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**ЦЕНТР НАУКИ**  
БИБЛИОТЕКА ГОРЬКОГО

**«Development of Science»  
(«Развитие науки»):  
материалы конкурсов  
исследовательских работ  
на английском языке  
(2018–2019 гг.)**

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**Development of Science = Развитие науки : материалы конкурсов исследовательских работ на английском языке (2018–2019 гг.) / Пермская государственная краевая универсальная библиотека им. А. М. Горького ; сост. И. И. Муравьев. – Пермь : [б. и.], 2019. – 86 с. – ISBN 978-5-6043295-1-1.**

В сборнике представлены материалы второго и третьего ежегодных конкурсов работ на английском языке «Development of Science» («Развитие науки»). Второй конкурс был посвящен проблемам и направлениям развития города Перми, третий конкурс прошел под темой «Взгляд в будущее: моя страна и мир к 2040 году». Работы представили 14 студентов пермских вузов, раскрыв заявленные темы с позиций разных наук и областей человеческих знаний.

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### **From the originator**

The first contest of scientific research in English language «Development of Science» took place in 2017 in Perm State library named after A.M. Gorky. It was initiated by communicative ground of scientific community («Center of science»). It was devoted to the Year of science and education in Great Britain and Russia. Based on the results of the contest, the first compilation named «Development of Science» was released in 2017.

In this compilation you can find materials of the second and the third annual contests of works in English language «Development of Science», which were held in 2018 and 2019.

The 2018 contest was dedicated to problems and directions of development of Perm city. Participants touched on the subjects of culture, ecology, social problems, and many others. In the competition participated students of higher education and specialized secondary educational establishments in Perm krai: Perm State National Research University, Perm State Medical University, Perm Technical School of Industrial and Informational Technologies, Perm State Professional Pedagogical College. All the participants have received gratitudes and certificates.

In 2019, participants of the contest introduced presentations about perspectives of development of the world and certain countries in the close future. The topic was the future of medicine, linguistics, energy, international relations, music, and subject of relevance of some jobs by 2040. In the contest participated students of Perm State National Research University, Perm State Medical University, Perm State Institute of Culture, Perm State Professional Pedagogical College. For the first time, international students became participants of competition. 1 place took Ekaterina Peshina (Perm State National Research University), 2 place – Kamal Zuani (Perm State Medical University), 3 place – Bholanath Gupta (Perm State Medical University).

## От составителя

Первый конкурс научно-исследовательских работ на английском языке «Development of Science» («Развитие науки») состоялся в 2017 году в Пермской краевой библиотеке им. А.М. Горького. Он был инициирован Коммуникативной площадкой научного сообщества («Центр науки») и посвящен Году науки и образования Великобритании и России. По результатам конкурса вышел первый сборник «Development of Science» (Пермь, 2017).

В этом сборнике представлены материалы второго и третьего ежегодных конкурсов работ на английском языке «Development of Science», которые прошли в 2018 и 2019 годах.

Конкурс 2018 года был посвящен проблемам и направлениям развития города Перми, поэтому участники затронули в своих работах культуру, экологию, социальные проблемы города и многое другое. В конкурсе приняли участие студенты высших и средних специальных учебных заведений Пермского края: Пермского государственного национального исследовательского университета (ПГНИУ), Пермского государственного медицинского университета (ПГМУ), Пермского техникума промышленных и информационных технологий (ПТПИП), Пермского государственного профессионального педагогического колледжа (ПГППК). Все участники конкурса получили благодарности и сертификаты.

В 2019 году участники конкурса представили презентации о перспективах развития мира и отдельных стран в ближайшем будущем. Предметом обсуждения стало будущее медицины, лингвистики, энергетики, международных отношений, музыки, был рассмотрен вопрос актуальности некоторых профессий к 2040 году. В конкурсе приняли участие студенты ПГНИУ, ПГМУ, Пермского государственного института культуры (ПГИК), Пермского государственного профессионального педагогического колледжа (ПГППК). Впервые участниками конкурса стали иностранные студенты. 1 место заняла Екатерина Пешина (ПГНИУ), 2 место – Камал Зуани (ПГМУ), 3 место – Бхоланат Гупта (ПГМУ).

**Problems and development path of Perm city  
(contest of 2018)**

**Проблемы и направления развития города Перми  
(конкурс 2018 г.)**

Voronova Anna Воронова Анна

Perm State Medical University named after E. A. Vagner Пермский государственный медицинский университет им. Е. А. Вагнера

**The health status of socially excluded people evaluation      Способы оценки состояния здоровья социально неадаптированных людей**

**Abstract:** In this work, the author points out the problem of socially excluded people. This article shows statistics of places of living these people in Russia, their educational level, correlation of diseases and injuries they have.

**Аннотация:** В данной работе автор раскрывает проблему социально неадаптированных людей. Приводится статистика мест проживания таких людей в России, уровень образования, подробно раскрывается соотношение травм и заболеваний, которые у них имеются.

An introduction. Do you know who socially excluded people are? Frankly speaking, there are lot`s of interpretations of these phrase. One of them claims that socially excluded people are all the people that are not able to use social benefits in full. And seems to be a big number since orphans, homeless people, low-income people and many others can`t do it. This research covers only one category of socially excluded people and they are homeless.

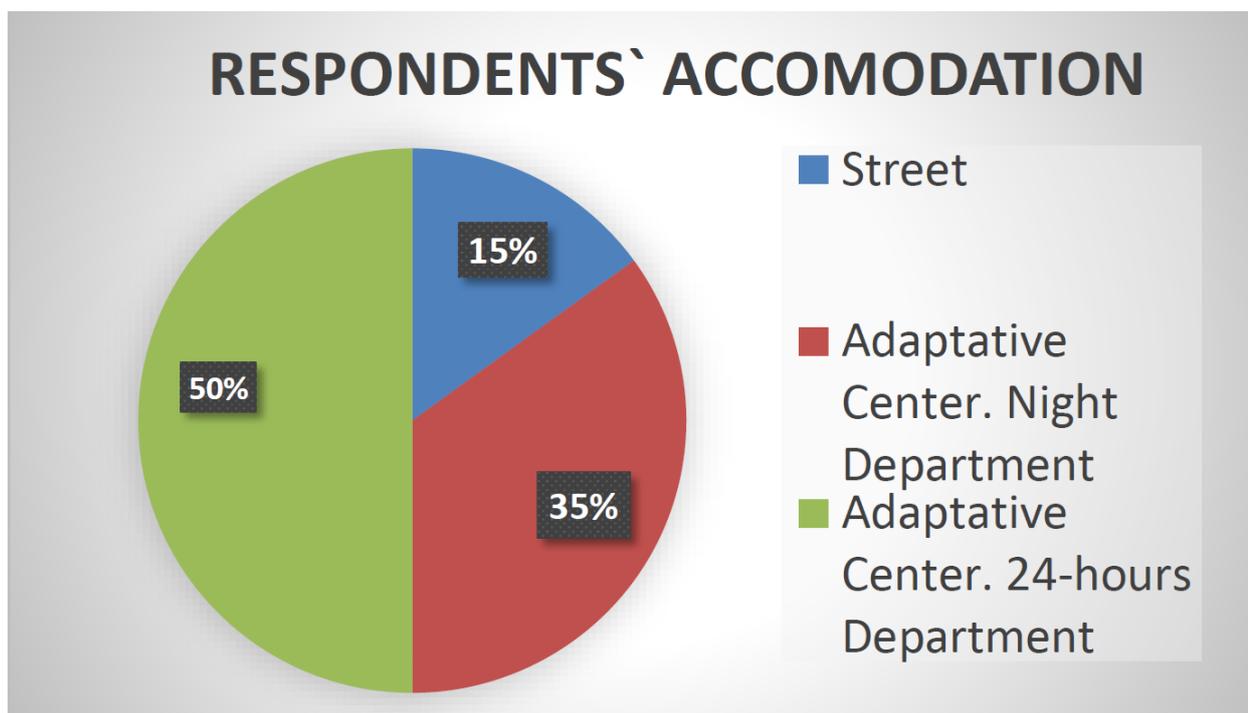
Are the usual people used to think about roofless people problems? I suppose the answer is no. We use benefits of the XXI century and we got used to them. But at the same there people that haven`t used such simple facilities as clean water and electricity. So, what are the outcasts` problems? And how does the presence of these problems affect the health status of a person? This project is due to respond this questions.

The research purpose is the health status evaluation of homeless people living on the street and homeless people living in Adaptative Centers. The research problems are working out of an

appropriate questionnaire, dealing with law problems, questioning and medical exam holding, health status evaluation with the usage of CIRS scale, results analyzing and spreading the results making the society aware.

The research urgency is reflected by the data of the all-Russian population census. According to official information, approximately 60 000 of people were living in the Russian Federation without an accommodation in 2010. But according to unofficial data, the number of homeless people reached almost 3,000,000 for the same period of time. This is a significant not only assistance in social rehabilitation, but also some basic medical care from a society. The uniqueness and novelty of this research lies in its surveys and elementary physical examinations.

During the study 40 respondents including 30 men and 10 women were questioned. An average age respondents was 52 years, the youngest one was 34, the oldest one was a 99 years old woman. Among the respondents, 27 people had experience of living exactly on the street. That means they were vagranting before they came to Centres of social adaptation. At a moment of research (December 2017) 13 people were living on the street for more than a year. The most lengthy no accommodation period lasted for 19 years.

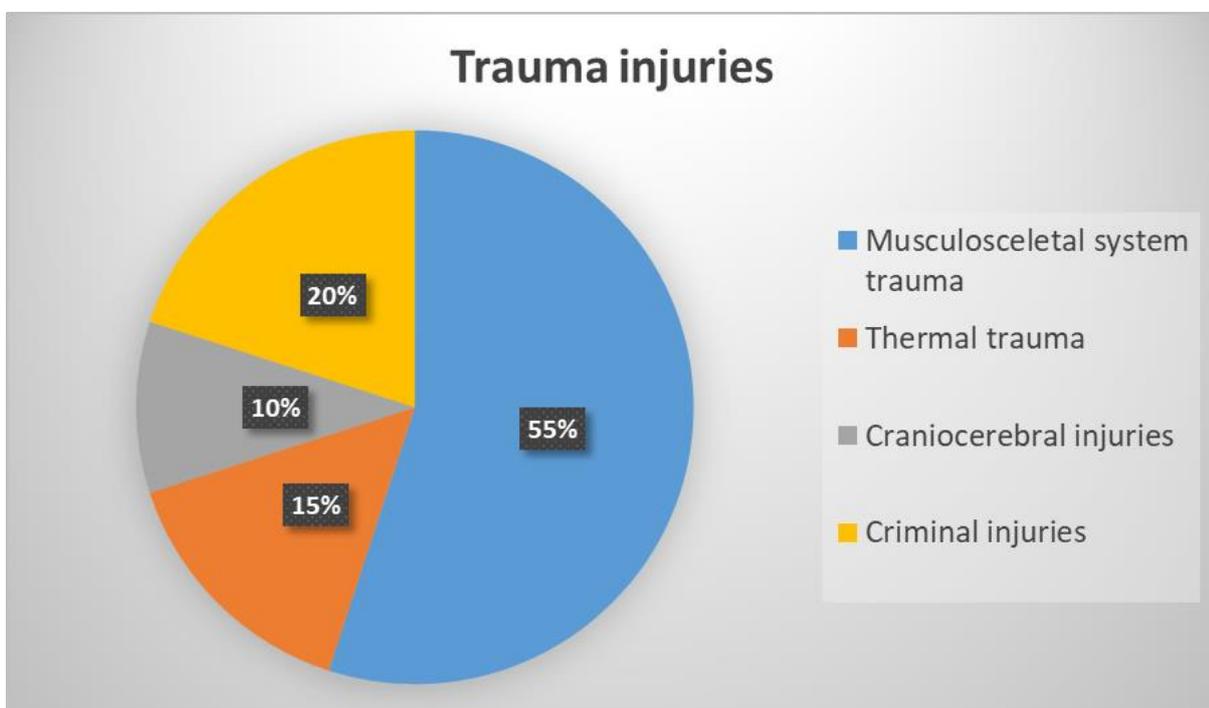


Education of respondents presents particular interest. Only seven people out of forty have no education. Seventeen people graduated a high school, 13 people have intermediate vocational education. Three people graduated from universities and mastered such professions as a dentist, a therapist and an engineer.

This study was conducted in two stages. The first stage was interviewing, the second one was an elementary medical exam. It's important to notice that at the very beginning of the first stage, at the moment of invitation to participate in the study none of the future respondents refused. It may be some kind of an indicator of their interest and it reveals remained social orientation of these people.

Moving on to the research itself a good idea is to start with the bad habits presence as far as it's impossible to stay healthy if you've got any of them. Through the usage of questionnaire it is established that 90 % of respondents smoke, 87.5 % take alcohol, 12.5 % are drug-addicted.

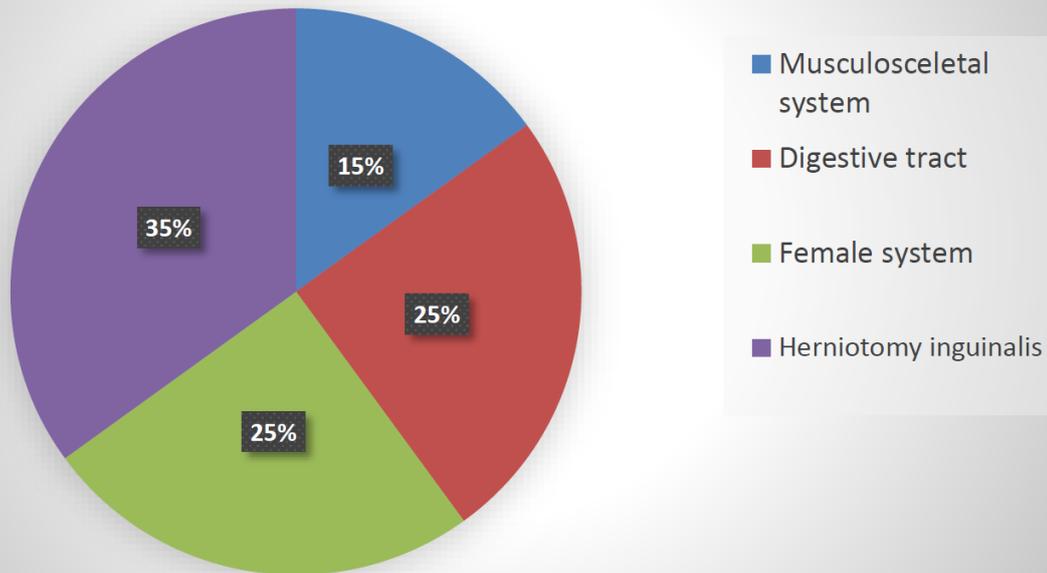
It's hard to stay uninjured if a person lives a homeless life. The next point was about any traumas a person has got. 100 % of respondents had traumas during an unhoused life. The traumatical structure consists of injury of musculoskeletal system – 55 %, the criminal injuries (stab, gunshot wound) – 20 %, thermal traumas – 15 %, traumatic brain injury – 10 %.



In view of the prevalence of musculoskeletal system injuries, it's structure was detailed. It's established that 67 % of the cases were extremities fractures, 13 % were joint dislocations, 10 % were ruptures and 10 % were soft tissue injuries.

Being asked about surgical interventions 60 % of interviewed people replied they were had an experience of surgeries living a homeless life. 35 % of respondents said they were operated because of inguinal hernia. The answers given to a question of the quality of medical care are of particular interest. So, 12 people estimated it as «worthy», 6 people are satisfied with it and three people were refused in assistance. The reasons for refusals are the lack of any identity documents or alcohol intoxication condition.

## Operative interventions



Being asked about chronic pathology, respondents named a wide range of diseases, for example, chronic calculous cholecystitis, chronic gastritis, coxarthrosis. It's impossible to systematize the obtained data on this issue, since the answers are rarely duplicated.

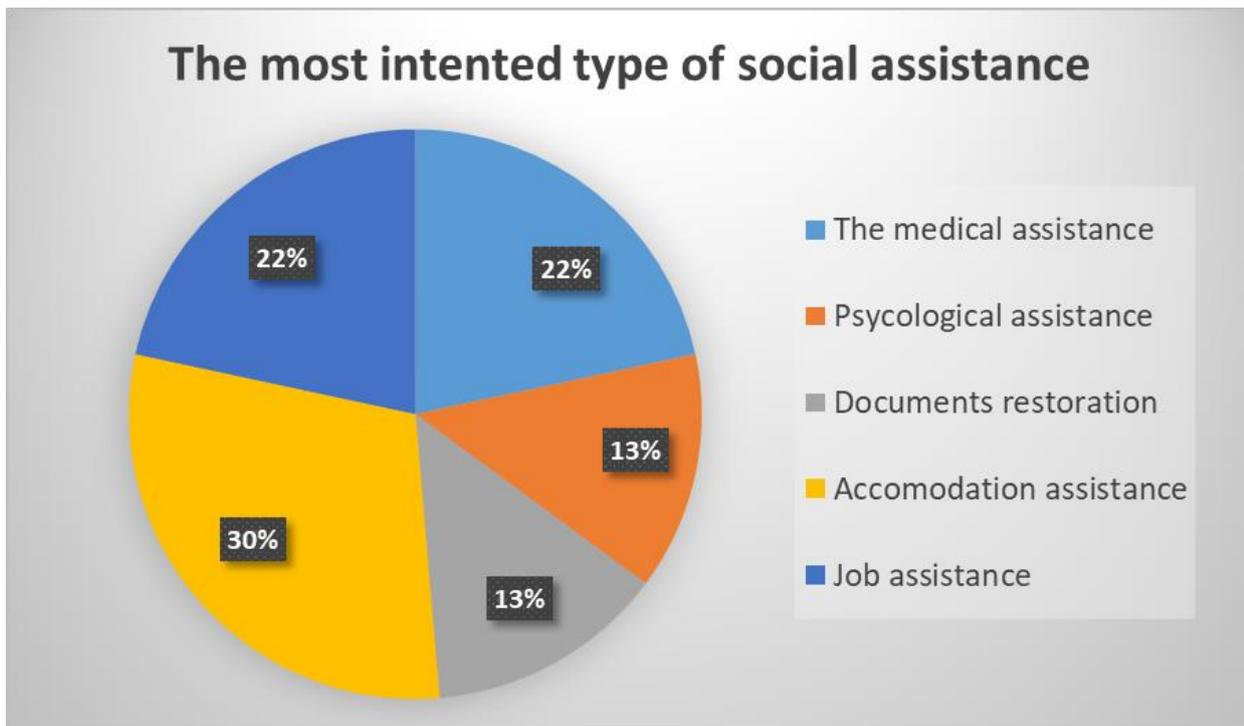
Of course, one of the most important components of health is the absence of socially significant diseases such as tuberculosis, HIV, hepatitis B, hepatitis C. These diseases are hazardous not only for the patient, but for people around him too. 40 % of respondents claimed that they've got the listed diseases. 13 % of respondents have HIV, 13 % hepatitis C, 8 % hepatitis B, 6 % tuberculosis. It is important to note that these diseases are usually combined with each other. For example, respondents who answered that they have HIV also noted the presence of hepatitis C. At the same time, only 50 % of contaminated respondents take antiviral therapy that is obligatory for HIV treatment.

