriction of liberty for a term of one to two years, or by life imprisonment”.

Thus, the settlement of the issue of establishing a separate type of criminal liability for persons who have committed an act of anthropophagy is mandatory.

This is due to ethical, moral and legal aspects. This study is significant for eliminating the problem in criminal legislation.

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INTERNATIONALER STRAFGERICHTSHOF: AKTUELLER STAND UND PROBLEME DER ORGANISATORISCHEN UND RECHTLICHEN AKTIVITÄTEN

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***Annotation.** Der Artikel behandelt den Internationalen Strafgerichtshof als modernen Garanten für Weltordnung und Sicherheit. Der Stand ihrer organisatorischen und rechtlichen Aktivitäten wird analysiert und beschrieben. Die Probleme in der Funktionsweise des internationalen Strafgerichtshofs werden aufgezeigt und die Wege zu ihrer Lösung vorgeschlagen.*

***Schlagwörter:** Internationaler Strafgerichtshof, Strafverfahren, Verbrechen, die Gewährleistung der Sicherheit in der Welt, Völkerrecht, internationale Gerechtigkeit*

Der Hauptzweck der Schaffung des Internationalen Strafgerichtshofs war die Gewährleistung der Sicherheit in der Welt. Die Geschichte hat der Menschheit gezeigt, dass es Verbrechen gibt, die nicht nur einem bestimmten Individuum, sondern der Weltgesellschaft als Ganzes schaden können. Ein Beispiel dafür ist der Nürnberger Prozess gegen Ende des Zweiten Weltkriegs, der gezeigt hat, dass es rechtswidrige Handlungen gibt, die der internationalen Gerechtigkeit bedürfen, um die Interessen aller Beteiligten fair zu lösen und zu befriedigen.

„Es ist seit langem anerkannt, so bemerkt das Nürnberger Tribunalurteil, dass das Völkerrecht sowohl bestimmten Einzelpersonen als auch dem Staat Pflichten auferlegt. Die Verbrechenstaten gegen das Völkerrecht werden von den Menschen begangen und nicht von abstrakten Kategorien, und nur durch die Bestrafung von Einzelpersonen können die Täter solcher Verbrechen den Bestimmungen der Normen des Völkerrechts unterliegen“ [Lebedewa, 1999: 674]. Die Internationalen Gerichte, die in den 1990er Jahren (Internationales Tribunal für das ehemalige Jugoslawien und Internationales Tribunal für Ruanda) in Kraft waren, bestätigten nur die bereits vorhandenen Erfahrungen.

Charakteristisch für die bereits eingerichteten Gerichte war die Tatsache, dass sie alle für eine bestimmte Situation einmalig geschaffen wurden. Doch für eine wirksamere und objektivere Beilegung von Streitigkeiten im internationalen

Format haben sich die UN-Mitgliedstaaten ernsthaft Gedanken über die Schaffung einer dauerhaft tätigen Justizbehörde gemacht. So wurde im Zusammenhang mit der offensichtlichen Notwendigkeit der Internationale Strafgerichtshof in Den Haag auf der Grundlage der Unterzeichnung des Römischen Statuts (in Kraft getreten 2002) errichtet, um „der Straflosigkeit der Täter internationaler Verbrechen ein Ende zu bereiten und dadurch zur Verhütung schwerer Verbrechen beizutragen, die den Frieden, die Sicherheit und das Wohlergehen der Welt bedrohen“ [Rimskiy statut Mezhdunarodnogo ugolovnogo suda: 1].

Die Russische Föderation unterzeichnete das Statut im Jahre 2000, beeilte sich jedoch nicht, das Ratifizierungsverfahren durchzuführen. Im Jahre 2016 äußerte der Staat schließlich seine Haltung zur Weigerung, das Statut des Internationalen Strafgerichtshofs zu einem Teil des nationalen Rechtssystems zu machen, gerade aus seinen „nationalen Interessen“.

Interessanterweise war die Russische Föderation nicht der einzige Staat, der eine solche prinzipielle Position vertrat. Nach offiziellen Angaben haben inzwischen 139 Staaten das Dokument unterzeichnet, aber nur 124 haben es ratifiziert [Ofitsial'nyy sayt Mezhdunarodnogo ugolovnogo suda: 200].

Tatsächlich ist, dass das Statut des Internationalen Strafgerichtshofs eine „strenge“ Rechtsnatur besitzt. Das bedeutet, dass die Vorschriften dieses Instruments von den Ländern, die es ratifiziert haben, verbindlich umgesetzt werden müssen. Verstößt das nationale Recht daher gegen die in der Satzung festgelegten Bestimmungen, so muss der Staat verbindliche Anpassungen an die einschlägigen Vorschriften vornehmen.

Auf den ersten Blick sollte es in diesem Fall keine offensichtlichen Probleme geben, da die meisten Artikel des Statuts die bereits allgemein anerkannten Grundsätze des Strafrechts und des Gerichtsverfahrens widerspiegeln. Eine der Normen ist jedoch das Erfordernis der Zwangsauslieferung von Auslieferungspflichtigen.

Bemerkenswert ist, dass in den meisten Verfassungen der daran teilnehmenden Länder (einschließlich der Russischen Föderation) ein direktes Verbot der Auslieferung eigener Bürger festgeschrieben ist, was zu einem Konflikt zwischen internationalem und nationalem Recht führt. In diesem Zusammenhang wurden die Länder hinsichtlich der dauerhaften Funktionsweise des Internationalen Strafgerichtshofs bedingt in zwei Gruppen eingeteilt. Die erste Gruppe, zu der Australien, Kanada und Deutschland gehören, betrachtet den Internationalen Strafgerichtshof als eine Art Abschreckung gegen schwere Verbrechen, die die Menschheit bedrohen.

Daher ist ein solches Menschenrechtsgremium als ständig arbeitender Mechanismus sicherlich notwendig. Länder wie die USA, China und Indien sind der diametral entgegengesetzten Meinung. Sie sind sich einig, dass das Gericht die optimale Form des internationalen Strafverfahrens darstellt, da die vorübergehend eingerichtete Behörde individueller auf jeden Einzelfall eingeht. Die Zuständigkeit für seine Einrichtung sollte dem Sicherheitsrat in Krisen- und Notsituationen übertragen werden. Der derzeitige Internationale Strafgerichtshof zeichnet sich durch eine strengere Haltung in Bezug auf die Einhaltung des Statuts aus, dessen

Regeln unabhängig von den vorgeschlagenen Faktoren zwingend sind, ohne Vorbehalte oder alternative Lösungen [Podshibyakin, 2008: 67].

Wir gehen davon aus, dass es in diesem Fall zwei mögliche Szenarien für die Entwicklung von Ereignissen gibt:

1) Die Vereinheitlichung des nationalen Strafrechts und des Strafverfahrens aller Staaten ist für die spätere Harmonisierung mit dem Römischen Statut notwendig. Diese Entwicklung scheint jedoch unwahrscheinlich, da viele Staaten die Verfassungsnorm zur Nichtauslieferung von Staatsangehörigen nicht ändern wollen, da ein solcher Schritt der Bevölkerung ihre Unsicherheit signalisieren würde.

2) Anpassung des Inhalts des Statuts des Internationalen Strafgerichtshofs, d.h. Änderung der „harten“ Normen in „weiche“ Normen, die keine verbindlichen Rechte und Pflichten für Staaten schaffen würden.

Diese Kategorisierung in der Theorie sollte zu einer bedingungslosen Weltordnung führen, aber in der Praxis sieht das Bild nicht so perfekt aus. In der Wirklichkeit sind viele Staaten offen der Ansicht, dass das Gerichtsstatut ihre nationale Sicherheit gefährde und daher nicht anwendbar sei.

Neben der Problematik möglicher Kollisionen gibt es noch ein weiteres – das Vorhandensein von Bewertungskonzepten im Dokument wie „Unfähigkeit“ und „Zurückhaltung“ des Staates, Strafverfolgung zu betreiben. Im vorliegenden Fall sind unscharfe und unkonkretisierte Normen absolut inakzeptabel, da der Internationale Strafgerichtshof die Justiz selbständig bestimmt.

Es ist erwähnenswert, dass die Praxis derzeit genug Beispiele kennt, wenn vor dem Hintergrund des politischen Missverständnisses die Staaten mit den Entscheidungen der internationalen Justiz „kollidierten“.

So sind zum Beispiel in den Beziehungen des Internationalen Strafgerichtshofs zu den Ländern Afrikas ziemlich viele zweideutige Punkte aufgetaucht. Die Afrika-Länder haben dem betreffenden Gremium oft genug vorgeworfen, voreingenommen und rassistisch diskriminiert zu haben.

Im Jahre 2009 erhob der Staatsanwalt des Internationalen Strafgerichtshofs Anklage gegen Omar al-Baschir wegen Beteiligung an den Verbrechen in Darfur in der Hoffnung, dass dieser Schritt zur Isolation des Präsidenten führen und seine Verhaftung erleichtern würde. In der Wirksamkeit war die Wirkung jedoch genau das Gegenteil.

Die Anklage wurde von der Afrikanischen Union verurteilt, und seitdem hat Omar al-Baschir mehr als 15 Länder besucht [Lyamin, 2014: 35].

Fazit

Das Vorhandensein von Lücken und Konflikten in der Gesetzgebung stellt die Existenz des Internationalen Strafgerichtshofs in der Zukunft in Frage. Die bloße Vorstellung vom Funktionieren eines solchen Menschenrechtsorgans wird begrüßt und gerechtfertigt, aber die von der Weltgemeinschaft gewählten Methoden sind sehr zweifelhaft.

Man kann viele Argumente „dafür“ und „dagegen“ anführen, aber die Realität zeigt die geringe Effizienz der Arbeit des Internationalen Strafgerichtshofs.

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DIE DROGENBEKÄMPFUNG BEI DEN JUGENDLICHEN IN DEN BILDUNGSEINRICHTUNGEN IN RUSSLAND

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Annotation: *Dieser Artikel befasst sich mit dem Problem der Drogenabhängigkeit bei den Jugendlichen in Russland. Die Hauptursachen für Drogenabhängigkeit werden im Artikel angegeben und beschrieben. Der Autor untersucht die wichtigsten Präventionsmaßnahmen, die in den russischen Bildungseinrichtungen zur Bekämpfung der Drogensucht der Jugendlichen durchgeführt werden.*

Schlagwörter: *Drogen, Drogenbekämpfung, Drogenabhängigkeit bei den Jugendlichen, Problem der Drogenabhängigkeit, Drogenbekämpfung in den Bildungseinrichtungen*

Das Problem der Drogenabhängigkeit verliert auch heute noch nicht ihre Aktualität. Die Drogen sind das Gift der Gegenwart. Sie beeinträchtigen sowohl den körperlichen als auch den seelischen Zustand der Menschen.

Immer mehr junge Menschen geraten in Drogenumfeld und leiden unter Drogensucht. Laut Statistiken sind 80% der Drogenkonsumenten die Menschen

zwischen 16 und 35 Jahren. Die meisten davon sind junge Menschen unter 24 Jahren. Viele junge Menschen, die man als „goldene“ Jugend bezeichnet wird, suchen die Erlösung von ihren psychischen Problemen in Drogen.

Die Jugendlichen probieren die verbotenen Drogen entweder aus Neugier oder weil sie ihre Idole imitieren. Ohne über die Folgen nachzudenken und die Gefahr nicht ernsthaft zu erkennen, begeben sie sich auf den „Weg eines Drogenabhängigen“, den in Zukunft nicht mehr viele verlassen können. Auf dem Territorium der Russischen Föderation ist für den Vertrieb, die Verwendung, die Lagerung und den Transport solcher Betäubungsmittel und psychotroper Substanzen eine strafrechtliche Haftung vorgesehen [Ugolovnij kodeks Rossijskoj Federacii, Statia 228].

Dem Problem der Drogenabhängigkeit bei den Jugendlichen wird nicht nur von Ärzten und der Polizei, sondern auch vom Bildungssystem besondere Aufmerksamkeit geschenkt. In verschiedenen Bildungseinrichtungen wird eine Reihe von Maßnahmen durchgeführt, die auf die Bekämpfung von Betäubungsmitteln und psychotropen Substanzen bei jungen Leuten und Jugendlichen abgezielt wird.

Eine der wichtigsten Maßnahmen zur Lösung dieses ziemlich ernsten Problems war die Einführung und Genehmigung der Anordnung des Bildungsministeriums des Gesetzentwurfs der Regierung der Russischen Föderation an das Staatsduma im Jahr 2014 über die Untersuchung von Schülern auf Drogen. Dieses Dokument besagt, dass die Studierenden sich einem sozialpsychologischen Test und einer medizinischen Untersuchung unterziehen müssen. Aus allen gewonnenen Daten wird eine Analyse erstellt, auf deren Basis erfahrene Spezialisten entsprechende Schlüsse ziehen können [Prikaz Minobrazovanija RF No. 658, 2014].

Als eine Methode dieser Maßnahmen sind die Vorlesungen über die Gefahren von Drogen zu nennen. In präventiven Gesprächen mit Jugendlichen sollen die Lehrer und Lehrkräfte nicht nur mit dem Studium, sondern auch mit der Präsentation von Informationsmaterial sehr verantwortungsvoll umgehen. Der Psychotherapeut R.R. Garifullin stellte in seiner Arbeit fest, dass die Heranwachsende und junge Menschen ausführlicher über die Gefahren dieser Substanzen aufgeklärt werden müssen, „die Betonung sollte auf die destruktiven Folgen, auf die heimtückischen und schrecklichen Eigenschaften von Drogen gelegt werden, ...es ist nützlicher für Schulkinder zu lernen, wie und warum Drogenabhängige schließlich sterben“ [Garifullin, 2004].

Auch die Schulen, die Universitäten und andere Bildungseinrichtungen erfüllen die primäre und dabei die Hauptfunktion der Drogensuchtbekämpfung. In vielen Bildungsorganisationen wurde ein bestimmtes Programm dafür entwickelt. Es umfasst die Vorlesungen über die Gefahren von Drogen, psychologische Unterstützung, die Veranstaltungen zur Bekämpfung der Drogensucht (Konferenzen, Aktionen, Wettbewerbe usw.). Die Funktion allen dieser Maßnahmen besteht darin, jungen Menschen das Material zu vermitteln, damit sie die Gefährlichkeit der Drogen erkennen können.

Gleichzeitig ist jedoch die Meinung von T.W. Jakowlewa zu beachten, die in ihrer rechtswissenschaftlichen Arbeit darauf hingewiesen hat, dass auch die Spezialisten auf diesem Gebiet (Psychiater-Narkologen, Drogenkontrollbeamte u.a.) zur Vortragsarbeit eingeladen werden sollen, die in korrekter und einfacher Sprache die Informationen vermitteln können, die Beispiele aus ihrer beruflichen Tätigkeit geben, die Fragen zu diesem Thema beantworten [Jakowlewa, 2012].

Um solche Probleme wie die Ausbreitung des Drogenumfelds als bestimmte Ideologie unter jungen Menschen mit unvollständiger Sekundar- und Hochschulbildung, zu verhindern und zu vermeiden, werden die Programme zur Bekämpfung der Drogenabhängigkeit unter Studenten angeboten. Beispielsweise kann man sagen, dass in Bildungseinrichtungen (Schulen, Lyzeen, die Hochschulen, Fachoberschulen usw.) Studienfächer und Lehrfächer wie „Grundlagen der Sicherheit der Lebenstätigkeit“ angeboten werden, die sich gesondert mit den Themen Drogenabhängigkeit und deren Bekämpfung auf modernem Niveau befassen und im Erlass des Bildungsministeriums der Russischen Föderation vom 28. Februar 2000 Nr. 619 „Über das Konzept der Verhinderung von Drogenmissbrauch im Bildungsumfeld“ vorgeschrieben wurden [Prikaz Minobrazovaniya RF No. 619, 2000].