When the questionnaire stage was finished, the respondents were offered to undergo an elementary medical examination, consisting of pulse examination, blood pressure measurement, skin examination, cardiac and pulmonary auscultation.

An average pulse meaning is 78 per minute. An average meaning of blood pressure is 140/100 mm Hg. During the skin examination the presence of severe pathology was identified rarely. Dryness, hyperemia or pale skin in certain parts of the body are mostly common. There were only two cases of harsh violations. A man had a large trophic ulcer of his shin. A woman had softening and suppurating skin of the parietal region.

Pulmonary auscultation revealed wet rales in 100% of cases. It may be regarded as a symptom of chronic bronchitis caused by long-time smoking. Cardiac auscultation revealed a wide range of pathological signs but the most common was disordered heart rate.

The final question the unsettled people were asked about was to reveal what kind of social assistance they want to get. It seems to a surprise that the main thing a homeless person dreams to obtain the most is a private accommodation. The structure and percentage of answers are given below.



When the theoretical part of a project was over it was a high time to star analyzing and estimating the health statuses itselfes.

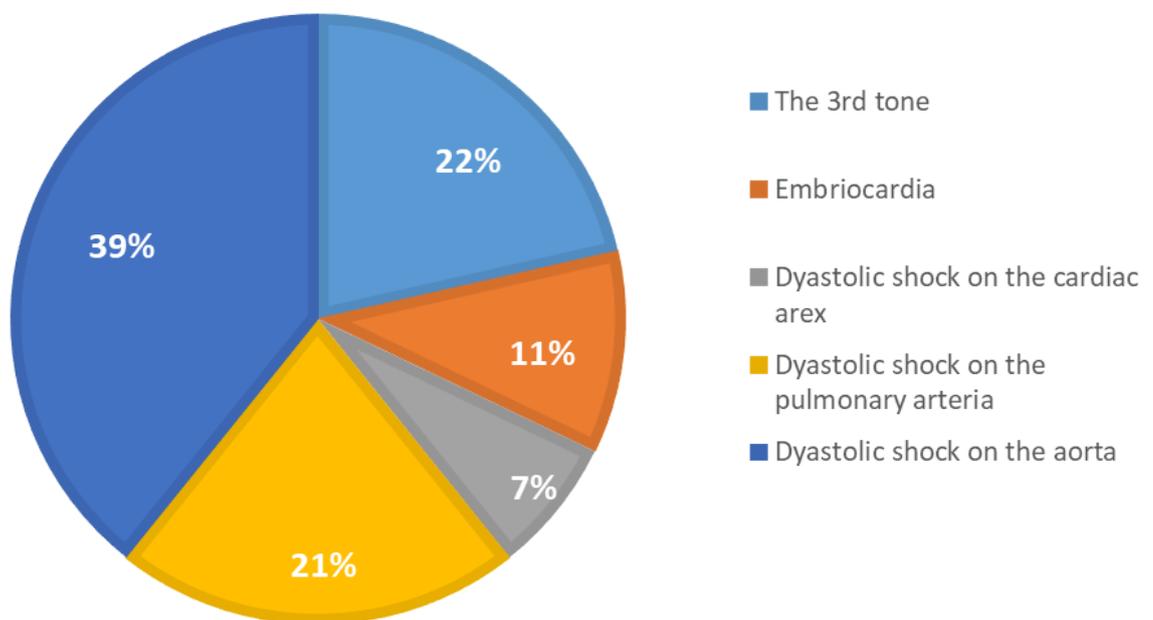
As a method to estimate the health status and determine and rate comorbid pathology the system CIRS (Cumulative Illness Rating Score) was chosen. The advantages of this method are the simplicity of evaluation (method of summation points) and it evaluates health in general (it`s important since the majority of scales evaluate health basing on a presence of a peculiar disease). The disadvantage is no instructions about how to evaluate the obtained scores.

Cumulative Illness Rating Scale estimates the health status through summing scores if body systems are affected. CIRS is appropriate to use to estimate such systems as cardiovascular system, pulmonary system, digestive tract, neurological system, musculoskeletal system. This scale includes oncology presence, alcohol consumption, mention diseases too.

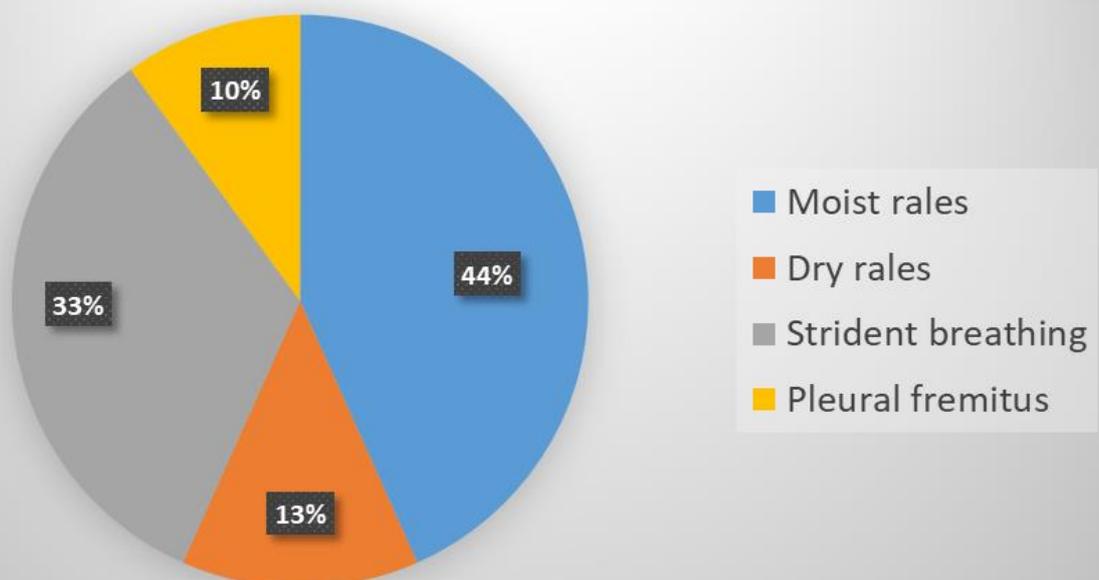
After the results analysis with the usage of this technique, the following results were obtained. In 100 % the presence of comorbid pathology was established. An average number of affected systems is  $4.2 \pm 1.9$ . The mean score of severe comorbid pathology is  $1.9 \pm 0.6$ .

The results obtained during the survey may regard the health status of respondents as decentish one. This conclusion can be made on the basis of the presence of combined pathology in 100 % of respondents and impact of adverse factors such as living on the street and bad habits. Somatic health is often affected by psychoneurotic deviations caused by social isolation, misunderstanding and lack of support from people around.

### HEART AUSCULTATION PATHOLOGY



### Pulmonary auscultation pathology



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**Sociological research of Perm University culture: does the organizational culture of employees contribute to innovation?** Социологическое исследование уровня культуры Пермского государственного университета. Насколько способствует инновациям организационная культура сотрудников?

**Abstract:** In this paper the author makes a research of organizational culture of employees, and how it contribute to innovations. During the research, the employees were divided into three groups, and took part into a questionnaire. In the end of research, the author highlights such organizational qualities as: sociability and solidarity.

**Аннотация:** В статье исследуется, как организационная культура сотрудников ПГНИУ способствует инновациям. В ходе исследования было выделено три группы сотрудников и проведен социальный опрос, в результате которого выяснились их социальная активность, общительность и сплоченность.

Perm National Research University is the oldest university of Perm. More than a hundred years, he promotes the development of the city, produces specialists and scientists who change the city. The future of the city depends on how well Perm University prepares graduates

On November 16, 2006, the CIS countries adopted the «Model Law on Innovation Activities». It is aimed at harmonization in the field of innovation activity of the legislation of the Commonwealth countries. Higher educational institutions are the subject of innovation. The transition to an innovative development path implemented by a modern university is hampered by the lack of an appropriate organizational culture and traditional cultural values. This barrier is manifested in the opposition of university staff to the introduction of innovations in educational, research and educational processes.

The strategy of the PSNRU is aimed at the introduction of innovative values and a creative, entrepreneurial approach to scientific and educational activities, but in everyday practice it is not

easy for the employee to move to a new model of educational and research activities and gain new values. Thus, the problem is expressed in the contradiction between the values declared by the heads of the university and its departments, and implemented in practice, in the daily activities of employees.

In carrying out the sociological survey «The Type Of Organizational Culture And Value Orientations Of The PSNRU Employees», the following scientific approaches were used: innovative management (A. V. Surina and O. P. Molchanova), typology of organizational culture (R. Goffee and G. Jones) [1], method of assessing the value orientations of teachers in research activities (G. A. Mkrtychyan) [2].

### **Description of the research**

120 employees of the university participated in the survey. All faculties (10 employees from the faculty) and the Mozgovo Innovation Center (6 respondents), the Natural Science Institute (7 respondents) and the Regional Institute for Continuing Education of the PSNRU (7 respondents) were involved in it. The survey was carried out by distributing questionnaires among teachers in two ways. The first 50 questionnaires were sent by email, the remaining 70 respondents were questioned at the departments and laboratories.

The first part of the questionnaire consisted of data on the field, age and division where the respondent works. In the second part of the questionnaire, employees note the degree of their consent (on a 5-point scale) with 23 statements regarding their unit. As a result, the scales of sociality and solidarity are measured quantitatively, and the type of culture is determined. The third part of the questionnaire was developed according to the methodology of Mkrtychyan «Assessment of Value Orientations of University Employees».

In the course of the study, the employees were divided into three groups:

1. Employees of natural science faculties (Biology, Geography, Geology, Physics, Chemistry);
2. Employees of humanitarian faculties (History and Politology, Faculty of Modern Foreign Languages and Literatures, Philology, Philosophy and Sociology, Law Faculty);
3. Employees of isolated units (RICE, «Mozgovo», Natural Science Institute).

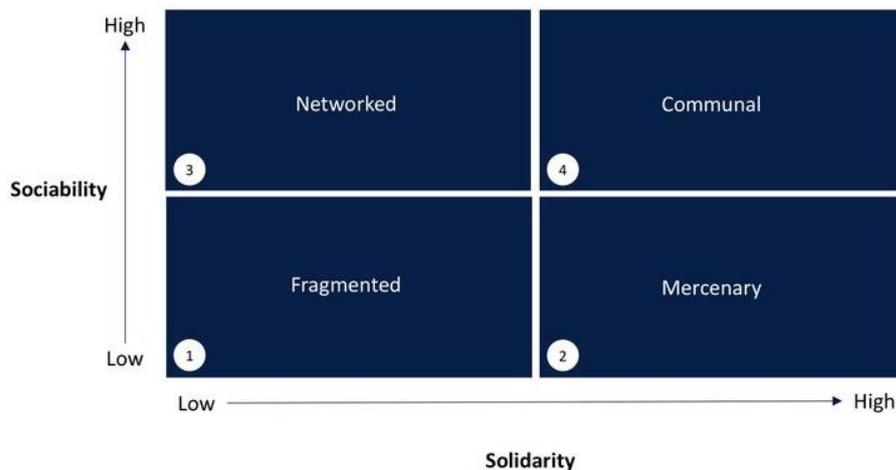
Why is the type of organizational culture important for us? According to the Goffee and Jones, innovative types of organizations are characterized by a network type of culture, with a high level of community and sociability.

The definition of the type of organizational culture took place according to the methodology of Rob Goffee and Gareth Jones «The Double S Model». It is based on the determination of the position in the coordinate plane, where the axes are sociability and solidarity. The double-S model

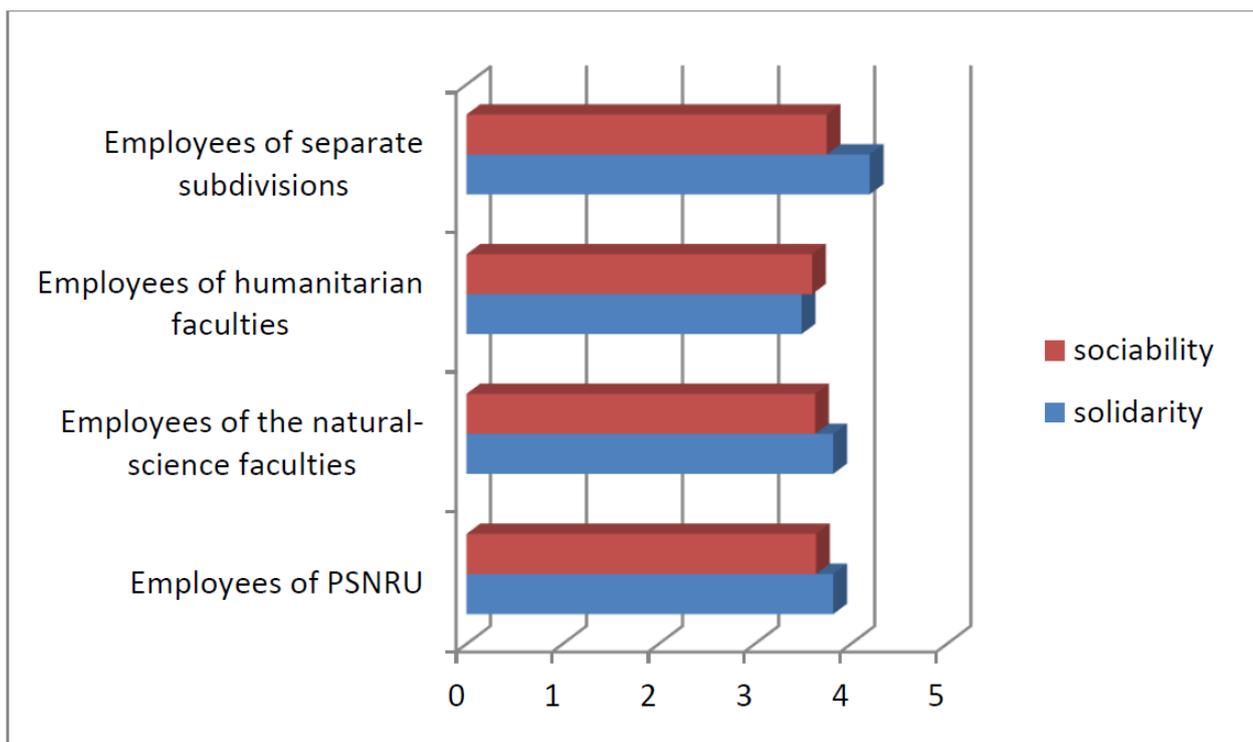
is a two-by-two matrix that identifies 4 cultures, depending on high and low solidarity and sociability.

Sociability measures sincere friendliness and non-instrumental relations (in which people don't see others simply as means of satisfying their own ends) among members of a community, associating with each other on equal terms. It is sustained through continuing face-to-face relations.

Solidarity measures a community's ability to pursue shared objectives quickly and effectively, regardless of personal ties. It is about relationships which employees builds on common tasks, mutual interests, or shared goals that will benefit all involved parties.



To determine the type of organizational culture, it is necessary to determine the average sociability and community. To this end, we determined the level of sociability and community of each respondent and the type of distribution.



The average value of the «Solidarity» characteristic for the entire sample of respondents is approximately 3.82, the average value of the «Sociability» characteristic is approximately 3.64. Accordingly, the type of culture «Solidarity» is more pronounced. According to these data, on the one hand, interaction and communication between university staff has traditionally been benevolent and open, and on the other hand, there is a fairly high similarity between teachers in understanding the goals and objectives of academic activity.

The average value of the community for the employees of the natural science faculties is 3.82, while the sociability is 3.63. Consequently, the staff of these faculties have the most pronounced type of culture «Communal».

For humanitarian faculties, the average value of the characteristics «Solidarity» and «Sociability» are, respectively, 3.49 and 3.60. As we see, the communal type of culture here is less expressed than among the natural-science faculties.

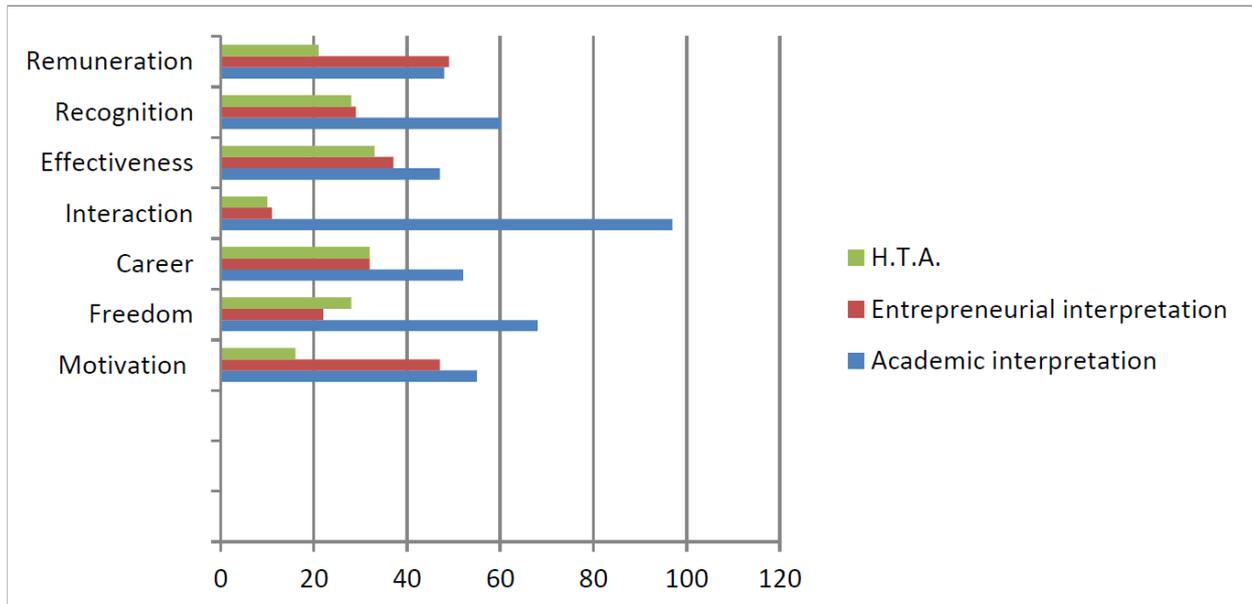
The average value for the observations belonging to employees of the RICE, NSI and Innovation Center «Mozgovo», the characteristics of «Solidarity» is 4.2, and the average value of the characteristic «Sociability» is 3.75. Among the separate subdivisions, the unity of goals and objectives is more clearly expressed. Accordingly, the organizational culture of the units is more in line with the culture of the innovative organization. These data indicate that, on the one hand, communication between university staff has traditionally been benevolent and open, and on the other hand, there is a fairly high similarity between teachers in understanding the goals and objectives of academic activity. In these units, an organizational culture suitable for innovation has been created.