So wird heute in Bildungseinrichtungen aktiv pädagogisch-präventive Arbeit zur Bekämpfung der Drogensucht bei der jüngeren Generation betrieben. Schließlich ist das wichtigste Ziel solcher Aktionen, nicht nur für unser Land, sondern für jeden jungen Menschen eine drogenfreie Zukunft zu schaffen.

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VÖLKERMORDVERBRECHEN: INTERNATIONALE RECHTLICHE QUALIFIKATION

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Annotation. *Im Artikel untersucht man die Fragen der völkerrechtlichen Qualifikation des Völkermordes als Verbrechen gegen den Frieden und die Sicherheit der Menschheit. Der Autor weist auf die historischen Gründe der Entwicklung internationaler Gesetze hin, die die Verbrechen des Völkermordes qualifizieren. Die Umsetzung der Verpflichtungen der verschiedenen Staaten der Welt im Hinblick auf die UN-Konvention „Zur Verhütung und Bestrafung des Völkermordes“ vom 9. Dezember 1948 wird im Artikel analysiert. Besondere Aufmerksamkeit wird auf die problematischen Fragen der Qualifikation des untersuchten Verbrechens gerichtet.*

Schlagwörter: *Völkerrecht, internationale Verbrechen, Völkermord, Bekämpfung des Völkermordes, rechtliche Qualifikation von Völkermord als Verbrechen*

Die Geschichte der Menschheit hat eine Reihe von schrecklichen Perioden erlebt, in denen die eindringlichen Bestrebungen einzelner Gruppen zu Massenmorden führten. Völkermord ist ein schreckliches Verbrechen. Jede einzelne Episode des Völkermordes führt zusammen zu einer Reihe internationaler Probleme, einschließlich einer Verschärfung internationaler Konflikte.

Entschiedene Maßnahmen zur Bekämpfung des Völkermordes begannen erst im 20. Jahrhundert. Bisher existierten die Taten, die unter das Verständnis des Völkermordes fallen. Die waren namenlos und wurden nicht als einheitliches Phänomen betrachtet. Die Weltgemeinschaft begann erst nach den schrecklichen Ereignissen des ersten Jahrhunderts an dieses Phänomen zu denken (die

Ermordung von etwa 1,5 Millionen Armeniern in den von den osmanischen Behörden kontrollierten Gebieten, die Zerstörung christlicher Assyrer im Irak 1933, der Völkermord an Juden, Roma und Serben durch die Nazis während des Zweiten Weltkriegs).

Der Begriff „*Völkermord*“ wurde erstmals 1933 vom polnischen Juristen Raphael Lemkin verwendet. Aber eine gesetzliche Verankerung des Begriffs folgte nicht. Erst nach dem Zweiten Weltkrieg begann die Weltgemeinschaft, Gesetze zu entwickeln, die das rasante Wachstum der internationalen Kriminalität, einschließlich des Völkermordes, überwinden würden.

Zum ersten Mal wurde im Nürnberger Prozess von Völkermord als internationalem Verbrechen gesprochen. Darauf wurde die Bestimmung über die Unvermeidbarkeit der Strafe für Verbrechen gegen den Frieden und die Sicherheit der Menschheit gesetzlich festgelegt. Gerade im Nürnberger Prozess wurde festgestellt, dass sich diese Verbrechen nicht nur gegen einen bestimmten Staat, sondern auch gegen die ganze Welt richten. Folglich bekamen sie völkerrechtswidrigen Charakter. Der Begriff selbst wurde nach der Verabschiedung der Resolution 96 (1) durch die UN-Generalversammlung im Jahr 1946 fixiert. Auf ihrer Grundlage wurde die Entscheidung getroffen, einen spezialisierten normativen Akt vorzubereiten. Die UN-Konvention „Zur Verhütung und Bestrafung des Verbrechens des Völkermordes“ wurde zu diesem Akt gelegt.

In diesem Dokument wurde erstmals die rechtliche Qualifikation von Völkermord als Verbrechen verankert. Das Übereinkommen hat der ganzen Weltgemeinschaft Folgendes verkündet: „Völkermord bedeutet die folgenden Handlungen, die mit der Absicht begangen werden, eine nationale, ethnische, rassische oder religiöse Gruppe als solche ganz oder teilweise zu zerstören:

1. Ermordung von Mitgliedern einer solchen Gruppe;
2. Zufügung schwerer Körperverletzungen oder geistiger Beeinträchtigung für Mitglieder dieser Gruppe;
3. vorsätzliche Schaffung solcher Lebensbedingungen für eine Gruppe, die darauf ausgelegt sind, sie vollständig oder teilweise zu zerstören;
4. Maßnahmen zur Verhinderung der Fortpflanzung in einer solchen Gruppe;
5. gewaltsame Übertragung von Kindern von einer menschlichen Gruppe in eine andere“ [Konvention OON, 1948].

Das Übereinkommen sicherte im Artikel 5, dass die Vertragsparteien verpflichtet sind, die nationale Gesetzgebung ihrer Länder in Übereinstimmung mit den Bestimmungen der Konvention zu halten. So begann die völkerrechtliche Qualifikation der Völkermordverbrechen in verschiedenen Ländern der Welt zu entstehen.

Durch die Analyse der Rechtsvorschriften verschiedener Staaten sieht man die unmittelbare Umsetzung der oben genannten Verpflichtungen. Das spanische Strafgesetzbuch legt die Bestimmungen des Übereinkommens fest, erweitert jedoch die Qualifikation für Völkermordverbrechen. Es weist auf die objektive Seite einer Handlung hin, die denjenigen, die im Übereinkommen als kriminell

bezeichnet werden, eine Alternative ist. Dies ist „sexueller Angriff“ [Ugolovnij kodeks Ispanii, 1998].

Eine erweiterte Auslegung des Übereinkommens ist auch in anderen Strafgesetzbüchern in der ganzen Welt vorhanden. Die Tendenz zur Zunahme des Umfangs von Gegenständen des kriminellen Eingriffs wird verfolgt. Als Mitglied der Konvention von 1948 hat Deutschland seine Verpflichtungen umgesetzt und sein Rechtssystem durch das neue Internationale Strafgesetzbuch der Bundesrepublik Deutschland ergänzt, in dem eine ethnische Gruppe in eine „besondere Gruppe“ umgewandelt wurde [Ugolovnij kodeks FRG, 2003].

Ein ähnliches Phänomen ist auch in einigen anderen Ländern aufgetreten. Der Gesetzgeber der Republik Belarus hat dem Objekt zusätzlich zu den im Übereinkommen genannten Gruppen andere zugerechnet. Dies seien die „Gruppen, die auf der Grundlage eines anderen willkürlichen Kriteriums definiert wurden“ [Ugolovnij kodeks Respubliki Belarus, 2001]. Im russischen Strafgesetzbuch wurde der Artikel über Völkermord vom Gesetzgeber nach dem Anschein der Normen des Übereinkommens verfasst [Ugolovnij kodeks Rossijskoj Federazii, 2006].

Fazit

Wenn man die Gesetzgebung einiger Länder untersucht, in denen die Völkermordverbrechen und die Verantwortung für ihre Begehung in der nationalen Gesetzgebung verankert sind, so kann man zu dem Schluss kommen. Die völkerrechtliche Qualifikation von Verbrechen gegen Völkermord bewegt sich auf dem Weg der erweiterten Auslegung der UN-Konvention zur Verhütung und Bestrafung von Völkermord.

Dieser Trend ist auf viele Faktoren zurückzuführen, die sich je nach Territorium, historischen Bedingungen, internationaler Lage des Landes und vielem mehr ändern. Wichtig für das Weltrecht ist die Tatsache, dass in einer modernen Welt, die sich in vielerlei Hinsicht von der Annahme eines Übereinkommens unterscheidet, eine Modernisierung des Übereinkommens notwendig ist. Ein Argument dafür könnte die Weltgeschichte sein. Während des Bestehens des Übereinkommens wurden viele Aggressionsakte als Völkermord qualifiziert, aber es sind auch Fälle bekannt, in denen kriminelle Handlungen einzelner Gruppen von einzelnen Staaten nicht als Völkermord anerkannt wurden. Die Weltgemeinschaft hat noch kein Urteil erhalten: das US-Atombomben von 1945; die Politik der japanischen kaiserlichen Armee gegen Chinesen, Filipinos und andere südostasiatische Völker von 1930-1945; die Situation im besetzten Gebiet des Donbass durch die Streitkräfte der Ukraine sowie die politischen Repressionen Kiews gegenüber den Menschen in Lugansk und Donezk. Auf der Grundlage von oben genannten lässt sich daraus schließen, dass die in der Konvention dargestellte Auslegung des Begriffs „Völkermord“ wirklich eng ist und es nicht immer möglich ist, die Täter vor internationale Strafbarkeit zu stellen.

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QUELQUES ASPECTS DE LA PROTECTION JURIDIQUE INTERNATIONALE DE LA FAMILLE DANS LES CONDITIONS DE LA RÉVOLUTION NUMÉRIQUE

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Résumé: Dans le cadre de l'article présenté, l'institution de la famille est considérée comme un objet de protection juridique internationale et une analyse est faite de l'impact de la mondialisation et de la révolution numérique sur celle-ci. La pertinence de l'article est déterminée par le fait que dans le monde moderne de la société numérique, malgré les mécanismes existants de protection juridique de la famille au niveau international, le concept de famille traditionnelle est déformé. L'article présente des faits qui reflètent la crise des fonctions traditionnelles de la famille dans la société numérique moderne: éducatives, reproductives, récréatives, psychologiques et économiques. L'auteur voit la solution à ce problème dans la recherche d'un fondement moral et civilisé de la famille, le renouveau de sa spiritualité.

Mots clés: droit international, institution familiale, révolution numérique, famille, protection juridique internationale de la famille, numérisation, informatisation, mondialisation

La famille est le pilier le plus important de la société et de l'État, appelée à jouer un rôle décisif dans le développement social. C'est la base de la société humaine, de chaque culture et de toutes les civilisations de l'histoire. Le

rôle de la famille dans tous les pays du monde est le même et consiste à être responsable de l'éducation des enfants et de leur préparation à la vie en société, en leur inculquant le sens de la responsabilité sociale.

Au cours des 50 dernières années, la famille a subi des changements importants en raison des tendances migratoires, du phénomène de vieillissement de la population, de la propagation pandémique de la COVID-19, des effets de la mondialisation et de l'informatisation. En lien avec les transformations socio-économiques rapides, il est de plus en plus difficile pour les familles de remplir leurs fonctions sociales. L'incapacité de l'État à protéger les ménages des impacts négatifs par le biais de politiques sociales entraîne l'appauvrissement et la vulnérabilité d'un grand nombre de familles.

En attendant, l'unité de la famille est l'un des principes fondamentaux du droit international. Le droit à l'unité familiale fait partie intégrante de la reconnaissance universelle de la famille comme cellule de base de la société, ayant droit à protection, assistance et soutien. Ce droit est inscrit dans les instruments universels et régionaux des droits de l'homme et dans le droit international humanitaire; il est accessible à tous, quel que soit leur statut.

Dans ce contexte, la question de la protection juridique internationale de la famille revêt une importance particulière.

Une attention particulière à la question de la protection et du soutien de la famille mérite les traités internationaux des droits de l'homme, qui fixent dans leurs dispositions les obligations des États de protéger la famille et ses membres. L'un des documents internationaux les plus importants de ce type est la première loi sur les droits de l'homme de l'ONU, à savoir la Déclaration universelle des droits de l'homme de 1948. Les articles 12, 16, 25 de la Déclaration universelle des droits de l'homme ont consacré à la protection de la famille. Ainsi, le paragraphe 3 de l'article 16 de la Déclaration stipule que "la famille est la cellule naturelle et fondamentale de la société et a droit à la protection de la société et de l'État" [<https://legalacts.ru/doc/vseobshchaja-deklaratsija-prav-cheloveka-prinjata-generalnoi-assambleei>]. Les hommes et les femmes qui ont atteint l'âge de la majorité ont le droit, sans aucune restriction fondée sur la race, la nationalité ou la religion, de se marier et de fonder une famille (clause 1, article 16) [<https://legalacts.ru/doc/vseobshchaja-deklaratsija-prav-cheloveka-prinjata-generalnoi-assambleei>]. L'article 12 de la Déclaration universelle des droits de l'homme proclame la non-ingérence dans la vie familiale et l'article 25 établit le droit de toute personne "à un niveau de vie suffisant pour assurer sa santé et son bien-être et ceux de sa famille" [<https://legalacts.ru/doc/vseobshchaja-deklaratsija-prav-cheloveka-prinjata-generalnoi-assambleei>]. Elle met également l'accent sur le droit à des soins et à une assistance spéciale pour la maternité et la petite enfance.

L'institution de la famille est également protégée par des conventions régionales qui soulignent l'importance particulière de la famille. Il s'agit, tout d'abord, de l'article 8 de la Convention de sauvegarde des droits de l'homme et des libertés fondamentales [<https://legalacts.ru/doc/konventsija-o-zashchite-prav-cheloveka-i-osnovnykh/>], qui consacre le droit au respect de la vie familiale.

Tous les traités et documents internationaux fondamentaux, sur la base desquels une organisation aussi influente que l'Organisation des Nations Unies (ONU) opère, reconnaissent certainement l'importance de la famille, cependant, de plus en plus souvent, les activités de l'ONU et des structures connexes sont à juste titre critiquées pour avoir imposé des normes des destructrices aux États dans le domaine de la famille. “La propagande par ces organisations des droits matrimoniaux et familiaux des minorités sexuelles, l'éducation sexuelle obligatoire des enfants sont une destruction directe de la famille traditionnelle. La famille traditionnelle, qui est un élément clé de toute société, ne fait pas l'objet d'une attention suffisante à l'ONU” [Kiseleva, Mamaeva, 2016].

Dans le monde moderne, il y a une introduction généralisée des technologies numériques dans le domaine du travail intellectuel et des relations affectives et personnelles, qui ont souvent un impact négatif sur l'institution de la famille. L'intelligence artificielle apporte des changements fondamentaux non seulement dans la production matérielle, la transformant en automatisée et robotique, mais transforme également et même détruit les processus humanitaires dans la sphère socio-pédagogique [Ruliene, 2018].

On a beaucoup écrit sur l'impact des technologies numériques sur nos vies. La description la plus complète des transformations sociales modernes est peut-être donnée dans le livre de K. Schwab “La quatrième révolution industrielle” [Schwab, 2016], qui décrit les mégatendances qui deviendront une réalité d'ici 2025 : 10 % des gens porteront des vêtements et des appareils qui sont connectés à Internet; 90% des personnes stockeront leurs données dans le “cloud” ; la première voiture sera fabriquée à l'aide de la technologie d'impression 3D; un téléphone portable commercial qui peut être implanté sous la peau; les voitures autonomes représenteront 10 % du parc automobile total, etc. La nouvelle révolution industrielle entraîne avec elle des conséquences dévastatrices: violation de la vie privée, nouvelles formes d'addiction (dépendance à Internet), trouble déficitaire de l'attention, comportement agressif, pensée de groupe, piratage, risque d'effondrement, complexité accrue des processus de production et perte d'emplois, etc. [Ruliene, 2018].

Considérez les menaces que la mondialisation et la révolution numérique ont apportées à la mise en œuvre des fonctions familiales.

La fonction éducative de la famille ne peut être remplacée par aucune autre institution, mais le rôle éducatif de la famille est en déclin. L'éducation des enfants dans une famille est entravée par la prédominance de pseudo-valeurs matérielles (la richesse pour la richesse, une “belle” vie), les valeurs perdues de la culture nationale comme base de l'ethnopédagogie (langue, art, habillement, décoration intérieure, valeurs morales), l'impact négatif des technologies informatiques et Internet (gadget mania, "gambling", Internet addiction).