At the heart of the method for evaluating the value orientations of university employees is the notion that there is a list of values for research and educational activities, each of which has alternative interpretations: academic and entrepreneurial (innovative) (Mkrtychyan, 2016). In this case, the respondent is put in a situation of forced choice between academic or entrepreneurial (innovative) interpretations for each value.

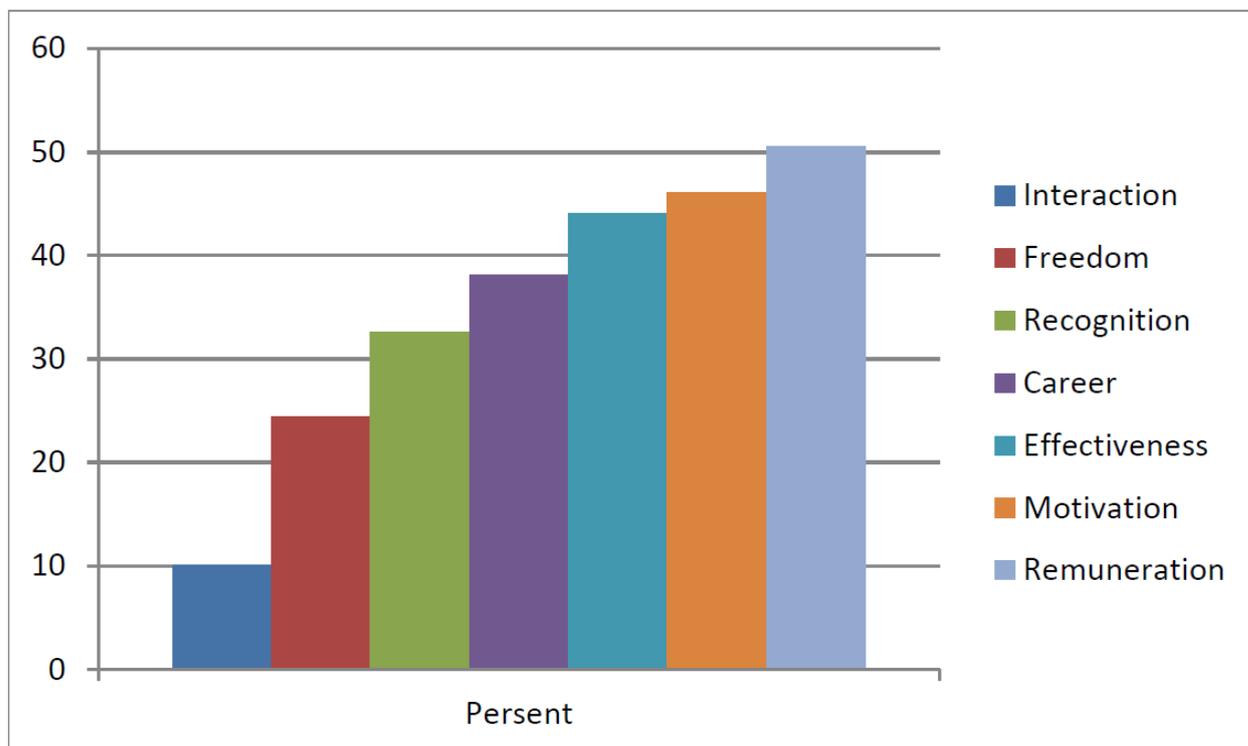
The questionnaire consists of seven bipolar scales, each of which represents one of the values of research activity: «motivation», «freedom», «career», «interaction», «effectiveness», «recognition» and «remuneration». One pole of each scale reflects the traditional academic interpretation of value, and the other – innovative. Identification of the very set of values and formulations of interpretations was carried out on the basis of expert assessments of professors and university managers. Respondents are invited to make a choice in one of the interpretations and

assess its significance on a 3-point scale: 3 – very significant, 2 – significant, 1 – relatively significant, 0 – difficult to answer.

In the analysis, the number of elections for a particular position on the scale is counted, the frequency of the election of a specific value is determined. A comparison of the total number of elections indicates what kind of (academic or innovative) understanding of values prevails in a given culture.



In general, Perm University can conclude that in this culture, the academic understanding of the values of activity prevails. About 65 % of observations (from the number of valid ones) pertain to the choice of academic interpretation of the values of research activity. At the same time, the staff of PSNRU was most often selected for the value of interaction between employees (89.9 % of respondents chose the academic interpretation of the value of «Interaction») and innovative interpretation of the value of «Remuneration» (50.5 % of respondents choose flexible compensation).



In assessing all values, other than remuneration, respondents preferred academic interpretation. For an average university employee, motivation for scientific relevance and personal interest is more important than practical relevance. It is important to be independent in choosing topics, determining the terms and requirements for the result, preference is given to an academic career, not to entrepreneurship. When interacting, employees and teachers avoid competition with colleagues and prefer cooperation. Also important for the staff are scientific publications and reports, recognition of the academic community, and not implemented technologies and expert opinions and recognition of the business community. Approximately equally (with a difference of 0.5 % in favor of innovative interpretation), the answers of university employees regarding the interpretation of the value of «remuneration» were distributed, with a small margin preferable to a flexible, according to the results of activity, remuneration, rather than stable and fixed.

### Conclusion

Based on our work, it can be concluded that the organizational culture of PSNRU is insufficiently of the «Network» type. At the same time, academic interpretation of values prevails in specific questions concerning research work among employees. The organizational culture of PSNRU can't be considered innovative and it is necessary to develop entrepreneurship in science. This will help create competitive innovations. It is necessary to involve employees in practical importance and orientation to modern problems. By the degree of predisposition to innovative organizational culture, the divisions are different. The most susceptible to entrepreneurial values are

the separate subdivisions. Perhaps this is expressed by the need to be flexible and up-to-date in order to receive grants, sell new topical educational courses and develop innovations in students.

At the moment, Perm University as a significant intellectual center of the city needs to transform the organizational culture. It must open up for new values in order to withstand competition, become practical and innovative. The employees have a great responsibility not only in scientific research, but also in educating the corresponding intelligentsia for the future of Perm.

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### **Art in Perm    Искусство Перми**

**Abstract:** This article is about art in Perm, it's high level and variety, which helps our city to be one of the cultural centers in Europe.

**Аннотация:** Статья посвящена искусству в Перми, его разнообразию и высокому уровню, которое позволяет нашему городу быть одним из культурных центров Европы.

### **Introduction**

Perm is a city in the Russian Federation, the administrative center of the Perm Region, one of the largest industrial and cultural centers of the Urals; a city famous for its many unique monuments, as well as a wonderful art gallery. Perm is located in the Middle Urals, on the Kama River. Perm is an important transport center; there is a river port, an airport and the oldest railway station in the Urals. The population of Perm is over a million people.

Perm is the largest industrial center in Russia. The leading branch of urban industry is engineering. Enterprises of Perm produce aircraft engines, electrical appliances, ultra-high voltage cables, telephones, bicycles, power saws. The largest machine-building enterprises are Perm Motors and Motovilikhinskiye Zavody. In the city are also enterprises of the fuel industry and chemical industry.

Every year, Perm is becoming more attractive for tourism, not only among Russian travelers, but also among foreign guests. Hotels in Perm host a large number of tourists and offer them high-level services.

Perm is considered to be the cultural capital of Russia, the city is famous for its sights, museums, artists, a lot of fine arts and, of course, its beautiful «appearance».

The purpose of this work is to tell and show the various cultural and educational sights of Perm, which make this city one of the main cultural centers of Europe.

To achieve the purpose of our work it is necessary to perform the following tasks: to study different sources of information about art in Perm: to describe various cultural events in our city: to discover the features proving our city to be the cultural center in Russia.

### **Body of the Research**

You can talk endlessly about the development of art and culture in the Perm region. It is not for nothing that Perm is called the cultural capital. Permian art with its roots goes back to ancient times, where it appeared in the first rock carvings of ancient people and developed under the influence of Ananyin, Rodanov, Shadenovo and other cultures. A lot of people lived in the Perm Territory in different historical epochs, each of them contributed to the development of culture.

The ancient peoples of the Kama region, the ancestors of the modern Komi-Permyaks, worshiped heavenly deities in their pagan religion – the Sun and the Moon – and believed in their descent from animals and birds. About their worldview, the realization of their place on earth and in outer space, the works of bronze art casting, known under the name of «Perm animal style», are perfectly preserved to the present day.

Permian animal style is a kind of art for creating objects with images of animals and man from metal, wood, birch bark, bones, ceramics, leather, furs that developed from the Neolithic to late Middle Ages in the Urals, the Urals and Western Siberia. This is the art of small metal plastics.

The content and artistic specificity of the Permian animal style of the heyday are zoomorphic and zooanthropomorphic images closely associated with the social order of the tribes, economic activities, religious beliefs, knowledge of the environment. The most original are flat and three-dimensional metal plates with complex compositions.

The visiting card of Perm animal style is the image of a man, or rather, a complex image of a human-bird elk, which nowhere else exists in the expanses of Eurasia. There are a lot of images created by craftsmen of the past. A bird with a human face on the chest, with fish, worms or elk's face on the wings; a man with wings or with the elk's head instead of human's; a bear or a wolverine with wings and a bird's tail; a duck with an elk's head – this is a small list of compositions created by an ancient master's imagination.

Many of the images were made by talented craftsmen that were preserved for centuries in the cities and villages of the Kama region now some of them are displayed in the exhibition halls of the Perm Art Gallery.

The Perm State Art Gallery was opened in 1922. It is located in the building of the Cathedral of the Savior-Transfiguration Cathedral, which is a monument of architecture of the XIX century. In the museum collections there are more than 43 thousand items of storage. In particular, you can see

the works of Russian and Western European art of various art schools, styles and trends of the 15th-20th centuries. Here, painting, graphics, sculpture, arts and crafts and folk art of Russia and Europe.

The museum has so-called «Permian gods» – the only collection of wooden sculptures of the 16th-18th centuries. The exhibits were collected and displayed in the gallery thanks to the work of Nikolai Serebrennikov, an art critic, who devoted his life to gathering and studying the Permian wooden sculpture. He organized several expeditions to the north of the Perm region and found original wooden sculptures and a lot of masterpieces of ancient art. They became the basis of the famous collection in the Perm Art Gallery which keeps almost 400 sculptures today. The most surprising thing about the figures of Jesus Christ is that they are three-dimensional which was strictly forbidden to do by the church; only the iconic flat pictures were allowed. Everything is unique about these figures: the poses, the plots, and especially, the Christ's face. The matter is that the local population of the Northern Urals was komi-permyaki and hanty-mansi (voguls) tribes, which are of the Asian type with characteristic Asian features.

If the Perm Art Gallery exhibits works of artists of past centuries, the works of contemporary artists can be seen in the Perm Artist's House. This is one of the central exhibition places in Perm. The halls of the artist's house are a permanent object of attention of the artistic community of the city. There are regular exhibitions of paintings, sculptures and graphics. And on the first floor you can buy a souvenir in memory in a small salon for the sale of works of Permian masters.

If you are a fan of culture, but consider exhibition halls and museums boring, but the desire to learn something interesting about Perm is very great, then welcome to the «White Nights».

The festival «White Nights in Perm» means a set of various folk festivals, concerts, exhibitions of paintings and sculptures from various subjects, from cans and bells to three-meter sand sculptures. It has been held since 2011. The festival is considered as the project of the cultural and youth policy in Perm Krai.

The festival takes place every year and lasts the whole of June in the city centre. Actors from Perm, other Russian cities and towns, and abroad take part in the festival. A lot of various projects are represented at the festivals, for example: «Electric Festival KAMWA PORT», «Lively Perm», «Parma Wings» and many others. The range of socio-cultural and educational programs «White Nights in Perm» combines discussions, seminars, public lectures of famous writers, critics, producers. Besides, the citizens of Perm and its guests have the opportunity to enjoy the street concerts and performances, art exhibitions, the most interesting events of all genres.

But if you do not manage to visit Perm in summer, do not worry, but try to have time to go to the Perm Fair. The exhibition center «Permskaya Yarmarka» is a large regional exhibition area.

Over 20 years of its work the representatives of more than 60 countries of the world, including the countries of Europe, Great Britain, USA, Canada, Scandinavian countries, China and other countries of the Asian-Pacific region took part in it.

Annually «Perm Fair» accepts more than 200 thousand visitors. The exhibition complex includes three specialized exhibition pavilions; it is equipped with all the basic elements of modern infrastructure: conference rooms, meeting rooms and so on. For certain exhibition events the exhibition center «Permskaya Yarmarka» uses a complex of prefabricated pavilions, which allow it to successfully conduct exit events at any venues. The exhibition complex is located a 5-minute drive from the city center.

Our city is famous for its ballet not only in Russia but also abroad. Perm is called the third ballet Mecca after Moscow and St. Petersburg. But few people know that in Perm there is one of the best choreographic schools. Graduates of the Perm Choreographic School work all over the world – from America to Australia, from Ireland to Japan. Many of the graduates work successfully, and some continue their careers abroad: in the USA, Germany, Holland and Israel. In many choreographic schools and amateur studios, the students of the school taught and teach. Many theaters in Russia take graduates of the Perm School into their troupes. In Nizhny Novgorod, Ufa, Perm today they are leading soloists. In St. Petersburg there was a whole Permian diaspora, in the Moscow theaters ballerinas, trained and brought up in Perm, dance. A lot of graduates of the Perm Choreography School work in the Perm Academic Opera and Ballet Theater named after P. I. Tchaikovsky. Our Opera House is the only theatre in Russia, where all the stage works of the composer (ten operas and three ballets) were staged at different times, the Perm Opera House became the real Tchaikovsky's House.

High dance technique, genuine feeling of ensemble, and purity of style – all these qualities are characteristics of our ballet group. A number of choreographers who worked in Perm at different times, are truly brilliant. K. Esaulova, T. Ramonova, M. Gaziev, N. Markaryants are choreographers, whose talent and individual artistic style determined the creative development of the Permian ballet. The development of the choreographic art of Prikamye owes much to the Leningrad ballet school. During the Great Patriotic War, the Leningrad Kirov Opera and ballet theatre, now the Mariinsky theatre, was evacuated to the Urals. That period left a deep mark in the theatrical art of Perm. Leningrad helped create a ballet school that opened a new page in the life of the Perm ballet, received a base for further creative growth. The unity of the performing style of soloists and corps de ballet is a special feature of the team. The Perm ballet is perhaps the only troupe in the Russian Federation, which consists entirely of graduates of the Perm ballet school. The creative career of many ballet stars began in the Perm Theatre. The names of the world famous

dancers – Galina Ragozina-Panova, Lyubov Kunakova, Nadezhda Pavlova, Olga Chenchikova, Marat Daukayev, Yuri Petukhov, Galina Shlyapina, Svetlana Smirnova – glorified Perm Krai.

The leading soloists of the Perm theatre visit various countries of the world with performances and concert programs, and participate in staging performances. Since 1973, the Perm troupe has been on tour in Austria, Italy, Yugoslavia, Bulgaria, Czechoslovakia, Germany, Poland, Belgium, the Netherlands, Australia and New Zealand, Japan and South Korea, England, Ireland, Holland, Spain, China, The USA. In France and Cuba, in Cambodia and Canada, in Thailand and Egypt, in Nicaragua, India and the United States – wherever artists performed, they gained true friends and admirers of the opera and ballet art of Perm, one of the largest opera ballet centers of Russia.

Perm is the oldest Russian city in the Western Urals. It is known that the city of Perm is famous for its sights, but the most magnificent impression is made by the embankment of the Kama River – one of the most picturesque places in Perm. Near the Kama promenade, you can find a lot of ancient buildings, which are a great example of Russian architectural construction, including the former house of the steamer N. Meshkov (1885), the Peter and Paul Cathedral (1764) – the first stone structure of the city, the walls and domes of which preserved the spirit of old Perm and steel symbol of the city.

In Perm there is a monument to the letter P, or «Perm Gate», – the most ambiguous art object in the city. The monument appeared in 2011 and still evokes the most contradictory feelings both in Perm and with the visitors, from admiration to disgust. The monument «Permyak's Salty Ears» is also very famous. Genre urban sculpture consists of two parts – the figure of the photographer and a round frame with big ears. It is in this framework that you need to substitute your face and take a picture. The Museum of Motovilikha factories, consisting of two large expositions, is considered one of the most popular Perm attractions. Guests of the establishment can get acquainted with the history of the plant from the 18th century to the present and hundreds of interesting objects and even climb on exhibits.

Gorky Park in Perm refers to the most famous and visited parks of the city. There are swings, carousels, attractions, cafes on the territory of 120 thousand square meters, surrounded by beautiful places, thousands of flowers and lush trees.

Not far from Perm on the high bank of the Kama is the unique in the Urals architectural and ethnographic museum-reserve «Khokhlovka», occupying an area of 42 hectares. Here, from the north of the region, unique wooden buildings of the 17th-19th centuries were transported.

Perm is a very beautiful city, in which there are many sights and beautiful views that are definitely worth seeing with your own eyes.

## **Conclusion**

The city of Perm is one of the most prosperous cities in Russia in terms of the level of supply with a cultural offer to the population. The tour of Perm is diverse in the types and genres of the arts. The city of Perm has a reputation as a city with a large and well-prepared audience for concerts, performances, exhibitions, festivals and other types of cultural-organized leisure.

Modern Perm is supposed to be the cultural capital in the Urals. Each period contributed to the art and culture of Perm. In the city every year, more and more different cultural events are held, aimed at creating a love of art for the inhabitants of Perm. Perm has great creative potential for development. The city already claims to be the future cultural capital of Russia.

Perm strikes at its first appearance and leaves an unforgettable impression, as something beautiful and unique. Such places as museums and fairs, monuments and cathedrals are in every city, but it is in Perm that you have that feeling of beauty and extraordinary because of which it will be very difficult for you to leave this city without the desire to return back.

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**The Architecture of Perm: Past, Present    Архитектура Перми: прошлое, настоя-  
and Future    шее и будущее**

**Abstract:** This work shows the topic of ar-    **Аннотация:** Эта работа затрагивает тему  
chitecture in Perm in different times: before    архитектуры в Перми в разрезе времен:  
the revolution, the architecture of Soviet Un-    дореволюционная эпоха, архитектура Со-  
ion, and modern times. The author considers a    ветского Союза и современный этап. При-  
comparison of these phases, research of archi-    водится сравнение этих этапов, изучение  
tectural objects, and gives a vector of growth    архитектурных объектов, определяется  
in future.    вектор развития в будущем.

The city of Perm is located on the East of the European part of Russia. It is a large industrial, scientific, cultural center of the Urals. The city was founded in 1723 as a settlement of the copper-smelting plant. At that time it was the period of intensive exploration of natural resources in the Urals, building of the numerous plants. In connection with that fact the famous researcher of the Ural architecture suggested the concept «town-plant». It strongly influenced the modern look of the city. Perm is a big, beautiful and varied city. It is reflected in the architecture. Modern tall buildings, as well as small one, stand side by side with the old merchant mansions. At the beginning of the nineteenth century, the city of Perm determined the basic principles of formation of the city structure. Like most cities, the plan of which was created at that time, Perm received straight perpendicular streets and wide avenues. In the city, there are many engineering and transport facilities, some of which radically changed the planning map of the city and its panorama. The aim of this work is to study the architecture of Perm and its future prospects.

The objects of the research are outstanding architectural buildings of Perm of the 18th-21st century.

To achieve this aim, we should perform the following tasks:

- 1) To study iconic architectural buildings.
- 2) To compare the architecture of Perm in different historical periods.
- 3) To determine the vector of the development of the city according to the data.

Like most cities of that time, Perm began with the construction of a plant near a large river. The year of foundation of Perm is considered to be the official date of the beginning of construction of the Egoshihinskiy copper plant – 1723. The territory which was six times bigger than the original size was explored for two decades. At that time the area of the city was already quite significant. The Empress, Catherine II, signed the decree about creation of a provincial city on the basis of the plant in November 1780. The festive opening of the city took place in October 1781. With the decree of Emperor Paul I of 1796, the Perm region was transformed into the Perm province with the center in Perm. At the same time, the first construction plan of the city of Perm was created. It was carried out throughout the XIX century. The main plans of the city, individual buildings and structures were created with the participation of famous Moscow and local architects, which left its mark on the architectural appearance of residential and industrial buildings. They combine traditional and modern methods of architecture of the Central regions of the country with specific methods of the Ural architecture itself. They are the protection of buildings from the effects of climatic conditions, the original solution of the appearance of buildings. Unlike in other parts of Russia a special type of settlement was formed in the Urals: a settlement-plant. The Ural builders sought compositional and stylistic unity of the settlement-plant. An ensemble of the settlement was created, the Central core of which was the plant. On the banks of the Kama and along the Egoshikha there was a new residential area. Here the administrative center was formed, and the first stone building of Perm – Peter and Paul Cathedral was built in the Baroque style. In the early and mid-nineteenth century stone building in the centre of Perm has appeared, as a rule, in place of the burnt wooden structures. The end of the nineteenth century was a period of active railway construction in Perm. It is possible to tell that thanks to it the provincial city of Perm possessed samples of almost all architectural styles and the directions, which had distribution in pre-revolutionary Russia. In 1878, the opening of the first railway station of Perm took place. Perm developed into a city of art and culture at the end of the XIX century. In 1874, the construction of the Opera and ballet theatre began, and in 1879, the construction was completed. In 1896 the first electro cinema «Illusion» appeared. In Soviet times, the city of Perm increased significantly; there were a huge number of blocks and significant architectural structures.

Residential development, as well as industrial production and social and business districts are located mainly on the left Bank of Perm. There are about 1300 streets and lanes in the city.

All Perm architecture can be divided into 3 periods:

- 1) The pre-revolutionary period.
- 2) The Soviet period.
- 3) The Modern period.

In the pre-revolutionary period, the first significant engineering structure for the Perm region appeared; it was the railway bridge over the Kama River. It changed the spatial perception of the directions and for a long time remained the largest project created in Perm. A number of the most beautiful buildings in Perm were constructed at that time. A significant part of them is represented in the art Nouveau style and classicism. One of them, Meshkov's house, was built by architect Ivan Sviyazev in the 1820s in the late Russian classical style. But the house was destroyed by the fire in 1842 and after some time was rebuilt by another Perm architect A. Turchevich. The facade of the house faced the waterfront of the Kama River, in the fashion of that time. The rich decoration – luxury frames, hand-modeling, cornices, pilasters, lattice fence – is very attractive.

Architecture is considered to be music in stone. We can say that one of the outstanding composers in architecture was Perm architect Ivan Sviyazev. He made a great contribution to the Perm architectural ensemble. The traditions of the Ural architects were expressed in the adherence to classical style at that time. He said, «...there was no any other style except classical for us, students of the Academy of the 20s...» Sviyazev didn't just follow those traditions; he applied his knowledge in solution of architectural problems creatively. He put into practice the concept of reasonable architecture, involving advisability and usability. The most famous of his works were the Noble Assembly House, the Rotunda in Gorky Park (former Country Park).

Gribushin's house is also interesting. It is a remarkable monument of art Nouveau architecture and art of artistic modeling which was built in 1897 on the project of the well-known Perm architect Alexander Turchevich. This is the only building in Perm, created in a unique eclectic style. The mansion is decorated with molding and decorative elements which are presented not only on the facade, but also in all 18 rooms. Women's faces on the relief ornaments were copied from the photo in the Gribushins' family archive.

One of the most attractive buildings in Perm was the hotel «The Royal Rooms». The author of the project was a provincial engineer Artemov E. I. The three-storeyed building in the art Nouveau style with molding appeared in Perm in 1910. It was one of the most expensive hotels in the city at that time. There the guests were provided with the European comfort: electric lighting, a water supply system and water heating.

The largest construction of the first half of the 19th century was the Spaso-Preobrazhensky Cathedral, built by the architect G. H. Paulsen in the style of Russian classicism. It served as a

symbol indicating the location of the center. The Cathedral became the organizing starting point uniting all parts of city ensemble in a single whole.

Other significant buildings of that period are: Smyshlyaev's house, Tokarev's mansion, Diaghilev's house, religious school and many others. They still belong to the landmarks of the city.

The Soviet period has changed the city greatly through that period did not last for a long time. For a short time Perm increased significantly, the population for 13 years of the Soviet power has increased in three times. Those changes contributed to the rapid construction of huge residential areas of the similar type. At that time, working districts were built very quickly; roads, avenues, houses, hospitals; libraries, cinemas, etc. were constructed as well. In Soviet times, Perm lost its uniqueness, but at the same time it was the period of constructing of many interesting buildings. Almost all buildings during the Soviet period were built in the style of functionalism. It was the style used for construction of most buildings in the city. But there were also other styles, for example, Stalin's Empire, Soviet constructivism, Modern. Significant buildings of that time are the Perm Drama theatre; it was built in 1981 and it became one of the main elements of the architectural ensemble in the center of Perm. The Building of the police Department or the Tower of «death», this five-storeyed building with three-storeyed tower and spire built by architect M. A. Parellina in 1952 in the style of Stalin's Empire; the building «Permenergo», a Complex of buildings on the city administration Esplanade and Lenin Street, river station and many others were peculiar symbols of Soviet architecture .

Nowadays a mass construction of new administrative and residential complexes is held. The complex of buildings near the Perm Fair, the complex «Saturn-R Towers» which stands on the hill near the Bank of the Kama and has deserved the title of best building in Perm of the early 21st century; and the «Sails over Kama», Green Plaza; and many others have changed the whole panorama of the city. Some of them are built in accordance with the environment and have a significant effect on the city skyline. The city develops harmoniously. Symmetry in the architecture of Perm, brevity and imagery are inherent in many modern buildings. It is high-rise construction. In modern Perm, some attention is paid to the improvement and restoration of territories, the city is changing very quickly and is becoming more and more like a modern metropolis.

Speaking of the image of the city we cannot help saying about the lost Perm buildings:

- Gostiny Dvor which played a special role in the history of the city, where urban interests were skillfully intertwined, political battles were played out, and key decisions were made more than once.
- Brewing plant in Sibirskaya Street, built in 1909, is in ruined condition and is an architectural monument.

- Tradesman Berezin's house.
- Perm gun factories mechanic's house.

The city is changing every day. There are large-scale interesting projects for the transformation of Perm: from the construction of a new stage of the Opera and ballet Theater, to the change of transport interchanges and the construction of skyscrapers of the historic center; from the long-awaited transfer of the zoo, to the construction of entire blocks with its own infrastructure.

What is expected to do in terms of architecture of Perm?

First of all, it is a new zoo. The citizens of Perm have been discussing the problem of the transfer of the zoo for more than 10 years. The place and the project have been changed many times. The authorities were able to agree and in August 2018, we expected to enjoy the view of the new zoo. According to a survey among residents, Permian's are waiting for the end of its construction. Its area will cover 25.4 hectares; it will be located in Victory Park in Nagorny.

Secondly, the new building of the Opera and Ballet Theater.

A new building for the theater of opera and ballet is a necessity for the city. The size of the existing scene is almost half of the modern standards for musical theaters. Another reason is the insufficient area of the administrative space. The theater simply does not have enough space for the normal organization of rehearsals and storage of the scenery. To solve these problems in 2010, a competition of projects was held. The project was designed by the British architect David Chipperfield. Now, there is no exact date for the delivery of the project, neither the budget nor the location of the new building. We considered the space at Razguliai, near the monument to Tatishchev, but most likely, the building will be built on the embankment. The space around it will be realized as a kind of cultural quarter. The inhabitants of Perm will be able to visit the first performances in the new building of the theater in 10 years.

Thirdly, the third bridge across the Kama.

One of the most interesting transport projects in Perm in the next few years will be the third bridge across the Kama. It should relieve traffic flows and significantly reduce travel time for inhabitants of the Kama right bank.

One more project is reconstruction of the railway station «Perm-II».

A large transport and transfer junction with a total area of about 110 thousand square meters is expected to be built instead of the railway station «Perm-2». It will combine a railway station and a bus station.

### **Conclusion**

Modern Perm is one of the largest industrial cities in the Urals. Each period made a great contribution to the architectural image of Perm. In Perm, there is a great potential for the

development of the territories. In all areas of the city, a large number of territories remain unoccupied, many sites prepared for construction are fenced, and many construction projects are under way. Buildings of three centuries, buildings of different styles, different-storeyed buildings, and design solutions don't conflict one another, but create a single architectural ensemble of Perm. But at the same time there is no elaborated complex residential development. One of the reasons is that new construction projects have commercial interests. Architecture has lost its social functions. There is practically no socially-oriented architecture for a human being.

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**Problems of Municipal Solid Waste Проблемы утилизации муниципальных бытовых отходов**

**Abstract:** In this research, the author considers problem of utilization of municipal waste. There's a calculation in this work, of how much trash, the basic family throws away, polluting the environment. The author offers to reuse plastic materials after full initial use, and offers to make a working system of municipal waste utilization.

**Аннотация:** В своем исследовании автор рассматривает проблему утилизации бытовых отходов. В работе ведется подсчет того, сколько мусора среднестатистическая семья выбрасывает в окружающую среду, загрязняя при этом экологию. Автор предлагает свои решения по утилизации мусора, выдвигая в итоге идею о создании в Перми системы для переработки отходов.

«Humanity will not perish in an atomic nightmare –  
it will suffocate in their own waste...»

Niels Bohr

Household waste ... ponder about these words.

Our life depends on household waste. After all, household means life. Household waste is a waste of our lives.

Human life is associated with the emergence of a huge number of different wastes.

Every morning we get up, eat breakfast, do our own business, but we do not notice how much garbage we make during one day. Solid household waste hammers and clutters the surrounding natural landscape. Also it constitutes a threat to all of humanity.

Why no one cares about the fact that garbage brings great harm to both the adult and the child.

The aim of my project is to define the role of man in environmental pollution and find ways how to solve this problem.

Tasks of the research:

1. to study literature and materials on this topic;
2. to find out what is household waste and what is their danger;
3. to study the methods of processing, their effectiveness and disadvantages;
4. to learn how my family is involved in the process of environmental pollution;
5. to find out what each of us can do to solve this problem;
6. to study the impact of household waste on the environment of Perm region.

### **The main part and conducting my own research**

Municipal solid waste (MSW) in the Russian Federation is a crude mechanical mixture of a wide variety of materials and rotting products, characterized by physical, chemical and mechanical properties and dimensions. [Appendix № 1]

Hazardous solid waste includes: batteries and accumulators, electrical appliances, varnishes, fertilizers and toxic chemicals containing toxic or biologically hazardous substances that are not allowed to enter the environment. Collection and temporary storage of waste are often the most expensive component of the whole process of removal and destruction of solid waste. Therefore, the proper organization of waste collection can save considerable funds.

Sometimes the means to solve these new problems can be found by introducing a differentiated fee for garbage collection.

Because of this I conducted a practical work, during which it was found out that for one person throw out about 250-300 kg of household garbage a year.

At the same time, the mass of waste is increasing every year by 4-5 %, and now imagine how many kilograms of garbage a year your family, consisting of approximately 3-5 family members, can throw away.

And I made a calculation. The family, consisting of 3 people, annually throws away 750 kg of household waste.

In my work, I decided to expand my coverage, taking as a basis not only a certain family, but also one group from our college, consisting of 16 people.

After analyzing and calculating the results of solid wastes of a certain group, it can be said that at 16 829 kg the amount of waste significantly differs from the number of one family over a certain period of time. Quite a lot of MSW components can be processed into useful products, such as glass, steel and aluminum cans, paper waste, plastic.

In the end, all this is not just rubbish, but a useful resource for processing.

What is recycled material?

Second raw materials are materials and products (waste paper, plastic, bottles, polyethylene, glass, textiles, metal cans), which after full initial use can be reused in production as raw materials.

Here are some examples of MSW secondary processing. From paper waste, you can make toilet paper or wrapping paper and cardboard.

And also it can be used in construction for the production of thermal insulation materials and in agriculture.

Plastic can be processed into bottles and packaging for household chemicals, as well as in disposable dishes, plastic foam, plastic.

There are various ways to recycle solid waste: burial, composting, heat treatment, plasma treatment.

### Conclusion

In conclusion of practical work, it should be noted that in Perm there is no organized system for collecting secondary resources, low control over their formation. This entails deterioration in the state of the environment, which negatively affects human health.

We, as future teachers, should bring up the pupils' feelings of love and respect our environment and homeland.

Appendix № 1

| Types of materials<br>Weight in gr. | Days of the week |      |       |       |      |      |      |       | During<br>the week | Total for the<br>year in (kg.) |
|-------------------------------------|------------------|------|-------|-------|------|------|------|-------|--------------------|--------------------------------|
|                                     | Mon              | Tue  | Wed   | Thu   | Fri  | Sat  | Sun  |       |                    |                                |
| Paper                               | 0,24             | 0,34 | 0,43  | 0,24  | 0,24 | 0,11 | 0,48 | 2,09  | 100,32 kg.         |                                |
| Glass                               | 0,38             | 0,24 | 0,16  | 0,45  | 0,40 | 0,07 | 0,49 | 2,19  | 105,12 kg.         |                                |
| Plastic                             | 0,075            | 0,26 | 0,14  | 0,096 | 0,18 | 0,06 | 0,11 | 0,921 | 44,208 kg.         |                                |
| Metal                               | 0,015            | 0,01 | 0,16  | 0     | 0,07 | 0,04 | 0,08 | 0,375 | 18 kg.             |                                |
| Org. garbage                        | 0,4              | 0,55 | 1,14  | 0,15  | 0,95 | 0,30 | 0,60 | 4,09  | 196,32 kg.         |                                |
| Other                               | 0,67             | 0,13 | 0,256 | 0,07  | 0,05 | 0,11 | 0,22 | 1,5   | 72 kg              |                                |

|       |      |      |      |      |      |      |      |       |             |
|-------|------|------|------|------|------|------|------|-------|-------------|
| Total | 1,79 | 1,53 | 2,29 | 1,01 | 1,89 | 0,68 | 1,98 | 11,17 | 535, 968 kg |
|-------|------|------|------|------|------|------|------|-------|-------------|

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**The social status of a journalist in the opinion of the youth of the city of Perm**    **Социальный статус журналиста глазами молодежи города Перми**

**Abstract:** This article shows a problem of status of a journalist's profession in the eyes of young people. The author gives a comparison with other professions. There's a questionnaire in the article, which is gives us an opinion of young people about meaning of a profession of journalist.

**Аннотация:** Данная работа раскрывает проблему статуса профессии журналиста в глазах молодежи. В статье приведены результаты опроса, в ходе которого выясняется, что из себя представляет журналист для молодых людей, значимость этой профессии для них, приводится сравнительный анализ с другими профессиями.

Young people are the social group that is in search of its work, its vocation. Therefore, young people are very sensitive to changes in the professional environment. I wonder how they evaluate this or that profession.

Scientists noted that today there is a significant decline in interest in journalism in comparison with other historical epochs. In Soviet times, for example, the profession of «journalist» was considered more prestigious than now. Previously, it was in demand, and today – it is limited, although it is considered the fourth power.

In addition, modern society is considered civil and democratic, and one of the features of such a society is freedom of speech. Journalists should be the personification of this principle, but, according to the results of research at the federal level, journalists do not have high prestige. In 2017, only 1 % of those polled by the All-Russian Center for the Study of Public Opinion consider journalists an attractive profession: respondents do not want their growing children to choose journalism as their work activity.

I conducted a sociological study, the purpose of which was to study the attitude of the youth of the city of Perm to the profession of «journalist». The research objectives: to assess the position of the profession «journalist» in the ranked number of professions in the opinion of the youth of the

city of Perm; to study the factors determining the position of the «journalist» profession in the ranked number of professions and to study the youth's views on the content of the «journalist» profession.

The research objects became representatives of the social group «youth» of the city of Perm. The subject – the attitude of respondents to representatives of the profession «journalist».