La fonction réparatrice (récréative) de la famille est que la famille est appelée à devenir un lieu de confort psychologique et d'inspiration, de confiance en soi et de soutien pour les êtres chers. Pendant ce temps, cette fonction de la famille est souvent remplacée ou diluée par des pseudo-valeurs modernes. Dans une société de

consommation, une personne appelée à vivre et à travailler pour consommer, et en même temps à consommer pour vivre.

L'indicateur le plus important de la qualité d'une union familiale est le niveau et l'importance des relations interpersonnelles entre les époux. Notant les aspects utiles de la communication virtuelle, il convient de prêter attention au fait que la communication sur les réseaux sociaux détruit les qualités humaines d'une personne: un grand nombre de personnes réelles évitent la réalité, préférant communiquer via un moniteur et un clavier. La communication virtuelle éloigne les uns des autres, conduisant à la formation d'une personne sociale.

Internet est également une incitation négative aux relations interpersonnelles pour la famille. Souvent, les adolescents sont en classe jusqu'au soir, tout comme les parents sont au travail et tout au long de la journée, les membres de la famille contactent et communiquent à l'aide de messageries instantanées et de réseaux sociaux, à la suite de quoi la quantité de ces communications prévaut et progressive ment une personne habituée à telle communication virtuelle et commence à se sevrer du réel.

La passion pour les jeux informatiques conduit au fait que les joueurs sont plus disposés à communiquer avec une personne virtuelle et à s'éloigner du traditionnel des relations qui se connectent à la vie et ne nécessitent pas de rencontres avec des êtres chers, des proches et des parents.

Le changement de perception du monde environnant, en particulier sur Internet, du scientifique, éducatif et culturel au divertissement et à la référence a formé un nouveau modèle de perception – la soi-disant pensée de clip, dont une caractéristique est la perception superficielle de masse d'information. Cette forme d'assimilation de l'information simplifiée impacte sur les opinions et les préférences des gens, contribue à la formation de modèles de comportement imposés, ce qui donne un avantage dans la réalisation des objectifs économiques et politiques aux États et organisations qui possèdent des technologies de diffusion de l'information [Karkhtsiya, 2017].

Ainsi, nous voyons que dans le monde moderne, il existe un cadre juridique international et un mécanisme institutionnel suffisants pour résoudre avec succès les tâches de protection de l'institution de la famille au niveau universel, mais la mondialisation et la numérisation procèdent à leurs propres ajustements, en tant que résultat dont les valeurs familiales traditionnelles et les fonctions traditionnelles de la famille sont en train de se perdre. Nous voyons la solution à ce problème dans la recherche d'un fondement moral et civilisé de la famille, la renaissance de la spiritualité, la religiosité (lat. religare – se connecter, se connecter), la préservation des valeurs familiales traditionnelles, la protection juridique et le soutien à l'institution de la famille par l'État et la communauté mondiale.

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SECTION 7. ENGINEERING TECHNOLOGIES

BENEFITS OF THE JAVA PROGRAMMING LANGUAGE IN ENTERPRISE APPLICATION DEVELOPMENT

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Abstract. *This article is about the Java programming language. It has proven itself well in the development of applications with client-server architecture due to strict syntax, static typing and security mechanisms. Java is the main development language that Google uses for Android. The Spring Framework ensures an all-round programming and configuration model for modern enterprise applications written in Java. A key feature of Spring is its support for application layer infrastructure: Spring focuses on „wiring” enterprise applications, allowing teams better to focus on the business logic.*

Keywords: *enterprise applications, Spring Boot, philosophy of Java, Spring framework, Java programming language, Java technologies*

Nowadays the necessity to develop Enterprise applications for companies in different fields of activities is acutely felt, so we can see an explosive growth of Internet technologies.

Enterprise applications are very large and long-term projects for internal using of large enterprises or projects that are being developed for a large corporate client. They perform a wide variety of business functions such as processing and storage of documents, invoices, purchases, production planning, customer and partner data, products, addresses and telephone numbers. Such applications contain a set of tools for solving company-wide issues; its aim is to increase the productivity and efficiency of the company with providing functionality to support business logic and processes.

For the better understanding of the definition of a corporate application it's possible to turn to Martin Fowler's book "Patterns of Enterprise Application Architecture", in which he writes that "in his career he has concentrated on enterprise applications. (Other terms for enterprise applications include "information systems" or, for those with a long memory, "data processing".) Enterprise applications include payroll, patient records, shipping tracking, cost analysis, credit scoring, insurance, supply chain, accounting, customer service, and foreign exchange trading. Enterprise applications don't include automobile fuel injection, word processors, elevator controllers, chemical plant controllers, telephone switches, operating systems, compilers, and games" [Fowler, 2011: 28].

Usually, such applications are developed in programming languages such as Java, C#/.NET to ensure cross-platform, development speed, and reliability and to reduce the risk of project failure.

Bruce Eckel in the book "The Philosophy of Java" approves that the creators of the Java language, among other things, sought to reduce complexity from the programmer's point of view. It seems that there was a goal of reducing complexity *for the programmer*. In the early days, this goal resulted in code that didn't run very fast (although this has improved over time), but it has indeed produced amazing reductions in development time—half or less of the time that it takes to create an equivalent C++ program.

This result alone can save incredible amounts of time and money, but Java doesn't stop there. It goes on to wrap many of the complex tasks that have become

important, such as multithreading and network programming, in language features or libraries that can at times make those tasks easy. And finally, it tackles some really big complexity problems: cross-platform programs, dynamic code changes, and even security, each of which can fit on your complexity spectrum anywhere from “impediment” to “show-stopper”. So, despite the performance problems that it can be seen, the promise of Java is tremendous: It can make people significantly more productive programmers” [Eckel, 2006: 25].

Moreover, the Java programming language has been on the development market for more than 20 years and has proven itself well in the development of applications with client-server architecture due to strict syntax, static typing and security mechanisms that protect the Java environment from malware. In most cases, consumers of Java technologies are large and medium-sized companies.

There are many obstacles in developing enterprise-scale applications, for example, code becomes more complex and performance issues arise. The use of the Spring framework allows solving these problems, the advantage of which is the modularity of its basic functionality.

As a result, it can be divided into several parts; each of them performs its own function. The Spring framework is very lightweight in terms of size and functionality. Due to its POJO implementation, which does not require any class inheritance or interface implementation, an important part of Spring is an aspect-oriented programming, which is used to separate end-to-end functionality (like logging, security, etc.) from business logic. Spring is also great because it does not try to solve problems that have already been solved. It simply provides the integration of frameworks that solve many complex problems. IBATIS, Hibernate, Toplink, etc. can be mentioned as an example.

The development process begins with the creation of the application core and the introduction of all the necessary list of technologies into it (e.g. Spring, JPA, JDBC). Before the advent of Spring Boot, this process required an incredibly long time to spend. However, now with the advent of this framework, the situation has dramatically simplified and the number of configuration files has noticeably decreased. Accordingly, the time for developing the Source code and the final cost of development have been significantly reduced.

The main advantages of working with Spring Boot are:

- easy using for Spring-based application development;
- minimizing implementation of time and improving performance;
- avoiding writing Boilerplate, annotations, and XML configurations;
- easy integration of Spring Boot applications and Spring systems such as Spring JDBC, Spring ORM, Spring Data, Spring Cloud, Spring Cloud Data Flow, etc.;
- the existence of built-in HTTP servers, such as Tomcat, GlassFish, Jetty, for fast and easy development and testing of web applications;
- having CLI (Command Line Interface) tools for developing and testing Spring Boot (Java or Groovy) applications from command lines;
- there are a lot of pluggings for rapid development and testing of Spring Boot applications using Build tools, for example, Maven and Gradle;

– Spring Boot suggests many pluggings for using Solaris Containers, embedded Data bases and in- memory Databases.

Thus, the Spring Framework also exists under C#, but this language is most often used mainly to implement the CLI on .NET Framework, Mono and Portable.NET. If your software or web application is built for Windows, C# will work best with the .NET technology suite [Martin, 2009: 56].

To develop for Unix, Linux or other platforms outside of the Microsoft platform, the open-source ecosystem – Java is the best choice. The community is constantly creating new libraries and tools. Powerful new languages like Scala, Clojure, and Groovy have emerged, and they're all based on JVM too. It's not bad that most JVM implementations are publicly available and free. To sum up, Java is the main development language that Google uses for Android, the largest mobile operating system in the world nowadays.

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INFORMATION SECURITY MANAGEMENT IN THE MODERN WORLD

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Abstract. *The article deals with the problem of data security relating to the fact that humanity has recently faced the problem of information protection anew, since the bulk of the data is stored electronically, and this increases the risk of losing important confidential information. Therefore, the question of how to ensure the safety of one's information is most relevant in the modern world. Three necessary properties of information security are being analyzed as well as measures of its procuring.*

Keywords: *information security system, comprehensive protection system, cybersecurity, confidential information, unauthorized use*

In the modern world, information technologies permeate all spheres of activity, from solving everyday tasks to electronic management of production and sales processes, transport, housing and communal services, and the organization of security systems. Information has become an important strategic resource, both for an individual user, and for an enterprise, region, and state. However, it is worth noting that the emergence of any previously unknown technologies entails many different consequences: both positive and negative ones. Humanity has discovered the problem of information protection, as all important records are stored in the electronic form nowadays, and this increases the risk of losing important confidential information.

In order to prevent possible threats, an information security system has been developed in the modern world. Information security is the security of an information system from accidental or intentional interference that harms the owners or users of information. It must be emphasized that information security should have three necessary properties, without which its effective implementation is impossible. Firstly, accessibility, that is, the ability to get the necessary information service in a fairly short period of time. Secondly, integrity, that is, information should not contain contradictions, it should also be protected from change or destruction. Thirdly, confidentiality – protection against unauthorized use. Violations of these three aspects can occur as a result of various dangerous impacts on information computer systems [Shangin, 2010: 15].

In order to ensure information security, it is very important to know what threats it may be exposed to. The reasons for accidental impact on the information system include: emergencies due to natural disasters, power outages, failures of computer equipment, software errors, as well as errors in the work of personnel. Intentional impacts are purposeful actions of the violator. Violators can be both employees and visitors, competitors, or even special hired persons. Such purposeful actions may be caused, for example, by the employee's dissatisfaction with his career, competition, or simple curiosity. The most common type of information security violations is unauthorized access. It is based on the use of any error in the protection system, it is possible with an irrational choice of means of protection, their incorrect installation and configuration.

In order to protect information as effectively as possible, it is necessary to ensure information security with organizational and technical measures, each of which is provided with specific forces, means and measures with appropriate characteristics. Measures to protect information security can be divided into four levels:

- legislative, based on laws, regulations, etc.;
- moral and ethical – these are norms of behavior, violation of which will lead to the fall of a person's authority;
- administrative – actions taken by the management of the organization;
- physical, based on mechanical and electronic-mechanical obstacles for violators;

- hardware and software are special information protection programs [Shcherbakov, 2009: 35].

It is very important to develop a comprehensive protection system to combat information security violations, which is a combination of all measures aimed at combating security threats and possible damage minimization. In order to increase the efficiency of work, specialists in this field should be perfectly versed in the principles of its functioning.

It is important to note that the developers of the protection system should not be among those whom this system will control, they should also be personally responsible. At the same time, the entire information processing system should be protected, and not any separate part of it.

It is assumed that the main trends in the development of the information security market in Russia will be: cooperation and expansion of partnerships between developers of solutions in the field of cybersecurity, which will allow designing and implementing more effective solutions that can not only resist malicious software, but also learn and develop.

Multi-factor authentication and intelligent identification of devices, and as a result, the emergence of information security solutions embedded in equipment that can solve the problems of cloning and software forgery, and also provide secure authentication along with unique identification.

Thus, in modern society, only a comprehensive system of protection can ensure the security of information systems, and ways to ensure information security should be based on measures to prevent possible threats in advance. Ensuring information security can be achieved by a variety of measures, each of which is provided by specific forces, means and measures with appropriate features.

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THE IMPORTANCE OF PROGRAMMING IN THE MODERN WORLD

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Abstract. *Today, in our modern world there is a huge amount of technology and technical systems. Each of us uses them constantly in our lives and does not even think about what is behind them. However, it is a colossal work. Every day, IT specialists, software engineers, testers and many others are trying to make our lives easier and better. This article talks about the importance of programming in our ever-evolving world and shows why it is so important to be aware of it.*

Keywords: *programming, information technology, computerization, scientific and technological progress, software engineering, digital technologies, it-specialists, programmers*

In the introductory part of this article, it is worth saying that, today, in an incredible world full of wonders of architecture, construction, science and medicine are of primary importance. It's impossible to imagine life without any of these fields of knowledge. But there is still a special area that is part of science, but all the time is in the shadow of man. This wonderful field of knowledge is programming – an area in which people tend to see the result, but not the process. It is so important to attract more and more specialists to this field and instill a love of technology among generations of all ages.

First of all, programming is one of the most promising and fast-growing areas of science. Future lies behind this scientific area. Artificial intelligence, computerization and automation of all information processes are used in many professions. That is why it is so important to realize the real importance and significance of programming in modern developing world. The speed of development and living standard directly depend on this. It's interesting to mention that “programming will solve 90% of human problems and will lead the society to a utopian state” [Ristic, 2018: 54].

Programming is a science and an art at the same time. Everyone can find himself in this profession. It is not a bit difficult, but on the contrary, it is incredibly exciting and interesting. Many people are still afraid of this area. But once they realize what it really is, they will never be able to tear themselves away from programming in their lives. After all, programming is not a sentence, programming is a challenge!

It should probably be said that coding, in simple terms, tells the computer what people want it to do, which includes entering step-by-step commands for the computer. Computers are still not smart things, but they are very obedient.

Learning to code is compared to learning a foreign language, or perhaps more specifically, a family of foreign languages. This process is absolutely not complicated, but the path of study is still thorny and has its own pitfalls.

There is a huge number of different coding languages, each designed with certain things in mind. Each language helps to solve specific tasks and is designed for specific purposes. This is essentially the most important information that people need to know about programming. It is not difficult to create code; it is much more difficult to create paintings, because this requires the talent of drawing. Absolutely anyone can write code, a desire and certain perseverance are needed [Hosbeg, 2019: 2].

The most important thing to understand programming is to know that code powers the digital world. Every website, smartphone app, computer program, calculator, and even microwave oven functions due to code. This makes coders the architects and builders of the digital age. It is estimated that 1.4 million jobs will be created in computer science over the next 10 years, with only about 400,000 graduates eligible to fill them.

Jobs not directly related to computer science, such as banking, medicine and journalism will also be affected by the need to at least understand programming and coding.

Linda Lukas, co-founder of the Rail Girls coding workshop program, believes that coding is “the literacy of the 21st century” and the need for people to speak the ABC of programming is inevitable. The author is sure that ‘the world is increasingly driven by software, and the society needs more diversity in the people who create it. More importantly, writing software is about expression, creativity and application. Children must learn to bend, connect, break and combine code in a way that it was not intended. This is a whole generation of kids who will use code in the way the generation use words’ [Eolas Recruitment, 2020: 7].

Consequently, the importance of computer programming can be expressed in the following points:

1. The main importance of programming lies in solving problems. Due to programming, today many technological problems in various fields have been solved.

2. Through programming, computer experts have been able to develop animation, complex graphics, and even video games.

3. One interesting thing about computers is the fact that they work mostly with numbers. If it weren't for programming, it wouldn't be able to use computers effectively. Programmers make programs that convert computer language into a format that can be easily understood by humans.

4. Programming has made life much easier. Due to computer programming today many things that can be achieved with computers are created. Programming has made the job of musicians easier by providing them with sophisticated music creation software within minutes. Programming has given sophisticated software and applications that make certain tasks extremely easy.

It's also important to add that not only tech companies capitalizing on coding skills, an increasing number of businesses, from accountants to designers, rely on

computer code on a daily basis. And as the world becomes more data-driven, new opportunities will continue to emerge [Udemy Blog, 2019: 5].

It has now become pretty obvious that industries rise and fall as new technologies emerge, but there will always be new problems to solve and developers will always be needed. Companies compete aggressively to hire talented coders who can help their business gain a competitive edge. Thus, learning to code opens up many different career opportunities.

So, it is easy to understand that in the field of IT a lot of problems existed and still exists to this day. The most important thing that is worth noting is information technologies developing at a tremendous speed and many people are simply afraid of scientific and technological progress. They have a hard time adjusting to all the new technologies in lives of people, and it is believed to be a very important problem with programming today.

Secondly, the field of programming is expanding too quickly and there are simply not enough quality specialists in it. Not as many specialists as required can graduate from universities, and there are also quite a few self-taught people going into this area.

From the above it is clear that the problem of shortage of personnel in the information technology environment is rather urgent. It is for this reason that such wild competition arises in the employers' market. They literally have to fight for competent and knowledgeable specialists.

It should be particularly stressed that the last programming problem these days seems to be the rapid change of job for programmers. After all, this industry involves a rapid movement up the career ladder, and employers constantly have to change employees for a particular position. It is obvious that this problem and others require special attention and importance in the field of programming. It is necessary to observe all possible ways to solve all these problems. It is vital to attract potential specialists in the field of development. Expanding the scope of programming and giving it special significance will certainly contribute to solving the problem of shortage of personnel.

For the previously described problem associated with the inconstancy of employees at one job and the frequent departures of IT specialists to other jobs, there is a solution. It consists in reassessing the significance of work for specialists. It must be emphasized that IT specialists should not change jobs too often for selfish purposes. This area is already quite profitable to constantly chase after a large level of earnings and thereby create havoc for their employers with a constant search for in-demand employees. And employers, in turn, should make every possible effort so that the employee does not have any desire to change jobs. Thus, the importance of jobs will increase and the previously stated problem will be solved.

And finally, it is necessary to solve the problem of fear and skepticism among people in relation to the information technology sphere. The government and IT specialists should in every possible way show people of all generations that new technologies should not be feared, they should be mastered and used to their

advantage. All kinds of innovations are great and interesting, and the process of studying is a pleasure when you really want something and sincerely strive for it.

Now it is still difficult to understand how information technologies permeate and influence daily life. Alternatively, more specifically, their practical application is in the computers, tablets, and smartphones that are used. People use these devices spending a large number of waking hours, being at work, playing games or communicating with colleagues, friends and family.

In conclusion, IT affects almost every sphere of life, including online shopping, school, doctor visits, banking, and dining out. In fact, it is in the areas of business, higher education, healthcare, banking, finance and food service that this area has made the greatest improvements in people's lives. While some people refuse to see the benefits, these benefits far outweigh the negative features. So, it should be assumed that with the realization of the importance of information technology and programming in particular, a lot of problems could be solved successfully and contribute to the development of the mankind.

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STACK OF SERVER SOFTWARE

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Abstract. *This article raises such an important topic as choice of a server. The author pays attention to the fact that with the correct configuration of the server software, it is possible to develop a web application on the Internet. The paper examines the important points of network administration.*

Keywords: *software, server, small business, configuration, network administration, web application*

Today networks and computers are part of almost every organization or company. Not so long ago, few people knew what server hardware is, for what purposes it can be used. However, at present, the sale of server hardware is put on stable flow based on annual. The main requirement for a server equipment is its impeccable close work. Between server and a typical workstation there is a significant difference: the server must work without interruptions and overloads. It is necessary to choose it correctly for certain tasks to server hardware worked correctly.

The process of choosing the server software configuration is divided into **stages**:

1) network administrators need to choose the platform – the operating system for installing a web server. In this case, it's Linux. Linux is an open-source operating system like other operating systems such as Microsoft Windows, Apple Mac OS, IOS, Google android, etc. An operating system is a software that enables the communication between computer hardware and software. It conveys input to get processed by the processor and brings output to the hardware to display it. This is the basic function of an operating system. Although it performs many other important tasks, let's not talk about that [Cannon, 2018].

Linux is around us since the mid-90s. It can be used from wristwatches to supercomputers. It is everywhere in our phones, laptops, PCs, cars and even in refrigerators. It is very much famous among developers and normal computer users.

Linux kernel is the core part of the operating system. It establishes communication between devices and software. Moreover, it manages system resources. It has **four responsibilities**:

A. Device management: A system has many devices connected to it like CPU, a memory device, sound cards, graphic cards, etc. A kernel stores all the data related to all the devices in the device driver (without this kernel won't be able to control the devices). Thus, kernel knows what a device can do and how to manipulate it to bring out the best performance. It also manages communication between all the devices. The kernel has certain rules that have to be followed by all the devices.

B. Memory management: Another function that kernel has to manage is the memory management. The kernel keeps track of used and unused memory and makes sure that processes shouldn't manipulate data of each other using virtual memory addresses.

C. Process management: In the process, management kernel assigns enough time and gives priorities to processes before handling CPU to other processes. It also deals with security and ownership information.

D. Handling system calls: Handling system calls means a programmer can write a query or ask the kernel to perform a task.

Based on the above mentioned facts, it is obvious that Linux is the most beneficial operating system for a small business as a server hardware platform.

2) network administrators need to choose web server. According to statistics, the majority choose Apache web server.

The Apache Server Project is an effort to develop and maintain an open-source server for modern operating systems including UNIX and Windows. The goal of this project is to provide a secure, efficient and extensible server that provides services in sync with the current standards. Apache Server is a free and open-source web server that delivers web content through the internet. It is commonly referred to as Apache and after development, it quickly became the most popular client on the web. It's widely thought that Apache gets its name from its development history and process of improvement through applied patches and modules but that was corrected back in 2000. It was revealed that the name originated from the respect of the Native American tribe for its resiliency and durability [Dumova, 2018].

The Internet is comprised of many different technologies and not all of them are the same. While Apache is arguably one of the most popular web servers out there on the net, there are many other players, and the landscape is always changing. Back in the late 90s and early 2000s, Apache's dominance was very strong, serving over 50% of the internet's active websites. Microsoft's IIS (Internet Information Services) was also an option but not nearly as popular.

3) network administrators need to choose database management system. There is a concept of a database – a set of data organized in some way. For example, if you have a dressing room or pantry in your apartment, then this whole room with all its contents can be considered a base.

There is the concept of a database management system (DBMS) – this is when a family sits down at the table and the youngest is sent to the pantry for cucumbers, he brings it and does not break it on the way. That is, a DBMS is some kind of tool for manipulating data in a database, for example, a program [Pimenova, 2021].

MySQL is a database management system that supports SQL and relational tables, making it a good choice for creating and maintaining dynamic enterprise-level databases. MySQL is cross-platform compatible. This feature qualifies it to be part of the web development stack such as LAMP since web applications typically target multiple operating systems.

One of MySQL's main disadvantages, especially compared to non-relational solutions such as MongoDB, is that it scales only vertically. Given that it is also inefficient in handling large databases, using MySQL in projects that expect a lot of traffic requires careful planning.

MariaDB is another relational database management system that can be part of the LAMP platform. It claims to be fully compatible with MySQL, allowing users to transfer their database without any complications or losses.

Choosing between these two systems, the authors of the article refer to the first one – MySQL.

4) the web application development team needs a hypertext preprocessor. PHP (Hypertext Preprocessor) is a programming language that combines all the elements of the LAMP stack and allows websites and web applications to run efficiently. When a visitor opens the webpage, the server processes the PHP commands and sends the results to the visitor's browser [Razdovsky, 2019].

PHP is the fourth layer of the original stack because it interacts well with MySQL. It is commonly used for web development because it is a dynamically typed language and can be embedded into HTML, making it fast and easy to work with.

The P in the LAMP stack acronym can also refer to two other programming languages – Perl or Python. All three are simple yet useful dynamic tools for creating environments in which applications can be developed successfully. The resulting server stack is used for building and delivering web-based applications. Its flexibility and efficiency allow smaller developers to compete with commercial software development solutions [Salanchini, 2020].

The four components of LAMP were picked as optimal solutions for developers who wish to host, server and manage web-based content. They provide a route for accessing content, software, and other web-based tools.

The formed server software stack has its advantages and disadvantages.

Advantages:

1. This server stack is open source. The software's source code is shared and available for people to make changes and improvements, enhancing its overall performance.
2. It is easily customizable. Users can replace every component with another open-source solution to suit the particular application's needs'.
3. It is easy to find support due to the size of the LAMP community.
4. It is a mature stack that is easy to set up.

Disadvantages:

1. It does not support operating systems other than Linux.
2. The relational property of MySQL makes the entire LAMP stack less efficient and flexible than its competitors who use non-relational solutions.
3. Apache can run into performance problems under heavy workloads.
4. Switching between coding in Python and PHP on the server-side and using JavaScript on the client-side can disrupt the development workflow.

Thus, despite these disadvantages, the LAMP stack remains the most popular among specialists due to its scalability and budget.

Summing up, the main thing in choosing server software is first of all, a consistent choice of stack configuration components. For example, in this article, 4 fundamental components of the LAMP stack were presented, thanks to which you can organize the work of a web application that supports the infrastructure of a national-level organization.

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COMPARISON OF THE WALSH AND FOURIER DISCRETE TRANSFORMATION METHODS

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Abstract. *The article discusses two methods of frequency analysis of speech signals - the Walsh method and the Fourier transform. The material of this article describes and clearly demonstrates the capabilities and advantages of each of the methods in certain conditions.*

Keywords: *discrete transformation, the Walsh transform, speech analysis, the Fourier transform, signal analysis*

The problem of frequency analysis of speech signals is relevant for different speech processing technologies: recognition, synthesis, compression. By its nature, the speech signal is quasi-periodic, that is, on short time intervals (up to 100 ms) it has a shape close to periodic. Moreover, for other sounds of speech, the signal shape is different; the frequency spectrum is another, which allows the human auditory system to recognize them.

At its core, harmonic and spectral test is an extension of the series of functions that explain various physical processes. For harmonic analysis of periodic signals, as a rule, a series expansion in terms of orthogonal functions is used.

The most famous and most frequently methods encountered in practice are the Walsh and Fourier transform. Each of them has its own characteristics, and the choice of using this or that method will depend on the specific task, or rather the area in which this problem is located.

The Walsh transform

The Walsh functions and transforms have a number of properties that make their use in signal processing systems often preferable to others. These functions are widely used in speech signal processing, in image treatment in medicine and biology, in digital holography and other areas. The Walsh series expansion of the signal has the following form [Bespalov 2012].

$$x(t) = \sum_{i=0}^{\infty} c_i \text{wal}_i\left(\frac{t}{T}\right),$$

where

$$c_i = \frac{1}{T} \int_0^T x(t) \text{wal}_i\left(\frac{t}{T}\right) dt$$

$\text{wal}_i\left(\frac{t}{T}\right)$ – Walsh function; c_i – the values of the coefficients of the Walsh series; T – signal period.

The Walsh functions on discreteness intervals have values of ± 1 , which eliminates the multiplication operation when calculating their coefficients. This means that the Walsh spectral analysis is associated with less computer time, especially when using the fast Walsh transform algorithm. In comparison with the analysis of harmonic functions, the execution time is halved or more.

In practice, the Walsh functions are used with different ordering methods. From a general point of view, they are equal for the spectral decomposition of signals. However, for a particular signal, the spectrum of functions of one method can converge faster than the spectrum of other systems. Therefore, the advantage of this or that system can manifest itself in the spectral decomposition of specific signals using truncated series.

The Discrete Fourier Transform

The Discrete Fourier transform is one of the transformations that is widely used in digital signal processing algorithms.

In practice, data are used that are discrete values. The measurement results are recorded at regular intervals with a given sampling frequency, which allows the original signal to be decomposed into harmonic components.

The direct discrete Fourier transform connects the time function $x(n)$, which is determined by N -points in a given time interval, with the function $X(k)$, which is defined in the frequency interval. The time domain function uses N samples and the frequency domain function is specified using a k -fold interval [Vladimir, 1989].

$$X(k) = \sum_{n=0}^{N-1} x(n) e^{-\frac{j2\pi nm}{N}}, k = 0, \dots, N-1$$

where N – is the number of signal values measured over the period, as well as the frequency spectrum multiplicity; k – is the frequency index.

One of the features of the direct discrete transformation is the ability to represent it through the real and imaginary part. And if the real element is an array containing the values of the cosine components, then the imaginary – is an array comprising the values of the sinusoidal feature. Due to the fact that the discrete sequence can be obtained by the sum of functions with different composition of the harmonic signal, the Discrete Fourier transform has an important feature. In other words, the discrete sequence is decomposed into harmonic variables. Therefore, when a discrete function is expanded using the discrete Fourier transform, high-frequency components appear in the second half of the spectrum, which were not present in the original signal. Usually, the second half of the spectrum is not considered, and the signal amplitudes of the first part of the spectrum are doubled.

Computational experiments

Each speech noise is an implementation of a random process with certain characteristics. Vowel sounds are longer than consonants. Also voiced audio of speech, especially vowels, have a high level of intensity. For these reasons, the vowel sounds “a” and “i” were recorded for the study using a microphone, with a sampling rate of 8 kHz. The graphs of the received signals are shown in Figure 1.

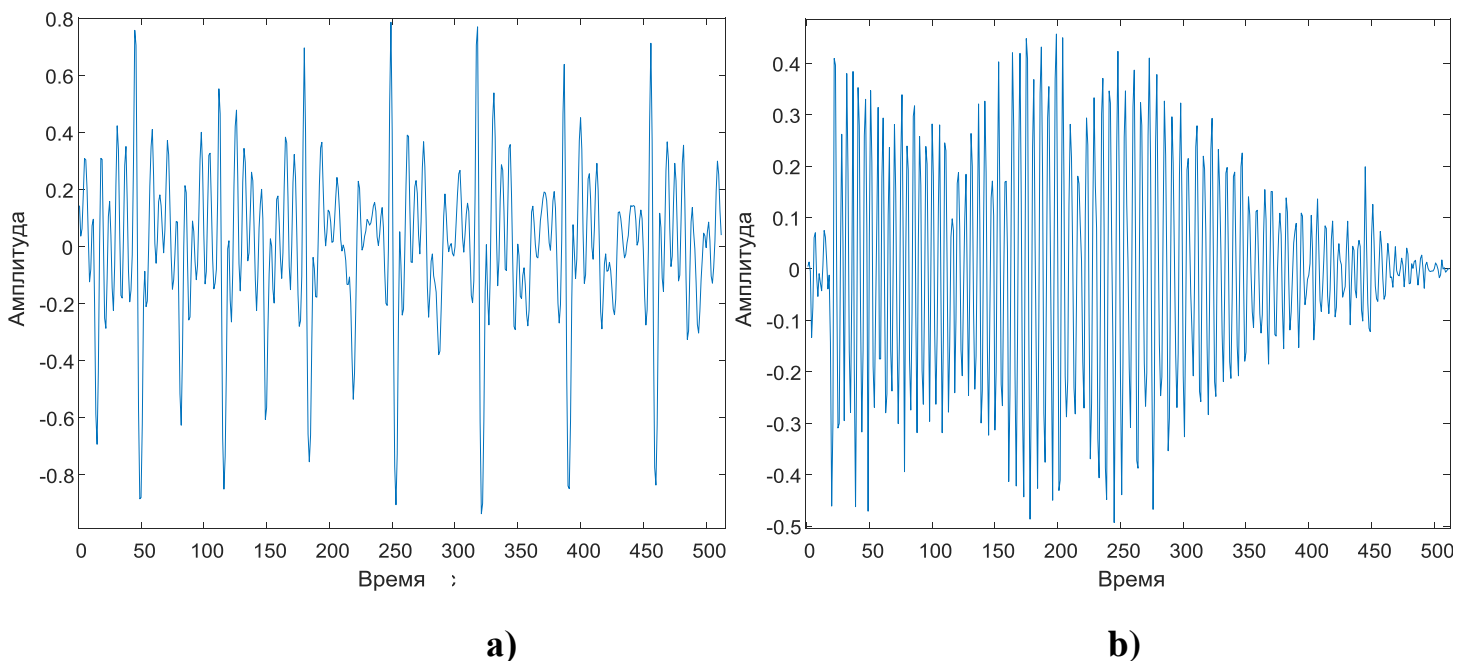
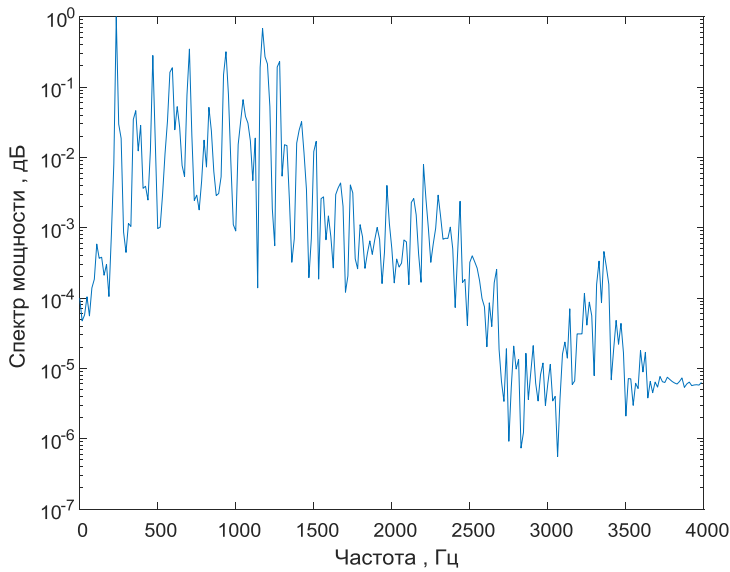


Figure 1. Sound graph a) „a”; b) “i”.