Within the framework of the empirical study, a mixture of two sociological traditions was used: quantitative and qualitative. In particular, it was a questionnaire and interview.

The study is caused by the problem of low socio-professional status of a journalist in a civil society.

Respondents – 100 representatives of a social group of young people in Perm. Five of them became participants in the interview.

### **The position of the profession «journalist» in the ranked number of professions**

The position of the journalist was determined using a distribution questionnaire. The respondents were asked to assign the title of seven professions, using the «social position of these professions» as a criterion for comparison.

The hypothesis of the researcher that the social status of the journalist is estimated by young people is below average, during the research was confirmed. The journalist was on the 6th place in the list:

1. Programmer, IT specialist;
2. The lawyer;
3. The top manager;
4. The doctor;
5. The economist;
6. Journalist;
7. Sociologist.

Why did the ranking of the professions evaluated by the youth look like this, we learned using an in-depth interview.

### **Factors determining the position of a journalist in a ranked range of professions**

In the course of a interview, the interviewer assigns questions related to the position of the journalist in the ranked series of professions. Respondent, responding to these questions, indicated the criteria that he used when he distributed the professions in order.

Each respondent has its own comparison criteria, because the understanding of social behavior is different. But most often respondents name the level of wages and prestige, the latter is also understood by each person in different ways.

As previously suggested by the researcher, the criteria changed from the beginning of the ranking to the time of the end of the procedure. Table 1 shows the criteria for comparing each respondent in the order in which they were called the respondent.

**Table 1. Criteria for determining the position of the profession by respondents**

| Interview № 1        | Interview № 2                             | Interview № 3                                       | Interview № 4   | Interview № 5  |
|----------------------|---|---|---|--|
| Wage                 | Is it the leading profession?             | Level of skills, knowledge and experience           | The ability of the profession to change the lives of many people for the better. Benefits for people        | Востребованность профессии                               |
| Prestige             | Wage                                      | Society's attitude towards the profession           | Prestige  | Понимание респондентом содержания деятельности профессии |
| High quality of life | Prestige                                  | Ease of learning                                    | Professional Services   | Заработная плата   |
|                      | Importance of the profession              | Theoretical and practical basis, necessary for work | Importance and respect for the profession   | Уважение к представителям профессии                      |
|                      | Mission of the profession                 | Prestige  | The complexity of the profession  | Популярность профессии                                   |
|                      | Personal acquaintance with the profession | Flexibility of the profession                       | The value of the profession in society  |  |
|                      |   | Responsibility                                      | The number of representatives of the profession (the stereotype that there are many economists and lawyers) |  |

There is a difference between the way the journalist's activity is assessed by those who work in this area and those who do not work in this area. Journalists estimate it more negatively than non-journalists. Non-journalists pay attention to the content of the profession, and journalists – to material wealth.

### **Representations of young people about the content of the profession «journalist»**

The social status of a particular profession also depends on the understanding by society of the content of the activity of this profession. Representations of Permian youth about the content of the profession «journalist» we received using the method of interview.

The interviewer asked the respondents the following questions:

- Who is a journalist, in your opinion?
- Imagine a world without journalists. What is it?

- We are now living in a civil society, one of the principles of which is freedom of speech.

Do you consider journalists as the personification of this principle? Why?

Respondents described how they represent the content of the journalist, pointed out their attitude to this activity, the value and importance of journalists.

It is important to note that we talked with representatives of the Perm youth who work in the field of journalism and representatives of Perm youth who do not work in the field of journalism. In some cases, the understanding of the journalist's work was very blurred and did not have a strict framework. This happened, for example, with a reciprocal housewife and an IT specialist. They define the concepts of «journalist» and «blogger» equally, and do not see the difference between them.

But the respondent-journalist stated about the existence of a «war between bloggers and journalists»: «... *Well, of course, **journalists want to prove that they are more professional than, for example, bloggers, civil journalists. Now this, well, the **opposition is coming, that a blogger is not a journalist. And they are still inferior in something, and somehow journalists are trying to prove that they are more professional...*****»

#### **The principle of freedom of speech in civil society and the place of a journalist in it**

Part of the study concerns the principle of freedom of speech in civil society and the place of a journalist in it. The most meaningful answers to this question were given by journalists. According to some, journalists are the personification of this principle, in the opinion of others – no.

The defendant, who worked as an editor of the independent media of the Perm Krai, explained that in his editorial board there were no topics that can not be written about. But because of this «authorities do not like journalists of independent media».

The situation with the restriction of topics that can be covered in the media is also commented on by another respondent. He works in a publication in which there is a list of «stops»:

*«... It seems to me that we do not have freedom of speech. Because there are topics that you can not write about. well, such a **stop list**... It seems to me difficult to talk about some kind of freedom, because I myself know for sure the topics about which we can not write. Firstly, they are connected there with commercial partners if something breaks down or someone suffers at a large industrial enterprise, we will not write about it. We not write about Navalny. **I do not write so diligently that it does not even stay in my memory...**»*

This passage describes in detail what topics can not be written about. And the thesis is said that there is no freedom of speech at all.

But young people who do not work in the field of journalism are sure that journalists are the embodiment of the principle of freedom of speech: «...and who else personifies this principle, if not him?..»

In the course of the study, the respondents were divided into three groups:

1. Journalists working in the pro-state media;
2. Journalists working in independent media;
3. Specialists of other professions.

Specialists of non-journalistic professions believe that journalists are the personification of the principle of freedom of speech. They argue that journalists are the «fourth power», they influence public opinion, influence the authorities and show an objective picture of the world.

Journalists working in the media, in this principle, doubt. Because in some publications there are stop-lists, but in others they are not, but there are problems in the sphere of relations with the authorities. In addition, journalists note that there are few correspondents in Perm who are able to show an objective picture of the world.

We considered only the attitude of young people towards the profession of «journalist», it is important to understand how the rest of the population belongs to it, as the older generation imagines the content of the «journalistic» profession and what it associates with. It is also interesting to consider how much the population trusts or does not trust modern media, which media are usually read. Do people understand between independent media and state media and what media do they prefer?

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**I want my homeland clean and beautiful Я хочу, чтобы моя Родина была чистой и красивой**

**Abstract:** The object of this work is perfection of utilization system of municipal solid waste in Perm Krai. The author consider advantages and disadvantages of separate collection of municipal solid waste.

**Аннотация:** Объектом изучения данного исследования стало совершенствование системы управления использованием отходов производства и потребления в Пермском крае. В работе автор рассматривает плюсы и минусы отдельной утилизации твердых бытовых отходов.

The problem of waste formation, its inefficient use, as well as the negative impact on the environment is becoming one of the main environmental problems of the Perm region.

In the Perm region officially reveal about 1,5 thousand unauthorized landfills a year. According to experts, there are still as many undeclared landfills. Both the authorities and social activists are included in the struggle against pollution.

To save cities and villages from garbage, one of the largest public organizations in the country, the all-Russia People's Front (RPF) is implementing the project «General cleaning», which launched the resource «Interactive map of dumps». The purpose of this service is to demonstrate the scale of the pollution problem and to involve residents in the struggle against it. Another direction of the regional headquarters of the RPF in the struggle against dumps is the organization of cleaning days (subbotnik) and direct participation in them.

On the territory of the Perm region more than 40 million tons of waste production and consumption is producing annually. Recently, there has been a steady tendency to increase the volume of waste formation. In 2007, this number was 49.5 million tons. This growth is due to the increase in production volumes, primarily the development of extractive industries, the volume of waste which is up to 90 % of the total.

The largest amount of waste accumulated in the cities: Berezniki, Solikamsk, Perm and districts: Solikamsk, Krasnovishersk, as well as in municipal districts located in the Kizelovsky coal basin.

The structure of the waste generated in the province includes several multi-tonnage groups, such as: ferrous waste, ash from solid fuel combustion, agricultural waste, slag and sludge, municipal waste, wood waste. The waste structure is determined primarily by the structure of the industry edge.

The low level of waste utilization, which is about 35 %, has led to the accumulation in the region of more than 650 million tons of industrial waste, placed in dumps, sludge storage tanks, landfills, which cause environmental pollution and pose a serious danger to public health.

Residents worry about the landfill of waste around the dumpster. In some areas, this garbage is spread all over the street and prevents people from enjoying environmentally friendly air. The negative impact of the environment affects human health. There are respiratory infections, diarrhea and much more.

That is why the problem of municipal solid waste will always be relevant in our time. As long as the authorities won't deal with this global problem.

Special attention is paid to municipal solid waste at the ecology lessons. Every student of our college knows about 4 Rs: Reduce, Reuse, Recycle and Respond, that we learn at our English lessons. What we can do:

| <b>REDUCE</b>   | <b>REUSE</b>  | <b>RECYCLE</b>  | <b>RESPOND</b>  |
|---|---|---|---|
| Share toys, CDs, books with friends<br>Listen to music on a friends mp3-player<br>Buy a big bag of trail mix<br>Reusable bottles<br>Plain packaging<br>Food in bulk (single servings should be avoided) | Pass things on to others<br>Eat a piece of fruit instead of drinking juice out of a bottle<br>Use lunch boxes<br>Drink glass of water instead of cans<br>Use gift wrapping paper after opening your gifts<br>Use cloth napkins instead of paper napkins<br>Refill pens with ink<br>Use rechargeable batteries<br>Wash disposables (like plastic cups) | Manufacturing new products from old ones instead of using raw materials<br>Don't throw away anything that can be recycled | Having separate bins for compost, recycle and landfills<br>Sort your trash<br>Tell your friends about the importance of 4Rs<br>Tell local merchants and manufacturers to switch to green alternatives for their business (use for delivering paper bags instead of paper and plastic) |

Schoolchildren and students are taught how to properly throw out garbage, how much each material decomposes.

At the moment there are a lot of waste classifications:

1. In its origin:

- industrial waste;
- Municipal solid wastes;

2. On a state:

- gaseous;
- liquid;
- solid.

3. List of wastes according to the level of harm to humans and nature, environment:

- Class 1-the most harmful, not degradable, ecology will be restored more than 300 years after the destruction of such waste.

- Class 2-highly harmful, decomposition time of 75 years or more, restoration of soil structure from 30 years or more;

- Class 3, moderately harmful, the decomposition time of 10 years, reconstruction of the environment from 20 years;

- Class 5, low hazard, decomposition time to three years, the period of recovery of the environment after the defeat of less than five years.

Industrial waste or solid waste is divided into:

- toxic-physiologically active substances that can adversely affect human and animal health;
- inert, are disposed on landfills. These include: wood, construction debris, slag, textiles and plastic elements;

- solid mineral waste or construction debris: gypsum, concrete, expanded clay, asbestos, plaster and others.

This year we got acquainted with sanitary and epidemiological requirements for the installation of garbage containers.

Garbage containers should be placed from residential buildings, recreation areas at a distance of 20 m and up to 100 m (this requirement applies to both the private sector and the village, and the gardeners' non-commercial partnership). The site shall be capable of accommodating all the garbage cans. You can install up to five containers. The site is best to concrete or asphalt. Three sides have to be border fencing up to 1.5 m in height. It should be provided with good illumination of the garbage area in the dark time.

At the end of this topic, we carried out research work, in which we analyzed whether correctly installed garbage containers near our house. During my project, I measured the distance between:

- Garbage collection and residential buildings;

- Waste dump and children's playground;
- Garbage cans and kindergarten and school.

As a result of my research, I came to the conclusion that the distance between the garbage and the living places (apartment building, playground, school, kindergarten) is observed. But within the location of five multi-storey residential buildings, two large and two small shops, there is only one trash can, which is clearly not enough, as well as the frequency of export is once a week.

Despite the fact that requirements are compiled trash can is situated at a distance of 50 kilometers from a residential area, these aforesaid reasons contribute to unsanitary conditions. The number of containers and bins for garbage is defined by municipal authorities taking into account the actual development of housing stock and other local conditions of a particular locality.

The waste problem has become now one of the most important environmental problems facing humankind. After the emergence of artificial materials, our waste will remain in landfills for decades and hundreds of years, poisoning the earth, water we drink and air we breathe. Every year a hundred thousand marine animals and one million birds in the world die.

The problem of waste generation will always be very acute in our world. Garbage pollutes our environment very much, negatively influences health. Teachers and parents should tell children about the importance of sorting waste.

Advantages of separate collection of municipal solid waste:

1. Reduction of sorting costs;
2. Reduction of transportation costs;
3. The higher quality of selected fractions;
4. Smaller waste sorting facilities;
5. Reduction of the number of sanitary and hygienic problems as well as safety problems at the waste sorting plant;
6. The visibility of the project: improving services.
7. Encouraging people to develop a new behavior in waste's concern;

Disadvantages of separate collection of municipal solid waste:

1. Waste collection and transportation for two times;
2. Additional investments in specialized containers and garbage collection machines;
3. Organization of public campaigns;
4. Reorganization of schemes of sanitary cleaning;
5. Difficulties associated with the involvement of the population.

Sort garbage or pollute the environment of the city is the choice of everyone. But it is important to think about the fact that every citizen of our city has the right to live in an ecologically

friendly environment. Therefore, it is in the interests of every citizen to keep their small homeland clean and beautiful!

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**Future outlook: my country and the world by 2040  
(contest 2019)**

**Взгляд в будущее: моя страна и мир к 2040 году  
(конкурс 2019 г.)**

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**Russian Federation population projection    Прогноз численности населения Российской Федерации**

**Abstract:** The following work contains analysis of leading demographic trends in contemporary Russia. Significant social consequences of depopulation are considered. Projection of the main demographic parameters up to is reported.

**Аннотация:** В данной работе анализируются ведущие тенденции развития демографической ситуации в современной России. Рассматриваются основные социальные последствия депопуляции населения. Приводится прогноз основных демографических показателей до 2040 года.

**Introduction**

Russian Federation has the largest territory among all countries of the world. It has more than 20% of planet's natural resources and it is characterized by an advantageous geographical position. However, Russia occupies only 9<sup>th</sup> position in population size ranking. Population density is extremely low (especially in Siberia), about 8 people per square kilometer, in contrast, in neighbor China it is about 140 people. Moreover, situation is dramatized by annual depopulation since 1992, which, having stopped for three years in 2013-2015, again is taking place. Depopulation can be defined as mortality rate's surfeit over birth rate with no reference to migration rate.

The main reason for demographic problem in our country is that it has fertility model corresponding to developed countries and mortality model similar to developing countries. In other words, we have depopulation due to combining of two factors: low fertility and high mortality. In addition, birth rate is lower in predominantly Russian areas, and higher in "ethnic" federal subjects, such as Chechnya, Tatarstan, Dagestan. Low birth rate, especially among native Russian nation, re-

sults in a number of consequences with ageing of population as the main one. All these after-effects combine in huge clew of linked social problems, including changes in population structure and interethnic conflicts. Depopulation threatens national security of our country, while ageing of population causes increasing load over people of working age and undermines social safety net.

Since 2006, demographic situation in Russia has remained one of the main topics of annual Presidential Address to the Federal Assembly. The government is trying to influence demographic situation by introducing measures of financial support for families with children, for example, popular “maternity capital”. The effectiveness of this policy remains to be seen, but the presence of it itself underlines the importance of the problem.

In order to ensure proper assignment of budget funds and to predict the need in child’s infrastructure and working resources different demographic projections are calculated. The following research comprises the example of such projection.

The aim of this research is to list the main demographic trends of contemporary Russian society and show the prospects of their development in the first half of XXI<sup>st</sup> century.

Basically, the research was conducted using statistical method: data of Federal Agency on Government Statistics and official results of Russian nationwide census were analyzed.

The issue of future demographic situation concerns not only politicians but also leading scientists of our country: A. Antonov, V. Medkov, A. Vishnevsky, I. Beloborodov.

### **The main body of the research**

Before describing future situation, it is important to mention main present demographic trends in contemporary Russia.

Russian families prefer having one child, which is subversive to population replacement. According to 2010 Russian nationwide census, 65 % of Russian families have one child and only 27 % have two children. Rural and urban territories now have similar low birth rates, though about 10 years ago fertility in the countryside was significantly higher. Moreover, one can note not only domination of one-child families but also spreading of childfree families, who choose not to have children voluntary, irrelevant to medical problems.

Russian women now choose to delay childbirth in order to reach career purposes and/or financial status, paying attention to purchasing of real estate as living and bringing up standards have risen substantially. For example, in 2000 most children were born by women of 20-24 years old, whereas in 2016 the most “fertile” cohort was 25-29-years-old group.

With changing of marital norms and attitude towards divorce more and more Russian women prefer bearing child alone after divorce or even without being married. Average duration of marriage shortens significantly, wherein the newly-weds, registering marriage, assume possibility of

divorce.

Russians nowadays tend to delay not only child's birth, but also marriage itself, giving preference to unofficial cohabitation, known as civil partnership. They make their relationship official only when they decide to have a baby.

Census papers of 2010 for the first time in Russia contain possibility to mark unofficial marriage. The results show that about 13 % of marriages in Russia (among those, who answered this question) are not registered in Civil Registry Office. The problem of Russian society is the absence of juridical recognition of civil partnerships and ignoring property and succession rights of such partners. Scientists predict further increasing spread of unregistered marriages due to their lightness and lack of duties. This may result in legal acknowledgement of such relations as it has happened in many European countries.

This trend translates to the "ageing of the newly-weds" with 27 years as the age of entering the first marriage for women and 31 years – for men. The outcome of this situation transforms into families, who have time to give birth only to one child.

Let us have a look at future perspective of main demographic trends, characterized above.

*Firstly*, it is essential to consider forecasts describing number of population. For the last few years depopulation accounts for 150 thousand people per year. Pessimistic forecast expects it to reach 750 thousand people each year since 2030, which is in fact returning to the lowest numbers of late 1990s – early 2000s, when dying out comprises about 900 thousand people per year. Such prognosis chiefly is calculated following fluctuating numbers of certain age cohorts and above mentioned age fertility models. In 2030s women, born in 2000-2005, will predominantly carry out births. As we know, this half a decade is characterized by birth rate crash.

Medium forecast variant supposes depopulation as well, though a bit lower – about 500 thousand people annually. Even an optimistic forecast predicts extremely negligible growth of about 80 thousand people yearly. We do not include migration in this forecast, as it is more unpredictable and dependable on larger number of factors.

It is interesting to note that medium and optimistic forecast variants presume mortality as the main factor of fighting depopulation, showing its moderate and substantial decrease respectively, while fertility changes are almost insignificant. At the same time, pessimistic forecast depicts the continuation of increasing mortality rate and decreasing birth rate.

The explanation of this is not hard to plumb: mortality tends to be more manageable parameter that can be influenced by medical care improvement, promoting healthy lifestyle and cutting of criminality. Fertility motives lie deeper and reasons of declining need for children are complex and difficult to study. Even the substantial raise in material welfare does not guarantee desire to have

more than two children, while the majority of families should have at least three children to provide demographic increase of population.

*Secondly*, we need to consider life expectancy of men and women. Russia is characterized by high mortality rates of men, especially ones of working age. It is widely known that among newborns there are more boys than girls. However, after 25-30 years old the number of women starts to exceed because survival rate of girls is higher and men usually have more dangerous lifestyle. As a result, averagely, women live 10 years longer than men do. Gender disproportion causes various negative effects, including loneliness of retiring aged women.

All forecast scenarios, showing the increase of life expectancy of men and women, preserve women's surfeit for 5-10 years. Under retirement-age prolongation reform it is important to analyze men's estimated "retired life": it is not more than 5-8 years in average keeping in mind the difference of this parameter region-wide.

### **Conclusion**

Consequently, we cover main demographic and family trends and features of contemporary Russian society. The situation remains to be dangerous and requires immediate system and long-term measures. Delay in solving problems of depopulation, low birth rate, gender disproportion and marriage instability may cost dear.

To conclude, we also can list possible guidelines or steps that may positively change existing complicated situation. Core message is to increase investments in profound studying of fertility and reproductive behavior, to improve substantially system of medical care, to enhance scientific approach to elaborating state demographic policy and to enlighten common people about demographic situation and its consequences. Moreover, it is crucial to amend family legislation in Russia to avoid contradictions in different branches of law and to include civil partnerships in legal environment, at least, partially.

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struments have been evolving over the centuries: some appear, others disappear, they are finalized by masters, change their form and sound. Some instruments were unfairly forgotten and then "resurrected." The evolution of musical instruments is very difficult and intricate, and we cannot guess the way which it will go. But we can turn on our fantasy: to imagine what musical instruments will exist in the near future, what they will look like, what their sound will be. This topic is very interesting for me, and I decided to conduct my research.

The scientists often explore the ways of sound production on various musical instruments, but not the instruments themselves. So, this topic is very relevant and poorly studied. In my research I would like to give my own classification of the musical instruments of the future and speak about the most unusual of them. Notions of "unusual" musical instruments are changeable and it is unlikely to lend them to unambiguous classification. So I made my own classification of unusual musical instruments. I hope it will help musicians to understand the variety and uniqueness of the musical instruments of the future better.

In the Baroque period some instruments caused a strange reaction of people, but in our time they do not cause us any negative emotions. These tools have become usual and very common. Also, the sound of such modern musical instruments seems for us very strange and unusual, sometimes even repulsive now. But maybe in 50 years it will be absolutely normal, and tickets to the Philharmonic will be sold to such concerts of these instruments. Moreover, almost everyone will be able to create a musical masterpiece on his own computer.

I conditionally divided modern unusual musical instruments into several groups.

First, there are electronic musical instruments, which work with electric current. These are various synthesizers, theremins, electric guitars, electric organs. [1] An important role in the development of modern music is played by a computer – new timbres are created, it is possible to create music on a computer in real time (There is a concert for several laptops. Several musicians behind laptops create and perform electronic music in real time).

This group includes the following instruments:

An Eigenharp is a brand of electronic instruments made by Eigenlabs, a company based in Devon, UK. The "instrument" is a highly flexible and portable controller of a sound. It consists of a breath-pipe, a key matrix and a ribbon controller. The instrument comes in three models: Alpha, Tau, and Pico, depending on the size.

A Hyperkeys is a performance tool, a mixer, and a sound designer, all in one.

The Reactable is an electronic musical instrument with a tabletop. The Reactable is a round table, used in a darkened room. A virtual modular synthesizer creates music or sound effects. The Reactable opened a completely new kind of musical activity: several people create and change the

sound picture in real time on one instrument. It is a wonderful and exciting show for the audience.

A laser harp is an electronic musical user interface and laser lighting display. It projects several laser beams played the musician by blocking them to produce sounds which are reminiscent of a harp. [3,5]

The second group includes the instruments created from improvised means.

For example, in the 1920s, a two-handed saw, a factory horn and a typewriter became musical instruments, and at that time no one perceived them as "unusual" – just as a matter of use in the function of a musical instrument: music was then considered the sounds of the city, machines and mechanisms.

Any pot, spoon, saw, glass of water can be a musical instrument – in general, everything that comes to hand. You can even play vegetables – there are real vegetable orchestras. Haydn in his Children's Symphony uses various children's toys as musical instruments and even writes for them parts in the orchestra. A music teacher and composer Carl Orff paid special attention to the musical education of children. Carl Orff created a special set of tools, usually called the "The Orff's set". The basis of this set is xylophones, metalphones and glockenspiels – bells. An interesting Orff's finding were glass cups filled with water in different ways and tuned to the sounds of a certain height. They are played with wooden or metal sticks. [4]

For the manufacture of homemade tools people use:

Various kinds of paper (cellophane, newspaper, etc.)

Wooden cubes, pencils, coils, bars.

Boxes of different materials (cardboard, plastic, metal, jars of yogurt, chocolate eggs, cells).

Natural materials: acorns, chestnuts, nuts, cones, various cereals, stones, shells.

Pieces of plastic, small metal objects (keys, brackets, sticks, nuts, rings, etc.)

Metal cans of different sizes.

Glass bottles and wine glasses.

Buttons, balls, rubber bands, bells, empty tubes of lipstick, combs.

And much more, from which only you can extract sounds!

However, scientists periodically wonder whether a pot, stick, vegetable, etc. is a musical instrument? And in general, what can be considered a musical instrument? But the fact remains.

Many of us played improvised musical instruments – the glasses of water, wooden sticks, and spoons. Such people created «noise orchestras», played different rhythmical compositions and enjoyed it very much. I decided to find out opinions of the students of the Perm State Institute of Culture whether it is music or just fun. So, I conducted a quiz for students of different specialties.

Let's turn to The Quiz:

1. Have you ever listened to music performed by improvised musical instruments – instruments of Carl Orff, glasses of water, wood sticks, spoons or by the noise orchestra? What impressions did this music produce?

2. Have you played any improvised musical instrument? If you have, what instrument was it?

3. Was it a real music or just getting fun for you?

After conducting the quiz, I received very unusual and unexpected results:

Almost everyone thinks that music performed by the improvised musical instruments is a true music. This activity brings pleasure to all respondents, because learning to play the improvised musical instruments is much easier than the real musical instruments. They played the glasses of water, barrels, bags, brushes, paper. Someone enjoyed playing in the country. For someone this kind of music even seems livelier than the instrumental. Others believe that it's just fun at first, but then it can grow into something more than just rattling. Someone was very interested in listening to different sounds, looking for an unusual approach, an original sound. For someone it is something unearthly, unusual, he is ready to watch and listen to it endlessly. Any rhythm makes life more diverse, all that has a rhythm and composition is music already.

Thirdly, any part or detail of musical instrument can serve as an independent musical instrument: canes and valves of wind instruments, mouthpieces, strings. For example, one musician conducted a very unusual experiment: he completely disassembled the oboe into its constituent parts, to the smallest details, and tried from each individual part (canes, valves, the body of the instrument, etc.) in all ways to extract sound. And he made a lot of incredible discoveries.

Next I'd like to describe that man's imagination is so boundless that he makes extraordinary, amazing instruments. Water, fire, wind etc. create very surprising sound. Get absolutely incredible things.

A hydraulophone is an acoustic musical instrument played by physical contact with water. The hydraulophone was described and named by Steve Mann in 2005.

A pyrophone is a small pipe organ, designed to produce musical sounds using gas flames burning close together in glass tubes, and producing a sound when the flames are separated by the pressing of a key. Designed by G.F.E. Kastner in 1869.

A glucophone would be called a percussion instrument. It looks like a small spaceship and its sound is similar to the voice of a harp and a bell. It is called a "drum of happiness". This instrument is included in the class of idiophones: the source of sound in this case is the tool body. Glucophone can be done from different materials: glass, bone, ceramics, metal or wood. [6]

An Aeolian harp (also a wind harp) is a musical instrument that is played by the wind. This

musical instrument is named for Aeolus, the ancient Greek god of the wind. It looks like a wooden box including a sounding board, with strings stretched across two bridges. It is often placed in an opened window where the wind can blow across the strings to produce sounds. [3,5]

The next group includes the instruments-centaurs (instruments-hybrids), composed of parts of different instruments. Let's see what it consists of.

A tromboon is a hybrid of a trombone and a bassoon. The sound of the instrument is comical and loud.

A shakulute is a hybrid of Japanese bamboo duda shakuhachi and European silver flute. They blow it backwards. To make a shakulute, special mouthpiece is put into a trumpet flute . Shakulute was invented in 2002 by Monty Levenson.

A venova is a musical instrument, currently produced by Yamaha Corporation. It was released in 2017. It combines some design attributes of a recorder and some of a saxophone. The venova is a woodwind that uses a single reed and mouthpiece, like a saxophone. [2]

The range of notes is a fully chromatic two octaves.

Now the conclusions of my work are:

In the future, of course, the main role will be assigned to electronic music, expanding the features of computers. New instrument-centaurs will be invented, absolutely new materials will be used to make tools.

Concerning the results of the quiz, I can assume that playing improvised musical instruments is a very promising area, because they are easily made, learning to play them takes a little time. They can be made from everything; it is a big expanse for our imagination. You can invent and create as many instruments as you want, you can search for the most unusual timbres indefinitely. I can consider with full confidence that it will take important place in the future.

That's all I have to say for the moment. Now if you have any questions I'll be happy to answer them.

Thank you for attention.

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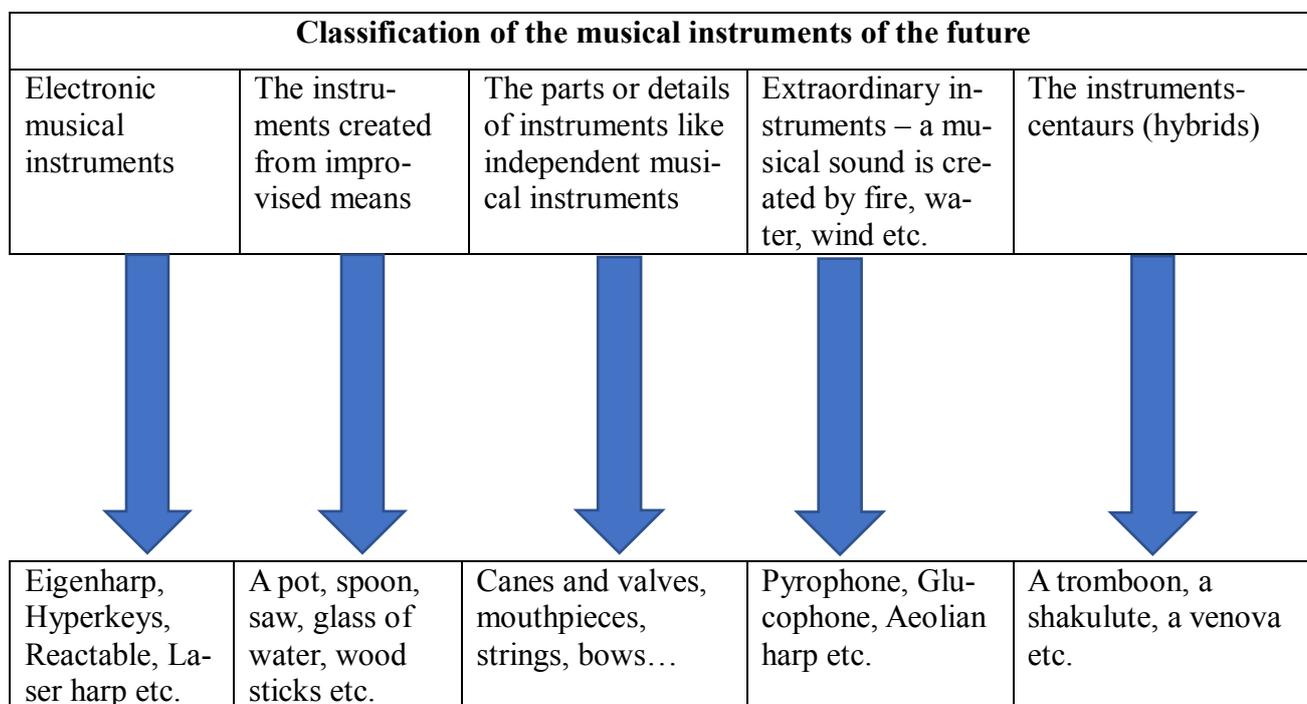
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*Application*



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**Future English learning technologies Будущие технологии изучения  
английского языка**

**Annotation:** This article is dedicated to using of new technologies in learning of foreign language. Using of informational technologies in the nearest future is considering on example of English language.  
**Аннотация:** статья посвящена использованию новых технологий в обучении иностранному языку. На примере английского языка рассматривается применение информационных технологий в ближайшем будущем.

**Introduction**

It is not a secret that modern generation prefers being taught foreign languages with the help of modern technologies. The development of education itself is closely connected with the increase of its informational potential. The priorities have recently been given to the Internet as one of the main sources. English has become the world language. These days we can come across one of its variants – Globish.

A large amount of researches have been made in the sphere of teaching a foreign language through the Internet. Consider, N.E. Anosova, I.N. Vereschagina, T.V. Karamysheva, N.V. Nesterova, L.P. Petrova, V.I. Pisarenko, M.E. Sergeeva and others. The majority of linguists view this problem one-sided. There are many sites which have lexical, grammar, listening and writing opportunities although not all of them analyze the users' mistakes.

As the information system, the Internet offers its users various resources. The basic services include:

- e-mail, usenet, videoconference
- the possibility of publication of the information on homepage and other Web-server
- access to the information services
- different searching systems (e.g. Alta Vista)
- reference catalogues (e.g. Yahoo)

➤ communication in Chats

All these resources can be easily used during classes. Learning communicational and intercultural communication is impossible without communication practice. The virtual reality of the Internet in this context allows going beyond time and space limits. It creates the feeling of live speaker in front of you. Though, to speak English means to know the meaning of words and correctly use them in speech situations.

In our work we offer a sort of linguistic modeling instead of educational computer games.

### The basic part

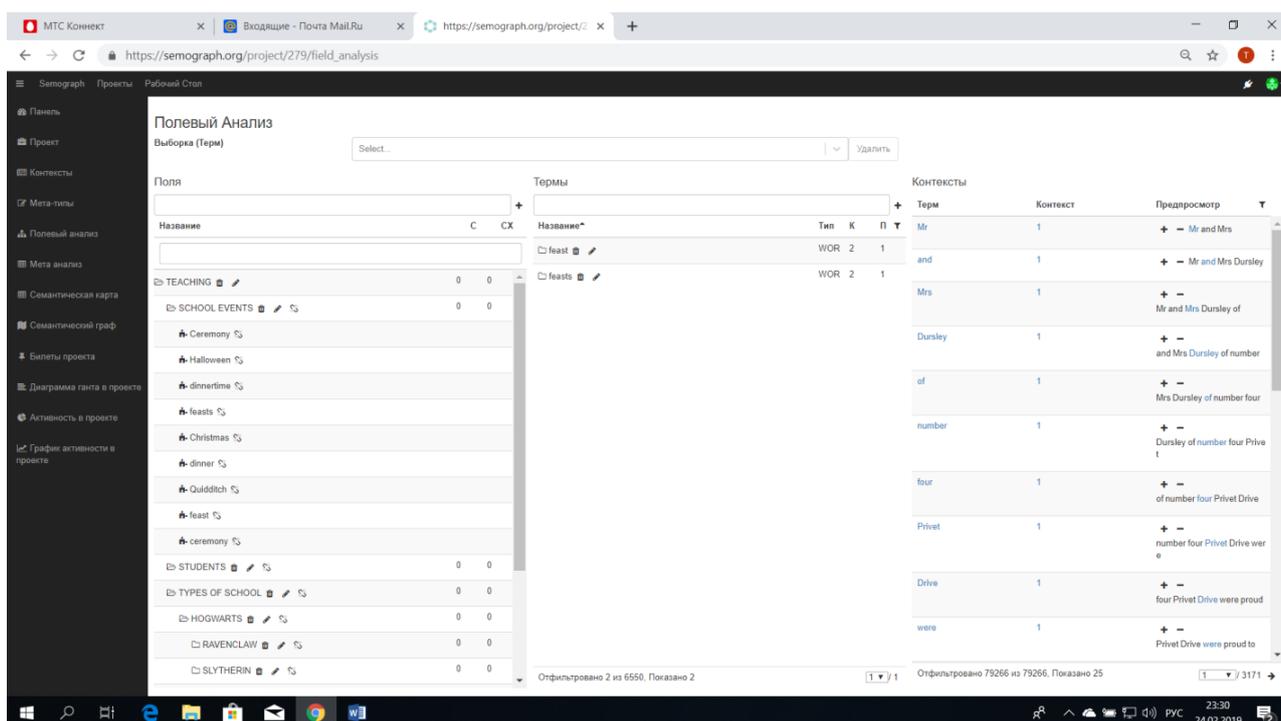
The aim of this work is to create word models based on literary works or scientific articles or books. There are some programs today that can offer such an opportunity. A student lists in the data of his book or work according to the family field he has chosen and creates the linguistic model.

One of such programs is called “SEMOGRAPH”. The linguists of Perm State University (PSU) have worked out this information system. It can be applied for the wide range of investigations connected with the expert analysis of the textual information. It helps the experts in different scientific spheres to conduct psycholinguistic experiments and applied marketing studies.

The specialists can give recommendations based on these studies how to project mediaplans and structure and use the families of words. Professor K.I. Belousov underlines that this resource is in free access [semograph.com].

We would show you one of the examples of working with this program from the linguistic side.

Picture 1. Contexts



Recently, we have started the project on Harry Potter's series to get the model of the literary concept EDUCATION. We have filled the first book in this program, dividing it into contexts [pic. 1].