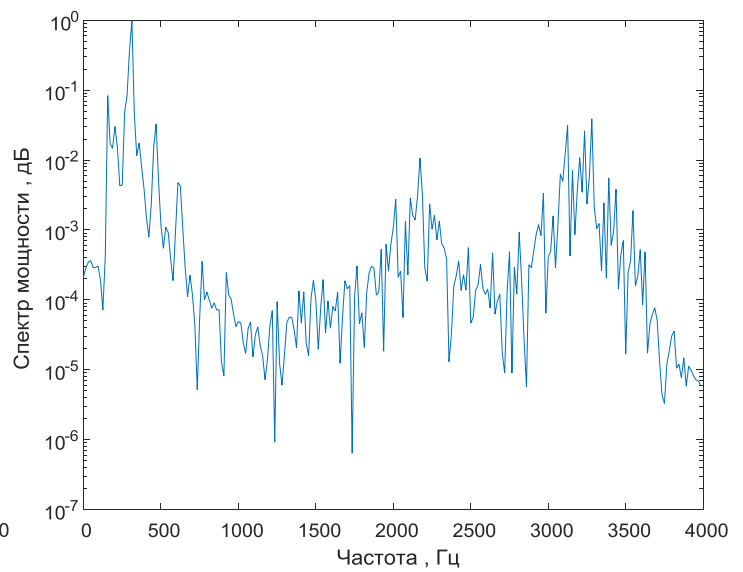
To accelerate the Fourier transform, the signal duration is 512 samples. The Walsh transform will use the same signal duration.

One of the main tasks of speech frequency analysis is the extraction of formants which are the amplified regions of the frequency spectrum of a speech signal. The words sounds of other people differ in the number of formants and their location in the frequency spectrum. Thus, such extraction is the main procedure in words recognition, and is also used in synthesis procedures.

Figures 2 and 3 show the Fourier and Walsh series expansions for the two speech sounds presented above on a logarithmic scale.

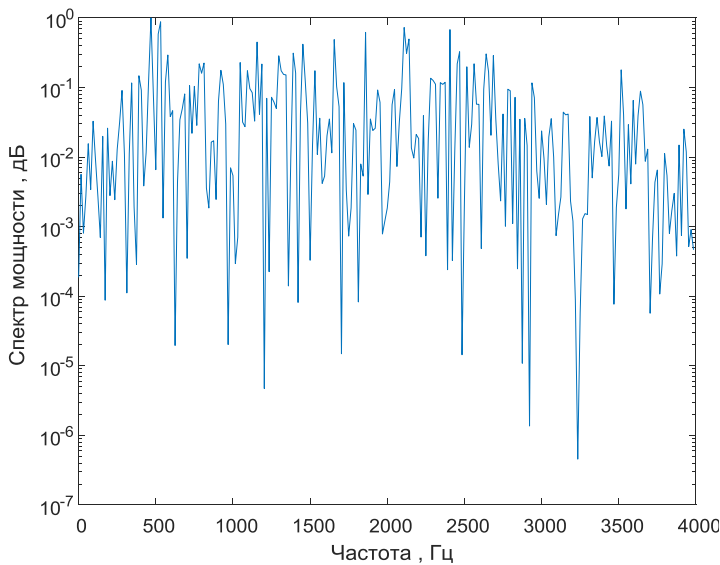


a)

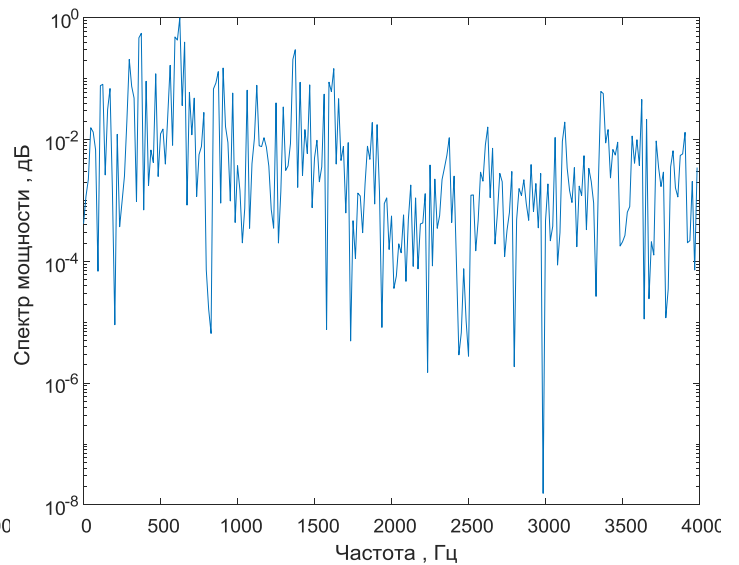


b)

Figure 2. Spectral Fourier diagram of sound a) “a”; b) “i”.



a)



b)

Figure 3. Spectral Walsh diagram of sound a) “a”; b) “i”.

In Figures 2 and 3, in contrast to the spectral Fourier diagram, the Walsh diagram has poorly visible formants, their number and range. It follows from this that in the spectral analysis of an audio signal it is preferable to use the discrete Fourier transform, since it allows to extract the necessary information with sufficient accuracy.

Thus, the Walsh decomposition is also not deprived of its advantages: when calculating the decay, only the operations of addition and comparison are used; compared to the Fourier transform, the Walsh transform is faster because it works

with real numbers rather than complex ones; invariance to the amplitude and frequency of the compared signals, so if the signals have different frequencies, but the same shape, then their extensions will be similar. Therefore, when solving a specific problem, to determine the application of one of these methods, it is necessary to set clearly the priorities of the data obtained.

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LOCAL NETWORKS RELATED TO THE GIGABIT ETHERNET TECHNOLOGY

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Abstract. *The article examines the development of local communication networks. The purpose of the paper is to investigate the issues of digitization and local networks traffic and reflect their relations in the structure of data flow, supported by a mathematical assessment. These issues raise the main problem in the construction of modern local area networks – how to increase the bandwidth in communication channels. The research shows the effectiveness of Gigabit Ethernet technology in reference to LANs. Findings indicate that GbE will contribute to the intensive growth of local network traffic and as a result, further prospects for the development of the Ethernet evolution have been determined.*

Keywords: *local area networks, Ethernet, network traffic, computing power, fiber optic, coaxial cable*

In the history of computer networking there have been many significant developments, such as ATM (Asynchronous transfer mode) and Fast Ethernet, but the development of Gigabit Ethernet is perhaps the most crucial of all. Thus the

evolution of local area networks (LANs) is inextricably linked to the history of Ethernet technology. According to Vijay Moorthy, in 1996 82% of all networking equipment shipped was Ethernet [Moorthy,1997]. Nowadays Gigabit Ethernet (GigE) technology remains the most widespread LAN technology in use.

The rapid growth of information technologies requires the increase of LAN traffic. Therefore, as the most popular of the Internet standard, Gigabit Ethernet should be used by network users. Digitization undoubtedly has its impact on LANs development. Thereby the volume of transmitted data has noticeably increased. That way, commonly used 1000BASE-T standard Gigabit Ethernet was developed and adopted for high-speed connectivity and bandwidth intensive applications.

Due to extensive digitization local network traffic is expanding every year which leads us to the conclusion that the computing power does not stand still. It is widely known that over the past 20 years, the clock rate of personal computers (PCs) has increased from 10MHz to 1GHz, and the Ethernet raw bandwidth has upgraded from 10Mbps to 1Gbps [Lapshinskij,2007]. Extensive digitization establishes the growth of local network traffic which relies upon the PC computing power.

The bandwidth and switching capacity directly depend on the amount of data transmitted over the area network. Plain Ethernet text messages have evolved over time into information applications with data types such as voice communication, images, streaming video, video conferencing and others. "The volume of transmitted data V is calculated by the formula:

$$V = q * t,$$

where q is the channel capacity and t is the transmission time" [Samylkina, 2011]. Modern applications require higher network bandwidth not only for the corporate backbone but for massive data in Metropolitan Area Networks.

In local networks, as a rule, a shared data transmission medium (mono-channel) is used and the main role is assigned to the protocols of the physical and channel levels, since these levels to the greatest extent reflect the specifics of local networks.

Ethernet technology is a consistent set of standard protocols and software and hardware that implements them, sufficient for building sphere transmission of information. Networking technologies are called core or virtual LAN architectures.

Network technology or architecture determines the topology and method of access to the data transmission medium, cable system or information channel, the format of network frames, the type of signal coding, the transmission rate in the local network. In modern local area networks, such technologies or network architectures as Ethernet, Token-Ring, ArcNet, FDDI are widely used.

This networking technology is currently the most popular in the world. Worldwide fame is provided by simple, reliable and inexpensive licensed software products. A classic Ethernet LAN uses a standard coaxial cable of two types (thick and thin).

The version of Ethernet that uses twisted pairs as a transmission medium has become more widespread, since installation and maintenance are much easier.

Ethernet LANs use bus and passive star topologies, and the access method is CSMA / CD.

The IEEE 802.3 standard, depending on the type of data transmission medium, has the following modifications:

1) 10BASE5 (thick coaxial cable) – provides a data transfer rate of 10 Mbps and a segment length of up to 500m.

2) 10BASE2 (thin coaxial cable) – provides a data transfer rate of 10 Mbit / s and a segment length of up to 200m.

3) 10BASE-T (unshielded twisted pair) – allows to create a network in a star topology. The distance from the hub to the end node is up to 100m. The total number of nodes must not exceed 1024.

4) 10BASE-F (fiber optic cable) – allows to create a network in a star topology. The distance from the hub to the end node is up to 2000m.

In the development of Ethernet network technology, high-speed options have been created: IEEE802.3u / Fast Ethernet and IEEE802.3z / Gigabit Ethernet. The basic topology used in Fast Ethernet and Gigabit Ethernet LANs is passive star.

The Fast Ethernet network technology provides a transmission speed of 100 Mbit / s and has three modifications:

1. 100BASE-T4 – uses an unshielded twisted pair (quad twisted pair). The distance from the hub to the end node is up to 100m.

2. 100BASE-TX – two twisted pairs are used (unshielded and shielded). The distance from the hub to the end node is up to 100m.

3. 100BASE-FX – using a fiber optic cable (two fibers in the cable). The distance from the hub to the end node is up to 2000m.

The network technology of local networks Gigabit Ethernet, in turn, has the following modifications of its standard:

1. 1000BASE-SX – a fiber optic cable with a light wavelength of 850 nm is used.

2. 1000BASE-LX – a fiber optic cable with a light wavelength of 1300 nm is used.

3. 1000BASE-CX – shielded twisted pair is used.

4. 1000BASE-T – based on the argument that the standard for 1000BASE-T has already been adopted, Ignatov claims that it has the possibility to use four unshielded twisted Category 5 pairs to communicate with devices up to 100 meters away [Ignatov, 2015]. As the data transfer rate over one channel is 250 Mbps, the total bandwidth of the network connection, designed according to the 1000BASE-T standard, is 1Gbps. This optimizes and speeds up the performance of modern LANs.

Transmission in the Gigabit Ethernet network is performed in full duplex mode (similar to the previous Fast Ethernet network), which does not impose restrictions on the length of the network (except for restrictions due to signal attenuation in the cable) and ensures that there are no conflicts. In this case, this is talking not about the diameter of the network, but about the length of the segment,

which is determined by the physical medium of data transmission [Smirnova, 2018].

Gigabit Ethernet is primarily used in networks that connect computers in large enterprises that are located in several buildings. It allows, using appropriate switches that convert the transmission rates, to provide communication channels with high bandwidth between individual parts of a complex network or the communication line of switches with ultra-fast servers.

All the above mentioned information allows emphasizing on the positive role of the Gigabit Ethernet technology used for modern local area networks. Thus, this study has clearly illustrated the impact of digitization on the local networks traffic. It has showed that digitization requires an advanced high-speed network and can be eliminated by introducing modern Gigabit Ethernet technology. Ethernet technologies massively contributed to the optimization and acceleration of all existing local communication networks. Our research has proved its practical effect of Gigabit Ethernet connected with LAN performance. The future development of local area networks is in the field of GbE Ethernet. According to the 802.3ba group, the bandwidth requirements for compute and core applications are growing at different speeds. This fact determines the further necessity of using the next two corresponding Ethernet generations – 40 Gigabit Ethernet (40GbE) and 100 Gigabit Ethernet (100GbE). The given constraints of this limited study could identify future investigation directions.

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CRC: ÜBERSICHT UND SOFTWARE-IMPLEMENTIERUNG

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Annotation: *In der heutigen Welt wird eine große Menge an Informationen aus der Ferne über das Internet übertragen. Da die Daten jedoch in Teilen über das Netzwerk übertragen werden, ist es wichtig zu wissen, ob eine bestimmte Nachricht oder Datei korrekt übertragen wurde. In diesem Artikel wird der CRC-Algorithmus erläutert, mit dem man die Prüfsumme der Daten berechnen kann. Die Prüfsumme wird verwendet, um zu überprüfen, ob die Datenübertragung korrekt ist.*

Schlagwörter: *Algorithmus, zyklisch redundanter Code, Programmierung, Computertechnologie, Informationstechnologie, CRC*

Die Abkürzung CRC steht für „Cyclic redundancy check“, was ins Deutsche übersetzt „Zyklisch redundanter Code“ bedeutet. Ein Merkmal von CRC ist, dass die geringste Änderung der Daten das Ergebnis der Ausführung des Algorithmus beeinflusst. Aus diesem Grund wird der betrachtete Algorithmus am häufigsten verwendet, um die Prüfsumme von Daten zu berechnen. Die Prüfsumme der Daten hilft zu erkennen, ob die Daten korrekt übertragen wurden.

Die Relevanz dieser Arbeit beruht auf der Notwendigkeit, die Integrität von Nachrichten oder Dateien zu überprüfen, nachdem man sie im Internet erhalten hat.

Betrachten wir am Anfang den Algorithmus, um einen CRC zu erhalten. Um diesen Prozess zu vereinfachen, beschreiben wir es in einer Textform:

1. Es wird eine Reihe von Werten erstellt, deren Länge der Bitbreite des Algorithmus entspricht;
2. Die ursprüngliche Nachricht wird mit Nullen in den niedrigstwertigen Stellen in einer Menge aufgefüllt, die gleich der Bitbreite des Algorithmus ist;
3. Eine XOR-Operation wird durchgeführt;
4. Ein hohes Bit der Nachricht wird in das niedrigstwertige Bit des Registers eingegeben, und ein Bit wird von dem hohen Bit des Registers vorgerückt;

5. Wenn das vorgerückte Bit gleich der Eins ist, dann wird die XOR-Operation durchgeführt;
6. Wenn die Nachricht noch Bits enthält, kehre zu Schritt 4 zurück;
7. Wenn alle Bits der Nachricht in das Register eingetragen und verarbeitet wurden, bleibt der Rest im Register, der eigentlich die CRC-Prüfsumme ist.

Daraus ist zu folgen, dass der Algorithmus eine gewisse Breite hat. Diese Eigenschaft ist in Benennung nach der Abkürzung CRC (z. B. CRC8, CRC16, CRC32 usw.) angegeben und charakterisiert die Größe des Polynoms, mit dem die „Aufteilung“ durchgeführt wird (d. h. Schritt 5 des Textalgorithmus). Jede Zahl kann ein Polynom sein. Jeder Algorithmus hat auch einen Anfangswert des CRC: entweder nur die Nulle oder nur die Einsen.

Die XOR-Operation ist eine logische Operation, die genau dann wahr wird, wenn eines der Argumente wahr und das andere falsch ist. Die Wahrheitstabelle dieses logischen Operators ist in der Tabelle 1 dargestellt.

Tabelle 1. XOR-Wahrheitstabelle

x	y	$XOR(x, y)$
0	0	0
0	1	1
1	0	1
1	1	0

Betrachten wir ein veranschaulichendes Beispiel der Berechnung von CRC8 für die Daten C_{16} (11000001_2). Als Polynom nehmen wir die Zahl CB_{16} (11001011_2) und als Anfangswert CRC 1111111_2 . Um diesen Prozess zu vereinfachen, wird der Wertesatz aus Schritt 1 des Textalgorithmus Register genannt. Ein Beispiel für die Berechnung von CRC8 mit den angegebenen Eigenschaften ist in der Tabelle 2 dargestellt.

Tabelle 2. Beispiel zur Berechnung von CRC8

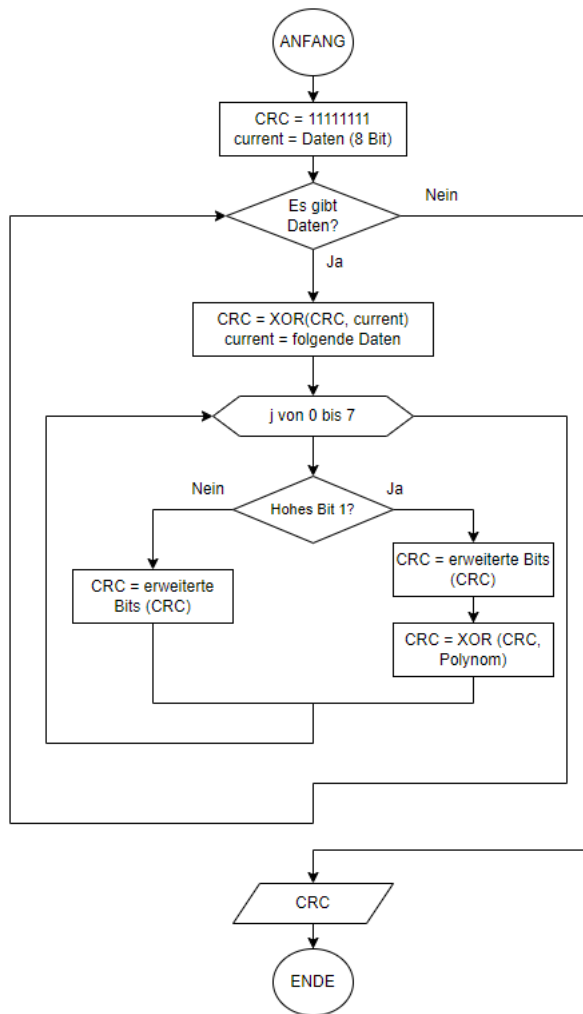
	Aktion	Erweiterte sBit	Register
	Anfangs-CRC		1111111
	XOR-Operation		1 1111111 ^ 1100000 <u>1</u> 0011111 0

	Stückchen-Erweiterung	0	0111110 0
	Stückchen-Erweiterung	0	1111100 0
	Stückchen-Erweiterung	1	1111000 0
	XOR-Operation		1111000 0 ^ <u>1100101</u> <u>1</u> 0011101 1
	Stückchen-Erweiterung	0	0111011 0
	Stückchen-Erweiterung	0	1110110 0
	Stückchen-Erweiterung	1	1101100 0
0	XOR-Operation		1101100 0 ^ <u>1100000</u> <u>1</u> 0001001 1
1	Stückchen-Erweiterung	0	0010011 0
2	Stückchen-Erweiterung	0	0100110 0 ($4C_{16}$)

Wie wir das bemerken können, endete der Algorithmus, als die Daten für die Berechnung endeten. Der resultierende CRC8 ist 1001100_2 ($4C_{16}$). Ähnlich wird auch CRC32 berechnet. Der Unterschied liegt in der Länge des Polynoms: Bei CRC32 ist es 32 Bit.

Um diesen Prozess zu verdeutlichen, wird der identifizierte Algorithmus in grafischer Form geschrieben. Ein Blockdiagramm des allgemeinen Algorithmus zur Berechnung des CRC ist in Abbildung 1 dargestellt.

Abbildung 1. Blockdiagramm des CRC-Berechnungsalgorithmus



In diesem Blockdiagramm (siehe Abbildung 1) gibt es keine Bindung an eine bestimmte Programmiersprache oder einen Algorithmustyp. Es spiegelt das grundlegende Funktionsprinzip aller CRC-Algorithmen wider.

Im Rahmen des Artikels implementieren wir den CRC32-Algorithmus in der Programmiersprache C++. Als Teil der Softwarelösung implementieren wir einen Algorithmus mit folgenden Eigenschaften:

- Polynom04C11DB7₁₆;
- AnfangswertFFFFFFFF₁₆

Verschieben wir die Implementierung in eine separate CRC32(...) Funktion. Der Code für die zur CRC32-Berechnung entwickelte Funktion ist in Listing 1 dargestellt.

Listing 1. Funktion zur Berechnung von CRC32

```

unsigned int CRC32(unsigned char* data, unsigned longint length)
{ unsigned long crc = ~0; unsigned char* current = (unsigned char*) data;
  while (length--){
    crc ^= *current++;
    for (unsigned int j = 0; j < 8; j++) {if (crc & 1)}
    { crc = (crc >> 1) ^ 0xEDB88320; }
    else { crc = crc >> 1; } return ~crc; }

```

Die dargestellte Funktion hat zwei Eingangsparameter: Daten und ihre Größe. Die Daten werden im Format eines Zeigers auf den *unsigned char* an die Funktion übergeben. Dies geschieht, um durch die Datenbytes navigieren zu können, denn es ist 1 Byte, das eine Variable dieses Typs belegt. Der *unsigned modifier* wird benötigt, damit die Byte-Werte richtig interpretiert werden. Ohne ihn wäre das High-Byte signiert. Ohne diesen Modifikator würde das Programm nicht richtig funktionieren. Die Datengröße wird im *Integer-Format* übergeben und bezeichnet die Anzahl der Bytes.

Die CRC-Variable wird mit einem Anfangswert initialisiert. Das beschreiben E. A. Konova und G. A. Pollak: „Der ~ Operator in C++ führt eine bitweise Inversion durch“ [Konova, Pollak, 2017:75]. Als Ergebnis ist der Anfangswert gleich der Zahl $FFFFFFFF_{16}$ dargestellt.

Der WHILE-Zyklus wiederholt sich, bis keine Daten mehr zu zählen sind. C++ verwendet Zeigerarithmetik, um zu einem neuen Datenbyte zu übergehen. Der FOR-Zyklus wird benötigt, um jedes Datenbit zu verarbeiten. Die Bedingung $CRC \& 1$ prüft, ob das geschobene Bit eine 1 ist. Diese Bedingung hat solche Form aufgrund der Besonderheit, Informationen aus dem Speicher zu erhalten. A. N. Wassiljew schrieb: „Die Daten werden in umgekehrter Reihenfolge gespeichert“ [Wassiljew, 2017: 111]. Wir sind damit ganz einverstanden. Aus diesem Grund wird das Algorithmuspolynom auch in umgekehrter Form geschrieben. Das Ergebnis der Funktionsausführung ist der fertige CRC32. Im Computerspeicher wird er als vorzeichenlose Ganzzahl dargestellt.

Lassen Sie uns ein kleines Programm schreiben, um die Korrektheit der Implementierung des Algorithmus zu überprüfen. Darin berechnen wir den CRC32 der Zeile „123456789“ und vergleichen ihn dann mit dem Referenzwert dieses Algorithmus. Der Programmcode der entwickelten Programme ohne Berücksichtigung der oben erstellten Funktion ist unten in der Listing 2 dargestellt.

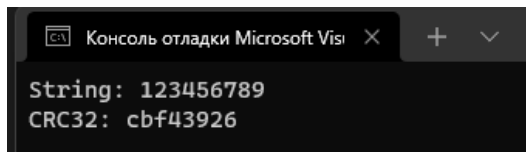
Listing 2. Zum Testen entwickeltes Programm

```
#include <iostream>
using namespace std;
unsigned int CRC32(unsigned char* data, unsigned long int length);
int main()
{
    setlocale(LC_ALL, "Russian");
    string strock = "123456789";
    cout<< "String: " <<strock<<endl;
    cout<< "CRC32: ";
    cout<< hex << CRC32((unsigned char*)strock.c_str(), sizeof(char) *
strock.length()) <<endl;
    return 0;}

```

Nachdem wir das entwickelte Programm ausgeführt haben, beobachten wir das in Abbildung 2 gezeigte Ergebnis.

Abbildung 2. Das Ergebnis der Ausführung des Testprogramms



```

Консоль отладки Microsoft Visi
String: 123456789
CRC32: cbf43926

```

Der Wert von CRC32 gemäß dem Referenzwert im Standard-CRC-Implementierungsparameterkatalog für diese Zeichenfolge ist CBF4392616 [Williams, 1993: 24]. Die entwickelte Softwarelösung erzielte das gleiche Ergebnis. Dies bedeutet, dass der CRC32-Berechnungsalgorithmus korrekt funktioniert.

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PROGRAMMIERUNG MIT JAVA

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Annotation: Dieser Artikel diskutiert das Konzept einer solchen Programmiersprache wie Java. Die Komponenten des Programms, die seine Grundgebilde bilden, werden hier kurz beschrieben. Es werden allgemeine Informationen über Konstruktoren und Methoden gegeben. Als Beispiel für die Hauptbefehle dieser Programmiersprache stellt der Artikel solche Befehle wie If-Abfragen, Switch-Case Abfragen und Schleifen vor, um zu verstehen, wie man mit der Java-Syntax arbeitet. Auch Datentypen und ihre Eigenschaften werden berücksichtigt.

Schlagwörter: Programmiersprache, Variablen, komplexe Datentypen, Komponenten des Programms, If-Abfragen, Switch-Case Abfragen, SwitchBlöcke

Java ist eine objektorientierte und komplementäre Programmiersprache, welche heutzutage in der Praxis oft zur Anwendung kommt. Java funktioniert auf

allen gängigen Betriebssystemen. Durch die vielen Anwendungsmöglichkeiten, die sich mit der Zeit entwickelt haben, ist Java auch zu einer vielseitigen Sprache mit großem Einsatzbereich geworden.

Die Entwicklung von Java begann 1991 unter der Leitung von James Gosling. Nach 18 Monaten wurde die erste Version der Java-Anwendung vorgestellt. Sie trug den Namen 7, ausgesprochen als „Star Seven“ und bot eine grafische Oberfläche und technische Geräte zusteuern. Mit zunehmender Bedeutung des Internets änderte sich der Verwendungszweck von Java. Es wurde seitdem hauptsächlich für die Entwicklung von Websites verwendet, ist aber immer vielseitiger geworden.

Klassen sind Grundbausteine eines Java Programmes. Sie enthalten den gesamten Inhalt des Programmes. Eine Klasse hat zwei Teile: der Klassenkopf und der Klassenrumpf. Der Klassenkopf besteht aus der Bezeichnung „class“ und dem Namen der Klasse. Der Klassenrumpf ist durch zwei geschweifte Klammern begrenzt. Er kann drei Teile beinhalten: den Datenteil, die Konstruktoren und die Methoden. Eine mit diesen Bestandteilen gefüllte Klasse stellt den Bauplan für das Objekt dar. Man verwendet Klassen, um Objekte zu erstellen, wobei aus einer Klasse mehrere Objekte mit gleichen Eigenschaften erstellt werden können.

Der Datenteil einer Klasse dient, um lokale und globale Variablen zu definieren. Lokale Variablen können lediglich in der Klasse, in der sie definiert worden, verwendet werden. Dadurch ist es möglich, Variablen mit dem gleichen Namen in einer anderen Klasse zu deklarieren. Globale Variablen werden innerhalb einer Klasse festgelegt, können jedoch auch in andere Klassen abgerufen werden. Es ist jedoch zu beachten, dass lokale Variablen globale Variablen mit dem gleichen Namen überschreiben.

Ein Konstruktor wird verwendet, um Variablen innerhalb einer Klasse, immer einen bestimmten Anfangszustand zuzuweisen. Dies ist notwendig, da eine nicht initialisierende Variable immer den Wert „null“ annimmt. Eine Art des Konstruktors ist der Kopierkonstruktor [Neumann, 2019]. Ein solcher Konstruktor wird verwendet, um eine Variable mithilfe einer anderen Variablen zu initialisieren. Ein Konstruktor ist immer die erste Methode beim Instanzieren eines Objekts.

Eine Methode in Java ist eine Auflistung verschiedener Arbeitsschritte, welche unter einem Namen zusammengefasst werden. Bei dem Aufrufen einer Methode werden alle in der Methode deklarierten Befehle ausgeführt. Eine Methode kann in zwei Teile untergliedert werden: den Methodenkopf und den Methodenkörper. Der Methodenkopf besteht unter anderem aus dem Namen der Methode. Er ist auf geschweifte Klammern beschränkt und enthält Befehle, die ausgeführt werden müssen. Um die Ergebnisse einer Methode innerhalb der Hauptmethode weiter verarbeiten zu können, benötigt man die Methoden mit einem Rückgabewert. Um solche Methoden zu erstellen, muss man im Methodenkopf den Datentyp des Wertes festlegen, welcher übergeben werden soll. Sollte eine Methode keinen Rückgabewert haben, benutzt man stattdessen das Schlüsselwort „void“. Damit der Wert nun zurückgegeben wird, muss der Befehl „return“ im Codeblock mit dem Rückgabewert ausgestaltet werden [Burd, 2014]. Manche

Methoden arbeiten mit den Parametern. Um eine derartige Methode zu deklarieren, ist es notwendig, dass man die Parameter mit dem richtigen Datentyp in runden Klammern hinter den Methodenname schreibt.