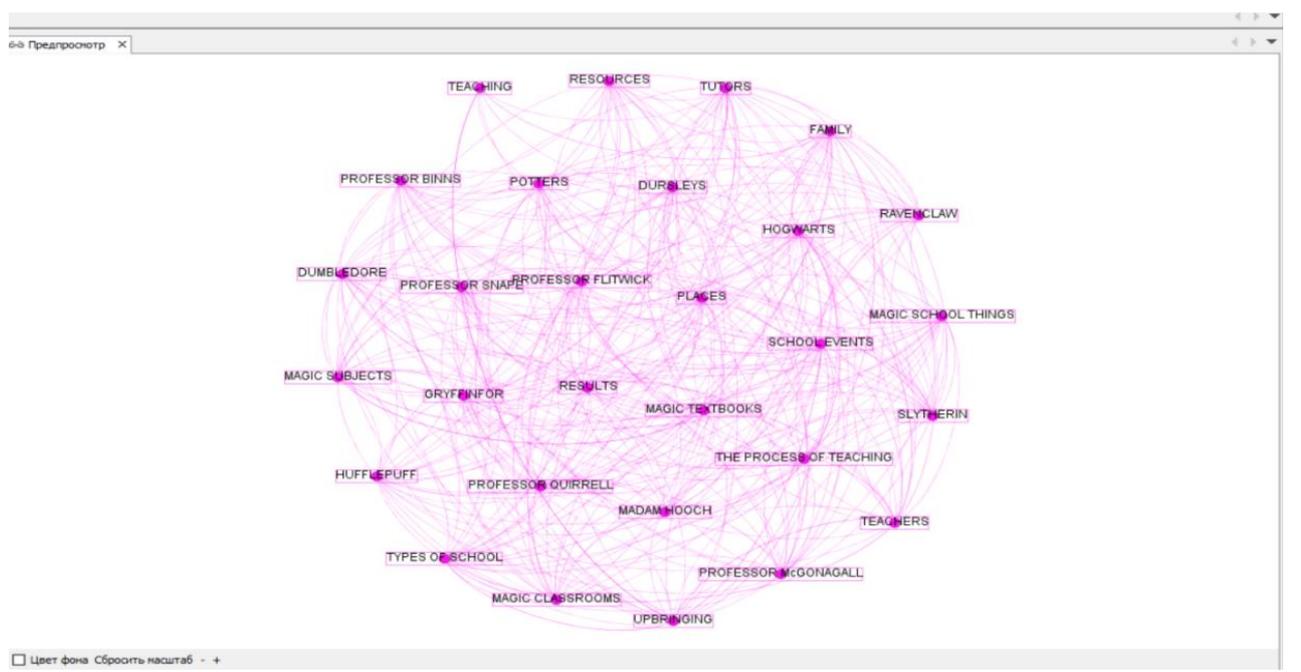
After that we are searching for special terms [pic. 2] which define education or are connected with it. Doing this job, a student remember words and contexts in which they are used.

Picture 2. Terms

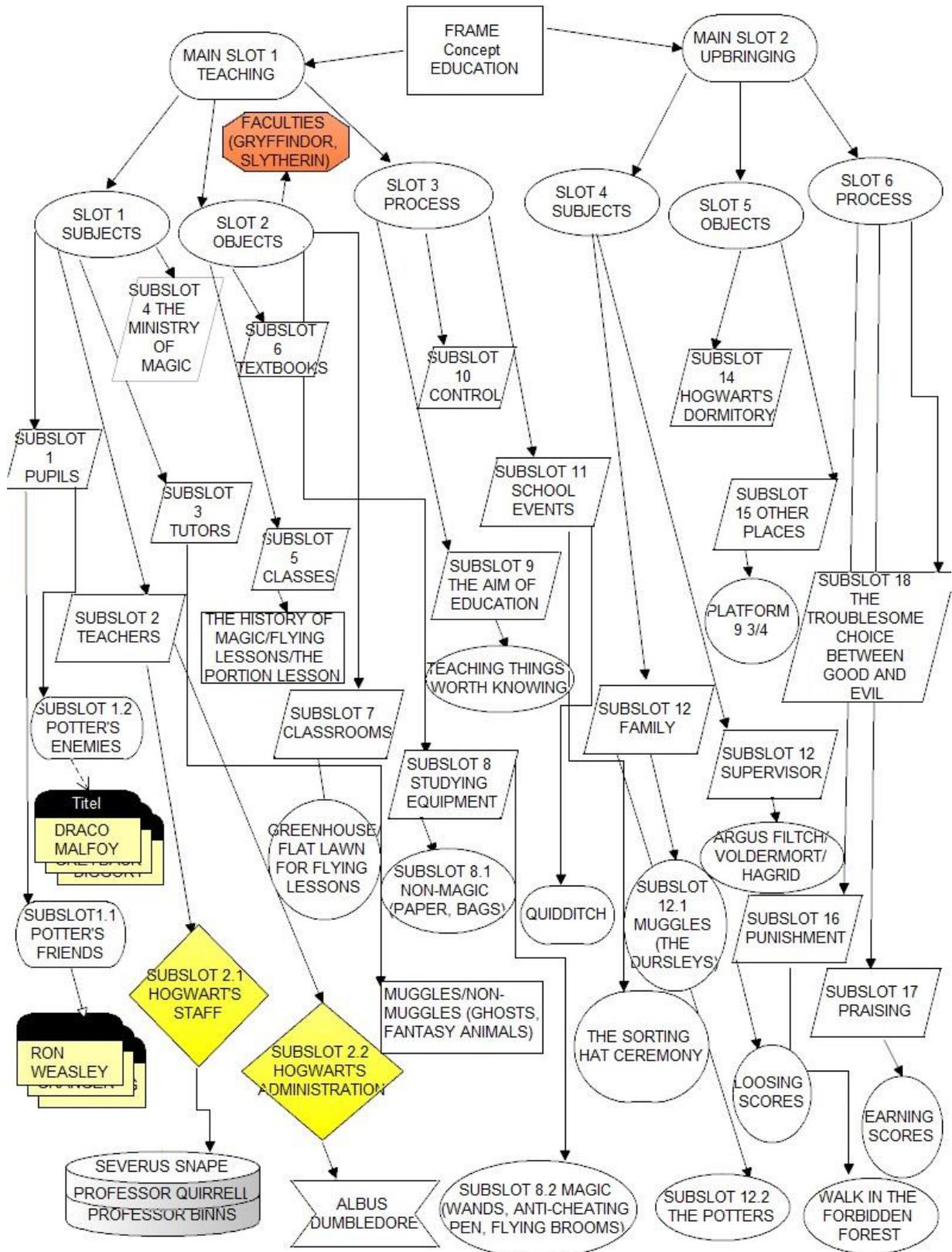
The screenshot shows a web browser window with the URL <https://semograph.org/project/279/context>. The page title is "Контексты" (Contexts). Below the title, there is a search bar and a "Удалить" (Delete) button. A table lists contexts with columns for "Название" (Name), "Создан" (Created), and "Chapters".

| Название | Создан           | Chapters   |
|----------|------------------|--|
| 18       | 14.01.2019 10:18 | 1. Chapter Seventeen The Man With Two Faces                      |
| 17       | 14.01.2019 10:18 | 1. Chapter Sixteen Through The Trapdoor                          |
| 16       | 14.01.2019 10:18 | 1. Chapter Sixteen Through The Trapdoor                          |
| 15       | 14.01.2019 10:18 | 1. Chapter Fifteen The Forbidden Forest                          |
| 14       | 14.01.2019 10:18 | 1. Chapter Fourteen Norbert The Norwegian Ridgeback              |
| 13       | 14.01.2019 10:18 | 1. Chapter Thirteen Nicolas Flamel                               |
| 12       | 14.01.2019 10:18 | 1. Chapter Twelve The Mirror Of Erised                           |
| 11       | 14.01.2019 10:18 | 1. Chapter Eleven Quidditch                                      |
| 10       | 14.01.2019 10:17 | 1. Chapter Ten Hallowe'en  |
| 9        | 14.01.2019 10:17 | 1. Chapter Nine The Midnight Duel                                |
| 8        | 14.01.2019 10:17 | 1. Chapter Eight The Potions Master                              |
| 7        | 14.01.2019 10:17 | 1. Chapter Seven The Sorting Hat                                 |
| 6        | 14.01.2019 10:17 | 1. Chapter Six The Journey From Platform Nine and Three-Quarters |
| 5        | 14.01.2019 10:17 | 1. Chapter Five Diagon Alley                                     |
| 4        | 14.01.2019 10:17 | 1. Chapter Four The Keeper Of The Keys                           |
| 3        | 14.01.2019 10:17 | 1. Chapter Three The Letters From No One                         |
| 2        | 14.01.2019 10:17 | 1. Chapter Two The Vanishing Glass                               |

Picture 3. Field diagram of the literary concept EDUCATION



Picture 4. The Literary Concept EDUCATION



As a result we can make a model of a literary concept EDUCATION using the learned words in different images [pic. 3, 4].

### **Conclusion**

To sum up, the basis of learning a foreign language is a clear view on the meaning of the words. Modern technologies are developing rapidly.

They say in ten years specialists to train the artificial intellect will be required. So, it is necessary to have special programs and start teaching them now to let our country be the world leader in this sphere.

The method, shown in the basic part, concentrates on the linguistic training.

We hope to continue this research to make people know and speak English.

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**Present and future of energy Настоящее и будущее энергии**

**Annotation:** in this research, the author considered such topic as using of energy and its saving in the nearest future. In the research, daily, domestic methods of electricity, for example, energy saving lamps.

**Аннотация:** В своём исследовании автор рассматривает такую тему как использование энергии и её сохранение в ближайшем будущем. В исследовании приводятся бытовые, повседневные методы использования электричества, например, энергосберегающие лампы.

We will make electricity so cheap  
that only the rich will burn candles."

Thomas Edison

Objective: To find out how to save electricity in the house.

Tasks:

- To study the literature on this topic.
- View materials on the Internet
- Make economic calculations

The object of study: electricity.

Subject of research: energy savings.

Hypothesis: If you replace incandescent bulbs with energy-saving ones and turn off electrical appliances at night, you can save electricity.

The role of electricity as a universal energy carrier in the life of modern society and man is very large. Electric power industry provides the necessary and optimal energy needs in the domestic and social sphere, production, transport, communications, computer science, management and defense. The ability of electricity to transform into light, mechanical, thermal, sound forms of energy, its communication, environmental friendliness and controllability in use provide the basis of the en-

ergy base of modern civilization.

Putin V.V. said: "I am sure that Russia still has a lot of hydrocarbon raw materials, but it is necessary to develop alternative sources of energy. And also to introduce energy efficient technologies." According to the Government, increasing energy efficiency is one of the main priorities of Russia's domestic policy. In 2008, Vladimir Putin was tasked with reducing the energy intensity of GDP by 40 % by 2020. And it's not just about reducing energy consumption. Improving energy efficiency is the creation of new technological areas of business, the modernization of industry, and the improvement of living conditions of our citizens and the production of new high-tech products.

The Government of the Russian Federation has now launched relevant work in several areas: the creation of a legal framework in the field of energy conservation, the implementation of specific pilot projects and the organization of information support for ongoing activities. "In the first direction, the Federal Law "On Energy Saving and Increasing Energy Efficiency" was adopted and entered into force", says Economic Development Minister Elvira Nabiullina, "work continues on the preparation of secondary legislation. The main focus of the law was on the state and budget sectors, this is a deliberate choice – when preparing the law, we were guided by the principle: the state should start the reform in the field of energy efficiency with ourselves." [4]

So where is the electricity wasted in the house?

Lighting of the apartment consists of natural and artificial. Any of them should provide sufficient illumination of the room, and should also be uniform, without harsh and unpleasant shadows. To improve the natural lighting of rooms, wall and ceiling decoration is recommended to be light. Natural illumination also depends on the loss of light when it comes in through glass panes. Dusty glass can absorb up to 30 % of light.

Artificial lighting is created by electric lamps. In modern apartments incandescent bulbs are widespread, which are traditional and widely used light sources.

Household appliances are the main consumer of electricity in any home, and its share in total energy consumption is growing rapidly around the world. The champion in the consumption of kilowatts in the average family is a fridge that operates around the clock. Its share is from 20 % to 40 % of the consumed electricity. The second place is for an electric stove over 20 %, lighting is about 18-20 %. Washing machine is about 15 %, TV – 11 %, vacuum cleaner – 8 %. In addition, there are small household appliances, which can be a lot in the house. Electric kettles, steamers, grinders, hair dryers and the like, though do not work all the time, but they can also burn a lot of electricity in total.

Of course, the amount of electricity consumed may vary. For example, the amount of energy consumed by a computer depends on the power of the power supply and the load on the computer.

In the case of a refrigerator, it depends on its volume and quantity of products stored in it, and with a washing machine it depends on the washing mode, set temperature, weight of laundry, etc.

Calculation of savings on energy-saving light bulbs.

In the electricity bill, 50-70 % comes from bulbs, sconces, night lamps, floor lamps ...

How much can you save by using energy-saving (hereinafter economical) lamps and is the game worth playing?

The table below shows a comparative calculation of costs when using conventional and economical lamps.

A conventional electric lamp spends 10 % of its energy on producing light and 90 % on generating heat. It is very wasteful.

An ordinary lamp costs 50-65 rubles. Energy saving lamp 120-300 rubles. But it will have to replace not one lamp, but every single one. And that means you have to spend from the replacement of lamps in a one-room apartment from 1,200 rubles. Will it bring a win in the future, or is it money thrown to the wind? This will show our calculation. How quickly will this lamp pay for itself and how much can you save by using energy-saving lamps?

Energy saving lamps are lamps of three types:

1. Compact fluorescent lamps (usually we use them at home)
2. Halogen lamps (the most expensive option)
3. LEDs (very expensive)

Therefore, in this article we will look at fluorescent lamps and we will call them energy-saving. These are tubular fluorescent lamps, which are still used in schools and offices.

These lamps save energy consumption by up to 80 % compared to conventional bulbs. The service life of a conventional lamp is up to a year or about 1000 hours. In practice, it is at best half a year. The service life of an energy-saving lamp is up to 10,000 hours, or 4–8–10 years (figures depend on the manufacturer, condition of the wiring and voltage drops). It is considered that the lamp turns on for 6 hours a day.

The most famous lamps are Philips, Navigator, Cosmos, General Electrics, Osram.

The power of energy-saving lamps does not match the power of ordinary light bulbs. For Chinese lamps, the indicated power is multiplied by 4. That is, a 25 watt lamp will shine like 100 watts. Lamps of famous manufacturers shine brighter and their power can be multiplied by 5. Lamps are spiral, arc-shaped, and with a bulb in the form of a ball. It is important to focus not on the form, but on the manufacturer and power. Also be sure to choose the right base. The base of the E14 is small, such lamps are used, for example, in ceiling lights. Ordinary lamps have an E 27 base – they fit almost all lamps that we use at home. Another thing to pay attention to is the color tem-

perature. They are: warm white light (corresponds to the usual lamp - yellow light), cool white (gloomy for use at home), day white.

Disadvantages of fluorescent lamps:

1. Contain mercury vapor, can not be thrown into the garbage! Need to specifically dispose of!

2. Energy-saving lamps are demanding on the quality of energy. When voltage surges, they can burn out. Therefore, the service life of such lamps can be predicted rather poorly.

3. The energy saving lamp does not light up immediately. It is gaining power. Therefore, the frequent on-off time is bad for the life of such a lamp. It should be turned off no earlier than 5-10 minutes after switching on.

So, a comparative table of savings in the use of energy-saving lamps.

We compare an ordinary 100-watt lamp, the price is 12 rubles, the warranty period is 1000 hours (1 year). And an energy-saving lamp with a power of 25 watts, the price is 150 rubles. The service life of 8 thousand hours. So 1 energy-saving lamp is equal to 8 ordinary in our case. We assume that we use the lamp for 6 hours a day. An average of 180 hours per month.

For a normal lamp, the juice of the service will be  $1000/180 = 5.5$  months. For an energy-saving  $8000/180 = 44$  months, this is about 3.5 years. Tariffs for electricity take 2.31 rubles (for apartments with gas stoves).

| Indicators   | Normal lamp  | Energy saving lamp  |
|--|--|---|
| Power, watt  | 100 (0.1 kW)   | 20 (0.02 kW)  |
| Service life, hours  | 1000   | 8000  |
| Lamp price   | 12 rubles  | 150 rubles  |
| Energy costs per lamp per month (at a rate of 2.31 rubles) | $0.1 \text{ kW} * 180\text{h} * 2.31 \text{ rubles} = 41.58 \text{ rubles per kW per hour} + \text{price of a lamp } 12 \text{ rubles} = 53.58 \text{ rubles}$ | $0.02\text{kW} * 180\text{h} * 2.31 \text{ rubles} = 6.31 \text{ rubles per kW per hour} + \text{lamp price } 150 \text{ rubles} = 156.31 \text{ rubles}$ |
| Energy costs for 1 lamp per year                           | $0.1 * 1000\text{h} * 2.31 = 231 \text{ rubles} + 12 \text{ rubles the price of a lamp} = 243 \text{ rubles}$  | $0.02 * 1000\text{h} * 2.31 = 46.2 \text{ rubles} + 150 \text{ rubles the price of a lamp} = 196.2 \text{ rubles}$  |
| The cost of electricity per 1 lamp for 3.5 years           | $0.1 * 8000 \text{ h} * 2.31 = 1848 \text{ rubles} + 96 \text{ rubles the price of } 8 \text{ lamps} = 1944 \text{ rubles}$                                    | $0.02 * 8000 \text{ h} * 2.31 = 369.6 \text{ rubles} + 150 \text{ rubles the price of the same lamp} = 546.6 \text{ rubles}$                              |

The most effective will be the replacement of incandescent bulbs for energy-saving, use the calculator to calculate the savings [1].

## Светодиодный энергосберегающий калькулятор

|  |                                      |
|--|--------------------------------------|
| Сейчас вы используете лампу, Вт  | <input type="text" value="100"/>     |
| Тариф на электроэнергию, руб/кВтч  | <input type="text" value="3.62"/>    |
| Кол-во ламп используемых в настоящее время                                 | <input type="text" value="5"/>       |
| Потребляемая мощность светодиодной лампы, Вт                               | <input type="text" value="75"/>      |
| Кол-во светодиодных ламп которые будут использоваться                      | <input type="text" value="5"/>       |
| Среднее суточное время работы лампы(в часах)                               | <input type="text" value="5"/>       |
| Срок службы СДЛ(в часах)   | <input type="text" value="20,000"/>  |
| <b>Экономия от энергосбережения:</b>                                       |                                      |
|  | <b>Рассчитать</b>                    |
| Текущая стоимость электроэнергии в месяц, руб                              | <input type="text" value="271.50"/>  |
| Стоимость электроэнергии в месяц, при использовании светодиодных ламп, руб | <input type="text" value="203.63"/>  |
| Вы будите экономить на электроэнергии в месяц, руб                         | <input type="text" value="67.87"/>   |
| <b>Экономия за весь срок службы светодиодной лампы составит, руб</b>       | <input type="text" value="9050.00"/> |

The next step is to save electricity beginning with the eradication of bad habits.