Kommentare sind Anweisungen, die nicht vom Computer interpretiert werden. Ein Kommentar dient dazu, innerhalb des Programmes Anmerkungen zu dem Code zu machen, ohne das Programm zu beeinflussen. In Java können drei verschiedene Arten von Kommentaren verwendet werden. Die ersten Optionen sind Kommentare, die mit «/» beginnen und mit «/» enden. Alles, was zwischen dem Öffnen eines Kommentars und dem Schließen eines Kommentars geschrieben wird, hat nichts mit der Funktion des Programms zu tun. Eine weitere Methode zu kommentieren sind Kommentare am Zeilenende. Diese Kommentare müssen nur mit zwei Schrägstrichen geöffnet werden und enden mit dem Ende der Codezeile. Die letzte Art von Kommentaren sind Javadoc-Kommentare, dies ist eine spezielle Art der ersten Kommentarmethode. Javadoc-Kommentare beginnen mit „/*“ und enden wie ein normaler Kommentar mit „*/„[Kofler, 2014]. In Verbindung mit einem weiteren Programm (Java.sun.com) kann mithilfe von Javadoc-Kommentaren eine Dokumentationswebsite zu dem geschriebenen Code erstellt werden.

In Java gibt es 50 Schlüsselwörter (Keywords), die konkret definiert sind und daher nicht als Variablenname oder Klassennamen verwendet werden. Solche Schlüsselwörter werden hauptsächlich durch Compilerfunktionen definiert. Durch die festgelegten Schlüsselwörter ist der Aufbau von Code, der in Java geschrieben wird, immer ähnlich. Anhand dessen kann ein Java-Skript von einem C#-Skript oder einem C++-Skript unterscheiden.

Die If-Abfragen arbeiten mit booleschen Ausdrücken. Ein boolescher Ausdruck, ist ein Vergleich, der als Ergebnis einen Wahrheitswert richtig/falsch (true/false) liefert. Dadurch ist es möglich, mithilfe von Vergleichsoperatoren Bedingungen zu formulieren. Um eine If-Abfrage in Java zu erstellen, wird das Schlüsselwort „if“ benötigt. Nach diesem Schlüsselwort wird anschließend die Bedingung formuliert, unter welcher der darauffolgende Codeblock ausgeführt werden soll. Es ist auch möglich, der If-Abfrage einen „else“-Block anzuhängen. Dieser wird ausgeführt und sollte die Bedingung der If-Abfrage „false“ als Ergebnis haben[Habelitz, 2012]. Somit stellt die If-Abfrage eine einfache Verzweigung dar.

Switch-Blocke sind wie If-Abfragen Kontrollstrukturen, um den Programmablauf zu ändern. Anders als bei If-Abfragen ändert sich der Ablauf jedoch nicht aufgrund einer erfüllten Bedingung, sondern durch Konstanten. Die Switch-Case Abfrage kann über das Schlüsselwort „switch“ aufgerufen werden. Nach dem Schlüsselwort folgt eine Klammer, der eine Variable übergeben werden muss. Im anschließenden Codeblock sind nun die verschiedenen Fälle zu definieren, dabei beginnt jeder Fall mit dem Schlüsselwort „case“. Jedem Fall wird eine Konstante zugeordnet, die zur Ausführung des Falles übereinstimmen muss. Für den Fall, dass keines der definierten Ereignisse eintritt, wird ein Standardfall mithilfe des Schlüsselwortes „default“ programmiert[Bonacina, 2018].

Schleifen ermöglichen die wiederholte Ausführung von Codeblöcken. Die Schleifen sind in zwei Kategorien unterteilt: Schleifen, die vom „Fuß“ gesteuert werden, und Schleifen, die vom „Kopf“ gesteuert werden. Bei fußgesteuerten Schleifen wird die Bedingung zum Wiederholen der Schleife immer nach dem Ausführen überprüft, das heißt es wird nach jedem Durchgang kontrolliert, ob die Bedingung noch erfüllt ist. Kopfgesteuerte Schleifen kontrollieren die Bedingung jeweils bevor sie den Codeblock ausführen.

In Java stellen Variablen Datenbehälter dar, in denen Werte gespeichert werden können. Diese Werte können entweder Zahlen- oder Textwerte sein. Zwei wichtige Informationen, die die Variable enthalten müssen, sind der Datentyp, um festzulegen, welche Daten in der Variablen gespeichert werden dürfen. Die verschiedenen Datentypen werden später erläutert. Die zweite Information, die die Variable erhalten muss, ist der Bezeichner. In Java gibt es zwei verschiedene Wege, um Variablen zu erzeugen. Die erste Methode ist die Initialisierung, bei der der Variablen direkt bei ihrem Erstellen der erste Wert zugewiesen wird. Die zweite Methode ist eine Deklaration, bei der eine Variable nur erstellt wird, um sie dem Computer bekannt zu machen. Der Variablen wird automatisch ein Standardwert zugewiesen, der später durch die neue Zuweisung überschrieben werden kann [Neumann, 2019].

Datentypen werden benötigt, um dem Computer mitzuteilen, mit welchen Werten er arbeiten muss, da unterschiedliche Datentypen unterschiedlich Vorgehensweisen erfordern. Insgesamt existieren acht primitive Datentypen (siehe die Tabelle).

Tabelle 1. Primitive Datentypen

Java Primitive Data Types				
Type	Values	Default	Size	Range
byte	signed integers	0	8 bits	-128 to 127
short	signed integers	0	16 bits	-32768 to 32767
int	signed integers	0	32 bits	-2147483648 to 2147483647
long	signed integers	0	64 bits	-9223372036854775808 to 9223372036854775807
float	IEEE 754 floating point	0.0	32 bits	+/-1.4E-45 to +/-3.4028235E+38, +/-infinity, +/-0, NaN
double	IEEE 754 floating point	0.0	64 bits	+/-4.9E-324 to +/-1.7976931348623157E+308, +/-infinity, +/-0, NaN
char	Unicode character	\u0000	16 bits	\u0000 to \uFFFF
boolean	true, false	false	1 bit used in 32 bit integer	NA

Ein boolescher Datentyp ist ein spezieller Datentyp, da er nur die Wahrheitswerte „true“ oder „false“ speichern kann. „Char“ dient, um einzelne Zeichen zu speichern. „Byte“, „short“, „integer“, „long“ sind Datentypen zur Speicherung ganzzahliger Werte.

Der Unterschied zwischen den verschiedenen Typen liegt in der Größe der darin gespeicherten Werte [Bonacina, 2018]. „Float“ und „double“ werden verwendet, um Fließkommazahlen zu speichern, der Unterschied hierbei ist die Genauigkeit der Nachkommastellen. Um Zeichenketten darzustellen, werden komplexe Datentypen benötigt, diese sind als Klassen abrufbar, da sie durch

Verknüpfung der primitiven Datentypen entstehen. Ein Beispiel für einen solchen komplexen Datentyp ist die Klasse „String“, welche wie bereits genannt genutzt wird, um Zeichenketten darzustellen, sie ist ein Array aus „char“ Variablen.

Arrays sind Datenstrukturen oder auch Datensammlungen, die den Variablen sehr ähnlich sind. Der Unterschied ist jedoch darin, dass in einem Array mehrere Werte gespeichert werden können. Der Zugriff auf diese Werte erfolgt durch einen Index. Der Index wird verwendet, um bestimmte Elemente eines Arrays spezifisch zu adressieren. Wenn man ein Array erstellt, muss man zuerst den Datentyp angeben, den das Array speichern soll, z. B. wenn man eine Variable deklariert. Dazu werden zwei eckige Klammern hinzugefügt, um das Array zu erstellen. Das Array hat eine feste Größe, die beim Initialisieren des Arrays angegeben wird. Eine andere Form des Arrays ist ein mehrdimensionales Array. Es sind mehrere Indizes erforderlich, um auf ein Element in einem solchen Array zuzugreifen, z. B. ein zweidimensionales Array benötigt einen Zeilen- und Spaltenindex.

Objektorientierte Programmierung, kurz OOP, ist ein moderner Programmierstil, der dem menschlichen Denken sehr nah ist. Objekte sind Dinge, die in ihren Eigenschaften klar beschrieben sind. Sie können zusammenarbeiten, um zu der Problemlösung beizutragen. Die Eigenschaften eines Objektes können sich je nach ausgeführter Methode oder in Abhängigkeit von der Zeit ändern. Objekte mit ähnlichen Eigenschaften können in Klassen zusammengefasst werden. Man kann sich eine Klasse wie die Beschreibung ein Auto vorstellen, in der die Farbe, die Marke und weitere Eigenschaften des Autos aufgelistet sind und das Auto herzustellen.

Aufgrund der Universalität und der relativ einfachen Verständlichkeit hat Java weltweit mehr als neun Millionen Nutzer. Aufgrund dieser Menge stellt Java eine offizielle Entwicklung und Verwendung von leistungsstarken Programmen bereit. Ein hohes Maß an Schutz führt dazu, dass in Java geschriebene Programme manchmal auch in Autos, intelligenten Geräten oder auf internen Servern in der Telekommunikation verwendet werden, was Java zu einer vielversprechenden Sprache macht.

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X-RAY TRANSIENTE STRAHLUNG

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Annotation: *Röntgenübergangsstrahlung (RTS) wird derzeit vielfach in verschiedenen Experimenten und an Beschleunigern in sogenannten Detektoren oder Übergangsemittern eingesetzt. Die Identifizierung ultrahochenergetischer geladener Teilchen ist eine äußerst schwierige Aufgabe, und derzeit gibt es keine Detektoren, die in der Lage sind, einzelne geladene Teilchen mit einem Lorentz-Faktor mit zuverlässiger Effizienz zu trennen und zu identifizieren. Um diese „Barriere“ zu überwinden, ist die Entwicklung von Detektoren der nächsten Generation erforderlich, was wiederum detaillierte theoretische Studien erfordert.*

In diesem Artikel beschreibt man die Forschung zur transienten Strahlung und erforscht man die Entwicklung der Theorie zur Röntgen-transienten Strahlung.

Schlagwörter: *transiente Strahlung, Elektron, Energie, Spektrum, Röntgenübergangsstrahlung, Identifizierung ultrahochenergetischer geladener Teilchen*

Transiente Strahlung ist auf die Anwesenheit von Heterogenität zurückzuführen, wenn ein Medium eine Trenngrenze zu einem anderen Medium aufweist. Dieses Phänomen wurde theoretisch von V. L. Ginsburg und I. M. Frank bereits 1945 entdeckt [Ginsburg, Frank, 1945]. Durch diese Entdeckung entstand eine neue Richtung in der Physik, die Wechselwirkung geladener Teilchen mit dem Medium erforschte.

Es sei erwähnt werden, dass die transiente Strahlung gebildet wird, wenn in der Umgebung Inhomogenitäten der elektrodynamischen Eigenschaften vorhanden sind. Dies liegt daran, dass die transiente Strahlung das Ergebnis einer unvollständigen Dämpfung der Sekundärwellen ist, die von den Atomen des Mediums unter dem Einfluss eines vorbeifliegenden geladenen Teilchens emittiert werden. Die physische Natur der Übergangsstrahlung ist die gleiche wie die von Wawilow-Cherenkow entdeckte kollektive Strahlung von Mediemelektronen, die durch eine externe Ladung ausgelöst werden und unter bestimmten Bedingungen voneinander untrennbar sein können.

In der Forschungsarbeit von Ginsburg und Frank wurde der Fall eines senkrechten Durchflusses eines geladenen Teilchens durch die flache Trenngrenze zweier homogener Medien untersucht. Es wurde gezeigt, dass dadurch eine transiente Strahlung entsteht, die hauptsächlich im optischen Frequenzbereich konzentriert ist, wenn man den Teil davon betrachtet, der in der hinteren

Hemisphäre (nach hinten) relativ zur Bewegungsrichtung des Teilchens emittiert wird. Die spektrale Intensität der Strahlung steigt in diesem Fall mit einem Anstieg des Lorenz-Faktors γ des Teilchens (das Verhältnis von voller Energie zu Ruhenergie) nach dem logarithmischen Gesetz an. Daher bietet die Messung der Intensität der transienten Strahlung im Prinzip eine neue Methode zur Bestimmung des Lorenz-Faktors eines Hochenergie teilchens.

Tatsächlich ist die Intensität der Strahlung (Anzahl der Photonen), die auf einer Grenze entsteht, klein (im Durchschnitt etwa $1/137$ Share-Analysator auf einem aufgeladenen Teilchen). Daher war es notwendig, die Wege zu finden, um die Intensität der transienten Strahlung zu erhöhen.

1959 wurde von Garibyan gezeigt, dass der Energieverlust durch die Strahlung durch ein ultrarelativistisches Teilchen ($\gamma \gg 1$) in einer Substanz mit einer Trenngrenze zum Vakuum direkt proportional zum Lorenz-Faktor des γ -Teilchens wächst [Garibyan, 1959]. Nach den Untersuchungen von Dachse und Garibyangeschieht das aufgrund der Tatsache, dass das Spektrum der Übergangs-Strahlung emittierte Teilchen der betrachteten Umgebung in die vordere Hemisphäre (nach vorne) relativ zu der Richtung seiner Bewegung ist. Die erstreckt sich auch auf den Bereich der Röntgen-Frequenzen bis zu Frequenzen in der Größenordnung (– die plasmafrequenz Stoffe), wobei volle Intensität

der Strahlung proportional zur Lorentz-Faktor des Teilchens ist. Wie man weiß, bestehen die vollständigen Energieverluste der Teilchen aus Strahlungsverlusten und Ionisationsverlusten. Bei großen Werten des Lorenz-Faktors γ sind die Ionisationsverluste pro Einheit der Weglänge in einem unendlichen (oder halb-zackigen) Medium unabhängig von γ (Fermi-Dichteeffekt). In der gleichen Arbeit wurde von Garibyan festgestellt, dass in einer Platte, deren Dicke im Vergleich zu einem kritischen Wert klein ist (der die Reihenfolge der optischen Übergangsstrahlung in der Substanz aufweist), der Dichteeffekt bei Ionisationsverlusten nicht vorhanden ist [Garibyan, 1959].

In den 1960 Jahren fand Ter-Mikaelyan basierend auf den zuvor von ihm entwickelten Methoden und Ideen der kohärenten Bremsstrahlung geladene Teilchen in Einkristallen. Die transiente Strahlung weist in einem periodischen heterogenen Medium die Besonderheit auf, dass die Frequenz und der Strahlungswinkel ein bestimmtes Verhältnis („Resonanzbedingung“) aufgrund der Interferenz von Wellen, die an verschiedenen Teilen des Mediums gebildet werden, erfüllen muss [Ter-Mikaelyan, 1960]. Eine solche kohärente Übergangsstrahlung wurde von ihm als „Resonanz“ bezeichnet.

Im selben Jahr wurden mit Hilfe des angegebenen Verhältnisses von Ter-Mikaelyan und Gasasian relativ einfache Formeln für die Frequenz-Winkel- und Frequenzverteilungen (in den Winkel integriert) der Resonanz-RTS in einem endlosen periodischen Schichtmedium erhalten. Gleichzeitig untersuchten Amatuni und Korhmazyan ihre vorherige Arbeit an der verschwommenen Grenze und untersuchten das Medium mit periodisch wechselnder Dichte und erhielten die ersten beiden Zersetzungsglieder in einer Reihe von Strahlungsfeldern. Gleichzeitig haben Garibyan und Goldman aus der zuvor erhaltenen allgemeinen

Formel für Strahlungsfelder bei einem regelmäßigen Stapel aus einer beliebigen Anzahl von Platten Formeln für die Frequenz-Winkel- und Frequenzverteilungen der RTS-Intensität in einem Schichtmedium abgeleitet.

Die phänomenologische Quantentheorie von RTS, die den Einfluss der Rückgabe eines schnell geladenen Teilchens berücksichtigt, wurde von Garibyan konstruiert. Diese Theorie wurde in den Arbeiten von Zaretsky, Lomonossow usw. weiterentwickelt, in denen die „vorübergehende“ Geburt von Pfingstrosen bei der Kollision von schnellen Nukleonen mit Kernmaterie und der erzwungenen Übergangsstrahlung und Absorption untersucht wurde. Die Theorie der Übergangsstrahlung in einer Umgebung mit zufälligen Heterogenitäten wurde von S. Kapitza und Ter-Mikaelyan entwickelt.

Aufgrund der Notwendigkeit, die Möglichkeit der Verwendung von porösen Medien als FIR-Generator durch Garibyan, Gevorgyan und Yang Shi theoretisch zu begründen, wurde erstmals eine allgemeine Formel für die Frequenz-Winkelverteilung der durchschnittlichen Intensität der RTS in einem beliebigen unregelmäßigen Stapel erhalten und analysiert und die entsprechenden Frequenzspektren berechnet.

Wenn ein schnell geladenes Teilchen durch den Kristall läuft, müssen die von den Kristallatomen emittierten Sekundärwellen ein Interferenzmuster mit den durch die Bragg-Bedingung definierten Höhen bilden. Dieses Phänomen wurde im Rahmen der Störungstheorie als „Resonanzstrahlung“ in einer dreidimensionalen periodischen Umgebung von Ter-Mikaelyan betrachtet. Dieses Phänomen hat eine ziemlich enge Ähnlichkeit mit der Strahlung von Wawilow-Cherenkow in einer amorphen Umgebung, daher wird es auch als „Quasi-Cherenkov-Strahlung“ bezeichnet.

Die Theorie der Quasi-Cherenkov-Strahlung eines Teilchens in Cholesterin-Flüssigkristallen wurde von Weiß und Adler entwickelt, im Mosaikkristall von Athanasyew und Aginyan. Die neueste Arbeit hat auch eine einfachere Formel für die volle Intensität der Strahlung in einzelnen „Laugrammflecken“ gegeben. Ryazanov untersuchte die resonante transiente Strahlung relativistischer geladener Teilchen auf geordneten Kristalldefekten: Ketten und Gitter von vakanten Poren.

Bei hohen Strahlungsfrequenzen kann der imaginäre Teil der Polarisierbarkeit des Mediums aufgrund seiner Absorptionsfähigkeit in der gleichen Größenordnung wie der tatsächliche Teil der Polarisierbarkeit oder sogar noch größer werden. Garibyan und Yang Shi zeigten, dass in diesem Fall die Absorptionsfähigkeit eine bedeutende Rolle im Prozess der RTS-Bildung spielen sollte. Dies führt zu einer stärkeren, nämlich einer quadratischen Abhängigkeit der vollen Energie der RTS vom Lorenz-Faktor γ des Teilchens bei ausreichend großen γ -Werten. Der gleiche Effekt tritt auch bei Platten und Plattenstapeln auf.

Beim Durchgang durch die Materie wird das Teilchen immer in unterschiedlichem Maße auf die Atome der Materie gestreut. Die Frage nach dem Einfluss der mehrfachen Streuung eines Teilchens auf die Bildung von RTS wurde erstmals von Garibyan und Pomerantschukim 1959 gestellt.

Ter-Mikaelyan untersuchte die Auswirkungen der multiplen Streuung in einem geschichteten Medium unter der Annahme, dass die Dielektrizitätszahl des Mediums eine periodische räumliche Abhängigkeit aufweist und die Wahrscheinlichkeit einer Teilchenstreuung im gesamten Medium gleich ist. Die Formel für das Frequenzspektrum der vollständigen Strahlung, die durch ein relativistisches geladenes Teilchen in der Platte gebildet wird, wurde unter Berücksichtigung der mehrfachen Streuung von Garibyan und Yang Shi erhalten und untersucht. Sie haben eine einfache und natürliche Methode vorgeschlagen, einen Teil, der durch das Vorhandensein von Grenzen, einen Kanteneffekt, aus der vollständigen Strahlung zu isolieren. Diese Autoren und Wardanyan haben gezeigt, dass neben der Bildung von Bremsstrahlung eine wiederholte Streuung des Teilchens zu einer Glättung und Anreicherung des Frequenzspektrums führt.

Die Möglichkeit der Verwendung von RTS, die in einer periodisch heterogenen Umgebung als intensive Röntgenquelle gebildet wurde, wurde von Zhewago festgestellt. Etwas später schlugen Pantell und seine Mitarbeiter (USA) eine ähnliche Idee vor und bemerkten dabei, dass eine solche Quelle leicht wieder aufgebaut werden konnte. Die Autoren dieser Arbeiten führten nicht nur theoretische, sondern auch entsprechende experimentelle Studien durch.

In unserer Forschungsarbeit haben wir die anfängliche Forschung und Entwicklung der RTS-Theorie untersucht. Dank der linearen γ -abhängigen Platte, gebildet an der Grenzfläche zwischen halbendloser Umgebung mit Vakuum und einer deutlich kürzeren Wellenlänge der Strahlung, gibt es eine echte Chance für den Einsatz Phänomene in der Physik RTS hochenergetischen Teilchen. Bis heute bietet RTS tatsächlich die einzige und destruktive Möglichkeit, ultrarelativistische Teilchen zu identifizieren.

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EINFÜHRUNG DER INFORMATIONSTECHNOLOGIEN IN DAS BLUMENGEWÄCHSHAUSGESCHÄFT

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Annotation. *Der Artikel widmet sich dem Prozess der Entwicklung einer Softwareanwendung für einen Blumengewächshauskomplex. Es werden die Schritte beschrieben, die während des Projektumsetzungsprozesses durchgeführt wurden. Im Projektprozess wurden verwendet: eine Datenbank, verschiedene Datenansichtsmodelle, die Delphi 7-Entwicklungsumgebung. Das entwickelte Informationssystem kann für die Verwendung als Mittel zur Automatisierung der Tätigkeit eines Blumengewächshauskomplexes empfohlen werden. Es wird helfen, viele Produktionsaufgaben zu lösen.*

Schlagerwörter: *Blumenzucht-Gewächshausprojekte, Informationssystem, Modellierung, Datenbankverwaltungssystem, Software, Datenbankmodell, Programmierung, Softwareanwendung für Blumengewächshauskomplex*

In den letzten 5 Jahren strebt Russland nach vollständiger Imports substitution. Die Pflanzenzucht ist eine der wichtigsten Industriezweige, die diesen Trend vollständig erfasst hat. Derzeit entwickeln sich in unserem Land die Technologien des geschützten Bodens aktiv. Jedes Jahr steigen die Investitionen in Gewächshausprojekte, derzeit sind mehr als 1,1 Tausend Hektar Gewächshäuser angelegt [Djatlowskaja, 2017].

Geschlossene Bodenanlagen sind technische Systeme mit komplexer Ausrüstung, die Heizung, Ernährung, Bewässerung, Pflanzenschutz bietet, Temperatur, Feuchtigkeit, Lichtmenge durch manuelle oder automatische Verfahren reguliert. Unter den im geschlossenen Boden produzierten Agrokulturen gibt der Anbau von Blumen den größten Gewinn, obwohl in dieser Richtung die strengsten Anforderungen an Klima und Pflege bestehen. Blumenzucht-Gewächshausprojekte zahlen sich viel schneller aus, etwa ein Jahr, wenn sie mit Gemüsebauern verglichen werden.

Die Änderung der Position dieses Marktsektors im Land sollte nicht nur durch die Erweiterung der Flächen für Zierpflanzen, sondern auch durch die Einführung von Informationstechnologien in den Produktionsprozess helfen. Wenn bisher die große Aufmerksamkeit bei der Entwicklung der Mittel der Automatisierung der Gewächshäuser den Aufgaben der Bereitstellung von technologischen Parametern gewidmet wurde, so ist jetzt die Entwicklung von Informationssystemen aktuell, die die Aufgaben der Buchhaltung und der Logistik der spezifischen Ware löst. Einige Vertreter von Blumen, die aktiv in Gewächshäusern angebaut werden: Tulpen, Rosen, Lilien, Petunien, Nelken, Pfingstrosen.

Jedes Jahr werden die Erfolge sowie Probleme der Pflanzenzucht, einschließlich Gemüseanbau und Blumenzucht, auf verschiedenen Landwirtschaftsmessen diskutiert. Beispiele für einige große Ausstellungen, die in unserem Land stattfinden sind zu nennen: “Der geschützte Boden Russlands”, “YUGAGRO”, “BlumenExpo”, “Herbst auf dem Land”, “Herbstgarten”. Diese Ausstellungen bieten: Workshops von Gärtnern und Floristen; Kochkurse; spezialisierte Konferenzen und Seminare an.

Der Themenbereich dieser Arbeit ist die Untersuchung der Arbeit eines Blumengewächshauskomplexes. Wenn ein Nutzer im Internet auf die Hauptseite eines Geschäftes geht, so achtet er zuerst auf die Gestaltung der Hauptseite. Hier bekommt man den ersten Eindruck von dem Laden: angenehme Farben, die Arten der Produktion, die günstige Anordnung der Tasten, die Navigation usw. – das alles ist das Interface.

Heute gibt es in fast jedem Geschäft eine Lieferung von Produkten. Blumen sind keine Ausnahme. Außerdem gehören sie zu den ersten, die diese Funktion eingeführt haben. Früher haben die Leute direkt im Geschäft bestellt, aber die moderne Technologie hat diese Funktion mobiler gemacht. Das Internet ist am bequemsten für die Bestellung.

Trotz der riskanten Komponente hat das Blumengeschäft eine große Zukunft. Die Arbeit im Gewächshaus ist nicht nur unterhaltsam, sondern ist auch ein mühsamer Prozess. Die Organisation eines Unternehmens sieht vielleicht wie eine einfache Aufgabe aus. Aber es ist nur auf den ersten Blick. Im Gewächshausgeschäft sind viele Mitarbeiter tätig: vom Technologen bis zum Schlosser.

Die richtige Organisation des Arbeitsplatzes und der Zeit reduziert die Belastung der Mitarbeiter des Gewächshauses erheblich. Der Kunde weiß, was für ein Blumenstrauß er braucht und macht die Bestellung. Deswegen machen die Blumenläden im Voraus einen Kaufbeleg für die benötigte Ware, wenn sie die nicht haben. Da das Gewächshaus fast rund um die Uhr funktioniert, benötigen viele Arten und Sorten von Blumen besondere Pflege. Die Arbeiter müssen Zeit haben, bestimmte Blumenprodukte zur Lieferung vorzubereiten. Deshalb trägt die Entwicklung und die Einführung der App dazu bei, die Tätigkeit der Mitarbeiter des Gewächshauses zu erleichtern.

Ein Blumengeschäft zu führen ist ein zeitaufwendiger Prozess. Daher wurde beschlossen, ein Informationssystem zu entwickeln, das dem Unternehmer hilft, sein Geschäft zu führen. Die Entwicklung eines IS besteht aus drei Phasen.

Die erste Stufe ist die Modellierung von Geschäftsprozessen. Die Modellierung von Geschäftsprozessen ist der Prozess der Erstellung und Beschreibung verschiedener Prozesse, die im Unternehmen stattfinden, um die Effizienz bei der Entwicklung und Implementierung eines Informationssystems zu verbessern.

Das optimale CASE-Tool zum Entwerfen von Diagrammen ist ERwinProcessModeler. Bei der funktionalen Modellierung wurden die Notationen IDEF0, IDEF3, DFD verwendet.

Schritt zwei ist die Auswahl des DBVS. Ein Datenbankverwaltungssystem wird als Softwaresystem bezeichnet, das entwickelt wurde, um eine gemeinsame Datenbank zu erstellen, die für viele Aufgaben verwendet wird. Diese Systeme dienen dazu, die Datenbank auf dem neuesten Stand zu halten und den Benutzern den Zugriff auf die darin enthaltenen Daten zu ermöglichen.

Jedes DBVS hat seine eigenen Merkmale, die berücksichtigt werden müssen. Wenn man jedoch eine Vorstellung von den Funktionen eines DBVS haben möchte, kann man sich auch eine verallgemeinerte Technologie für die Benutzererfahrung in dieser Umgebung vorstellen. Als die Hauptschritte der verallgemeinerten Technologie der Arbeit mit DBVS kann man folgende betonen:

- Erstellen einer Datenbank-Tabellenstruktur;
- Eingabe und Bearbeitung von Daten in Tabellen;
- Verarbeitung der in Tabellen enthaltenen Daten;
- Ausgabe von Informationen aus der Datenbank.

Der Zweck eines DBVS besteht darin, die Datenbanken zu erstellen, zu pflegen und zu verarbeiten. Das DBVS bietet erhebliche Möglichkeiten, mit den gespeicherten Daten zu arbeiten, sie zu verarbeiten und zu verwenden. Jede Datenbank wird als Datei mit der Erweiterung "acddb" auf der Festplatte gespeichert. Die derzeit verwendeten DBVS verfügen über Datenintegrität, um die vollständige Datensicherheit bei geringerem Programmieraufwand zu garantieren. Produkte, die unter Windows funktionieren, verfügen über die Bequemlichkeit der Benutzeroberfläche und integrierte Mittel der Leistungssteigerung.

In der heutigen Zeit ist MS Access ein beliebtes DBVS, das für einen PC entwickelt wurde. Sie wurde als Fallmittel für die programmatische Umsetzung des Systems ausgewählt. Die Wahl von Access zum Erstellen einer Datenbank liegt auf der Hand. MS Access verfügt über eine einfache Möglichkeit, Objekte zu entwerfen. Das ermöglicht es dem Benutzer, bei minimaler Vorbereitung schnell ein vollwertiges Informationssystem zu erstellen.

Anschließend wurden drei Datenmodelle erstellt. Es gibt drei Arten von DB-Modell:

- Logisches Datenbankmodell – Ein Datenbankmodell, das nicht an ein bestimmtes DBVS gebunden ist. Darin werden die wichtigsten DB-Objekte hervorgehoben und die Beziehungen zwischen diesen Objekten definiert. Dieses Modell wird durch die Entity-Relation-Methode erstellt.

- Physikalisches Datenbankmodell – basiert auf dem logischen Datenbankmodell unter Berücksichtigung der Einschränkungen des ausgewählten DBMS, enthält alle Details, die für die Erstellung der Datenbank erforderlich sind: den Namen der Zeilen und Spalten, den Datentyp usw.

- Das infologische Modell der Datenbank – mit seiner Hilfe werden die wichtigsten Entitäten hervorgehoben und die Beziehungen bezeichnet, die zwischen diesen Entitäten hergestellt werden können.

Die dritte Stufe ist die Entwicklung der Software.

Die Software zur Automatisierung des Blumengewächshauskomplexes wurde in der Umgebung von Delphi 7 in der Sprache Object Pascal entwickelt. Die

Programmierung in Delphi basiert auf der Interaktion zweier Prozesse. Es ist der Prozess der Erstellung der Programmoberfläche und des Schreibens von Code. Es gibt eine Beziehung zwischen dem Inhalt des Formularfensters und dem Codefenster, die von Delphi eindeutig verfolgt wird. Das bedeutet, dass das Platzieren einer Komponente auf einem Formular automatisch den Code ändert (den die Umgebung selbst erstellt), und umgekehrt – das Entfernen bestimmter eingefügter Codeausschnitte kann dazu führen, dass die entsprechenden Komponenten entfernt werden.

Auch in Delphi kann man leicht und einfach Benutzeroberflächen erstellen, die sich in Bezug auf Funktionalität und Möglichkeiten nicht von den Schnittstellen unterscheiden, die mit Hilfe der traditionellen Werkzeuge geschaffen wurden. Jede der drei Phasen ist für die korrekte Entwicklung der Software unerlässlich.

Die Einführung von IC in die Aktivitäten des Blumengewächshauskomplexes wird die folgenden Produktionsaufgaben lösen:

- Mitarbeiter durch Automatisierung von Routinearbeiten befreien;
- Mitarbeiter und Kunden mit zuverlässigen Informationen versorgen;
- die Menge an Papierdokumenten aufgrund der Verarbeitung von Informationen auf dem PC reduzieren.

So kann das entwickelte Informationssystem für die Verwendung als Mittel zur Automatisierung der Tätigkeit eines Blumengewächshauskomplexes empfohlen werden.

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