1. Do not keep the refrigerator door open for a long time, it harms both the products inside and the unit itself.

2. It would be nice to unplug the chargers after you have already charged your phone or tablet. Consider that they spend energy not only on burning a red light bulb, but also on self-heating!

3. It is advisable to completely turn off the TV and other appliances that can remain in "standby" mode. This is also extra kilowatts, for which you have to pay.

Only due to all this can save from 5 to 15 % of electricity, depending on the degree of past sloppiness and the level of equipment used.

In each home, you can still save energy by replacing the meter of electrical energy. Previously, due to the high reliability and low cost, induction electricity meters were used. However, over time, apartments began to install electronic one-rate or multi-tariff (controlling devices with several tariffs) meters with a liquid-crystal display or the usual digital drum. New devices allow you to take into account electricity at preferential and basic rates. With a two-tariff counter, you can save [2]. For example, the cost for one-rate accounting is 3.77 rubles per 1 kW at any time of the day. And with two tariffs, the cost of 1 kW at night is 3.8 rubles; during the day, 2.43 rubles [3].

The constant growth of electricity tariffs makes you think about energy saving and look for ways to reduce energy consumption as much as possible for the consumer. To keep electrical lighting in the apartments of citizens has recently become the norm.

In the course of research, my hypothesis was confirmed.

But the further development of scientific and technological revolution for the next 35 years will increase the comfort of life due to gadgets and devices, which will double the specific power

consumption in the residential sector, and in general increase the specific power consumption per person from 7 thousand kWh per year to 13 thousand. kWh respectively.

Thus, there is every reason to predict that further electrification of the country will occur at the expense of alternative energy sources. Gas and oil can be replaced by wind, ocean, sun, bioenergy and geothermal energy of the Earth. In 2018, according to IR, the share of alternative renewable energy sources (without large hydropower plants) was 8.4 % in world electricity generation.

As a conclusion, it is worth saying that these alternative methods of producing current are being improved and are being developed constantly. They are already able to provide the population with electricity and in the future are able to compete with the traditional options for generating electricity, and in some cases completely replace them [4].

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**Specificities and development of global relations in the near future**  
**Особенности развития международных отношений в ближайшем будущем**

**Annotation:** this article is dedicated to development of geopolitics by 2040. The article address the question of “soft power” in international relations, and the question of interaction between Russia and other countries on the international arena

**Аннотация:** Статья посвящена развитию геополитики к 2040 г. Затрагивается вопрос международной безопасности, применение «мягкой силы» в международных отношениях, и вопрос взаимодействия России с другими странами на международной арене.

Nowadays-modern global relations characterises by dynamic development, diversity and unpredictability. «Cold war», and especially bipolar confrontation have had their day. Transition from bipolar system to forming of modern system of global relations began in 1980s, with the policy of Gorbachev, and exactly during the «perestrojka» and new way of thinking.

Today, in the era of post-bipolar world, status of one and only superpower country – USA is in the «phase of challenge». It means that the number of countries, ready to challenge United States of America is growing. Even today, at least two superpowers are obvious leaders in international landscape, and ready to defy USA. It is Russia and China. Considering views of Evgeniy Primakov in his book “The world without Russia? Worth of political lack of vision” United States of America are gonna share with European Union, India, China, South Korea and Japan the role of hegemon.

In this context, I need to mark important occasions in global relations, which particularly demonstrate becoming of Russia as independent country. In 1999, during bombing of Yugoslavia by troops of NATO, Russia had been in favour of protecting Serbia, so it submitted the independence of Russian policy from west.

Also, it’s important to mention the speech of Vladimir Putin to the envoys in 2006. Need to point out, the meeting of envoys is annual event in Russia, but exactly in 2006 Putin first time an-

nounced Russia must play the role of superpower country, managing by its own national interests. The next year, in February 10, 2007 Putin expressed his famous Munich speech, which was the first real honest talk with the west. Putin made straight and really deep analysis of western policy which made a crisis of world security. Besides, the president told about unacceptability of unipolar world, and now, 12 years later is obvious that today, United States cannot handle the role of world gendarme.

Thus, modern global relations nowadays are in transit, and Russia since 20<sup>th</sup> century showed its independent policy in the lead of decent leader.

In addition, the tendency of modern global relations has been globalization, which contradicts Westfall system. This system is based on idea of relatively isolated and self-contained states and balance of power between them. It should be noted, that globalization has patchy nature, as the modern world has been asymmetrical, and that is why globalization is controversial thing in modern global relations. I need to notice that disintegration of Soviet Union has been groundswell of globalization, at least, in economic sphere, because, at that time, transnational corporations, which have economic interest, started to act.

Besides, I need to mark, that active integration of countries – is the main tendency of modern global relations. Globalization between countries differ from integration by lack of interstate agreements. However, globalization affects stimulation of integration, because it makes interstate borders more transparent. Development of close cooperation within local organizations, which had started in the end of 20<sup>th</sup> century, is the obvious proof. Usually, on the local level, active integration of countries is happening exactly in the economic sphere, which positively effects on global political process. However, at the same time, process of globalization negatively effects on domestic economy, because it limits the possibility of national states to control its inside economic processes.

In considering the process of globalization, I would like to mention the words of Russian Minister of foreign affairs Sergei Lavrov: «Nowadays, this model of liberal globalization made by so-called “the chosen”, including its financial and economic aspects is failing. Therefore, it is obvious that the west wants to save its domination on the world arena. However, Evgeniy Primakov pointed out in his book “World without Russia. Political lack of vision” that USA is not a sole leader anymore. That says about new phase in development of global relations. Thus, it is more objective to look at future global relations as polycentric, not multipolar, because, the tendency of regional consolidations leads to forming of centers of power, not the poles.

Interstate organizations, transnational corporations, nongovernment organizations play active role in development of global relations. Besides, appearance of big international financial organizations and global trade networks have an impact on development of global relations, which is

consequence of Westvale's principles, where the one and only actor of global relations was the state. It is worth noting, that transnational corporations can be encouraged in regional associations, because they are oriented on optimization of costs, and on creation of common production networks. That is why transnational corporations put pressure on government for development of free regional investment and trade regime.

In conditions of globalization and post-bipolarity, interstate organizations needs more reforms to make their work more effective. For example, Organization of United Nations obviously needs reformation, because, its actions do not bring a big result for stabilization of crises. Vladimir Putin in 2014 suggested two options for reforming this organization, which are consistency in taking a decision on reforming United Nations Organization, and safety of all the fundamental basics of UN. Once again, participants of discussion club "Valdai" were talk about reforming of UN on meeting with Vladimir Putin. In addition, I should say that Evgeniy Primakov was talking about strengthening of impact of Organization of United Nations, when the question is national security. Specifically – do not provide the veto for the most countries, this law should belong only to the permanent members of Security Council of UN. In addition, Primakov was talking about importance of development of other structures of crisis management, not only Security Council. He also considered benefits of charter of anti-terror actions.

That is why; one of the most important factors of development of modern international relations is effective system of national security. One of the most serious problems on international arena has been a danger of dissemination of nuclear weapon and other kinds of weapons of mass destruction. That is why, I need to mark that in a transitional period of modern international relations it is important to contribute strengthen control of armament. Such important agreements as ABM Treaty and Treaty on Conventional Armed Forces in Europe were no longer operate, and conclusion of new treaties remained in question.

Furthermore, as a part of development of modern international relations, the problem of terrorism and the problem of migration are actual for today as well. Migration process negatively influences development of countries, because this international problem affects on major source country and on recipient country. Usually, migrants do not do nothing positive, but spreading drug dealing, terrorism, and criminal activity. There is a system of collective security, which has been used for the solution of current situation. System of collective security needs in reforming, as much as UN. While observing its activities, we can conclude that local organizations of collective security do not have any coherence between neither themselves, nor United Nations Security Council.

In addition, I need to point out considerable influence of soft power on development of modern international relations. Conception of soft power by Joseph Nay imply the ability to achieve

desired goals on international landscape, not using violent methods (strong power), but applying political ideology, the culture of society and the state, and also foreign affairs (diplomacy). The term “soft power” appeared in Russia in 2010 in pre-election article of Vladimir Putin “Russia and changing world”, in which the president clearly formulated definition of this conception. “Soft power – is the set of tools and methods of achievements of foreign policy goals without using the weapon, but by informational leverages and others”

For today, the most obvious examples of development of “soft power” is the holding of Winter Olympic Games in Sochi in 2014, and also holding of World Football Championship in many cities in Russia.

I need to point out that in the conceptions of foreign policy of Russian Federation of 2013 and 2016 the “soft power” mentions as essential component of foreign policy. However, the difference between conceptions consists in public diplomacy. In the conception of foreign policy of Russia in 2013, it had been paid a lot of attention exactly to public diplomacy, because it creates favorable image of our country abroad. The clear example of public diplomacy is creating The Fund of Public Diplomacy Support named after A. M. Gorchakov. The main mission of this fund is advancement of development of public democracy, and also assistance of formation of favorable public, political and business climate abroad for Russia. Nevertheless, in spite of positive impact of public democracy on Russia, the problem of public democracy itself disappear from the “Conception of foreign policy in 2016”. That is inappropriate, because public democracy is institutional and instrumental basic of “soft power” realization. However, I need to point out, that there is successful direction of development of international informational policy in the system of public diplomacy in Russia, and this is the good start for increasing the effectiveness of foreign policy work.

Thus, if Russia will continue developing the “soft Power” conception, then our country will positively met on international arena.

Obviously, modern international relations will save unpredictable character because of quite unstable world. However, the perspectives of development of international relations will give enough of positive vectors of global policy development. This foreseen in the light of strengthening regional integration and influential power centers.

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**The psychology of jobs between yesterday and tomorrow Психология профессий вчера и завтра**

**Annotation:** The object of this research is variety of jobs, which are popular now, and its actuality and relevance by 2040. **Аннотация:** Объектом изучения данного исследования стали профессии, которые популярны сейчас, а также их актуальность и востребованность к 2040 году.

Spanish civil servant skips work for years without anyone noticing!!! Only in 2010 when Joaquín García, a Spanish civil servant, was due to collect an award for two decades of loyal and dedicated service did anyone realise that he had not, in fact, shown up to work for at least six years – and possibly as many as 14.

How is it possible? Are there some jobs that pointless and useless? Back to the USSR.

The dominant ideology:

All citizens have to work, no matter what is the nature of that job, so they made up jobs because they had a Full Employment Program. Everybody had to have a job whether or not you actually needed them to be doing anything: To buy a piece of beef in the store you'd have to go to one person to get the beef, then you got the ticket, then you have to take the ticket on another line and so on... We pretend to work and they pretend to pay us!

Bullshit jobs: It is a 2018 book by anthropologist David Graeber that argues the existence and societal harm of meaningless jobs. The author contends that more than half of societal work is pointless (Bullshit jobs), both large parts of some jobs and, as he describes, five types of entirely pointless jobs:

1) Flunkies: Workers who serve to make their superiors feel important:

Receptionists

Administrative assistants

Door attendants

2) Goons: Workers who act aggressively on behalf of their employer:

Lobbyists

Corporate lawyers

Telemarketers,

Public relations specialists

3) Duct tapers: Workers who ameliorate preventable problems:

Programmers

Repairing shoddy code

Airline desk staff who calm passengers whose bags don't arrive

4) Box tickers: Workers who use paperwork or gestures as a proxy for action:

Performance managers

In-house magazine journalists

Leisure coordinators

5) Taskmasters: Workers who manage or create extra work for those who don't need:

Middle management

Leadership professionals

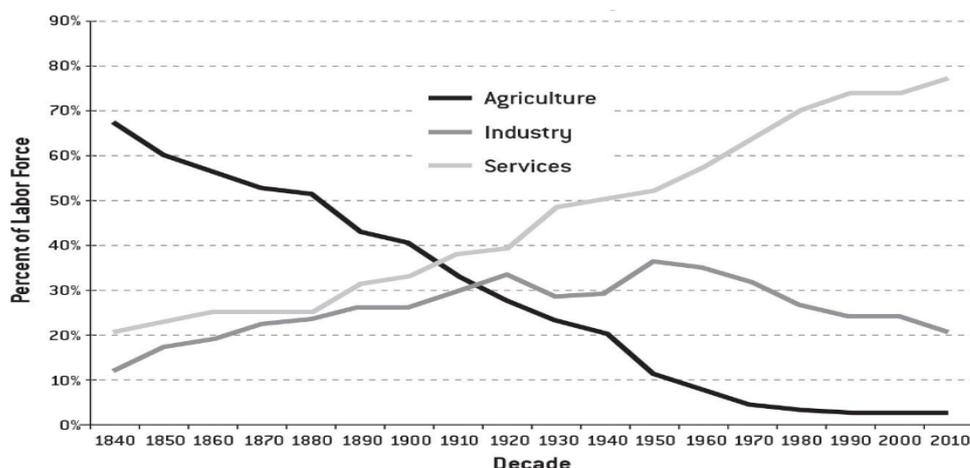
In fact, all these jobs are largely in the private sector especially the service sector that represents 3/4 of the developed countries economy, despite the idea that market competition would root out such inefficiencies (Homo-Economicus).

A False Prediction In the year 1930, John Maynard Keynes predicted that, by century's end, technology would have advanced sufficiently that countries like Great Britain or the United States would have achieved a 15-hour workweek. There is every reason to believe he was right. In technological terms, we are quite capable of this. And yet it didn't happen.

So what happened then?

Services sector: What happened is the Rapidly Growth of the service sector (Retail, Banks, Real estate, Education, Health, Social work, Computer services, Media, Communications...)

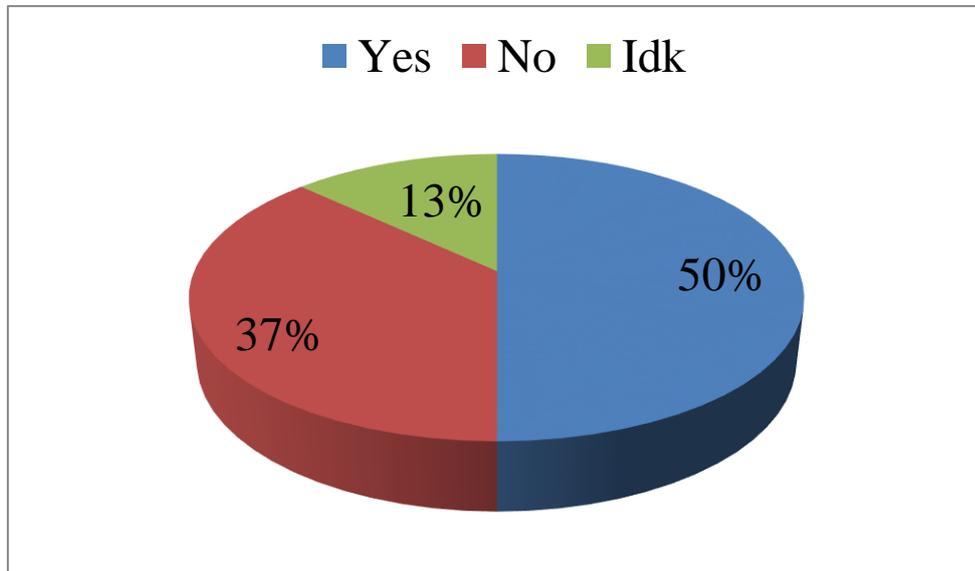
*Distribution of the labor force by sector 1840-2010*



YouGov: In 2015 YouGov Company (Market Research and Data Analytics) made a public opinion poll, about if your job does have a significant contribution to the world or not?

The answers were shocking...

*Does your job have a significant contribution to the world?*



Bullshit job: Good/Bad: In 1901 the German Sociologist Karl Gross tried to answer to a big question:

Why do people love to play games and they really care about who going to win, even the winning has no additional value outside the game?

The pleasure of being a cause: Gross discovered that the babies feel extra happy when they figure out that they affect their environment even that effect is pointless.

For Gross the love of the games is just a tool that allows the player to affect their surround even if it's virtual.

Exercising the power simply for the sake of exercising them.

The trauma of failed Influence: The problem is when the baby pushes the button and there is no music coming out from the toy, the baby is going to get angry, social anxiety and feelings of inadequacy and inferiority.

When it comes to Bullshit jobs it's the same, it's a type of psychological violence: The trauma of failed Influence.

Why cannot look for another job?

Reasons:

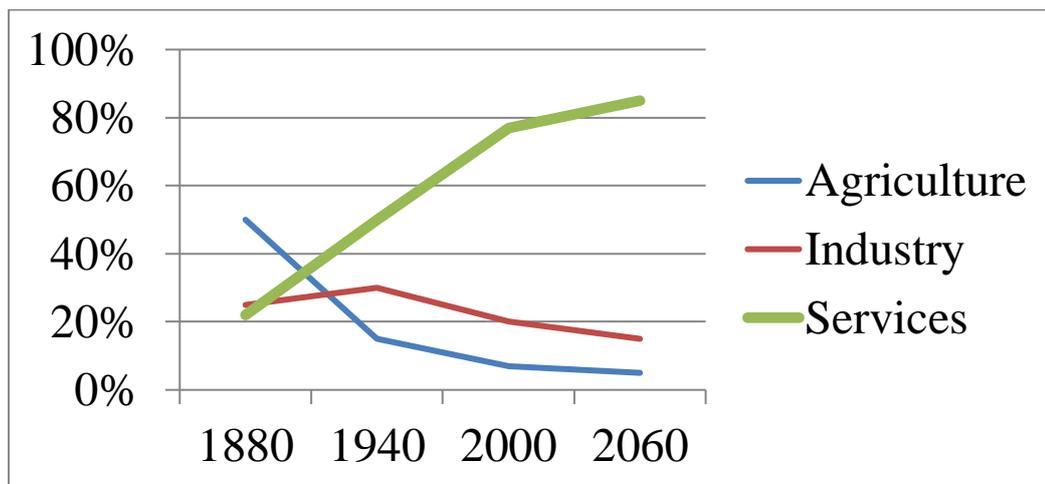
- Not enough skills.
- You do not want people to think less of you.
- You worry that changing your career will harm your marriage.

- You think you are too old to make a change... yet you are in your 20s, 30s, or early 40s.
- You have done the same job for a long time now, and do not think you are qualified for anything else.
- You do not think that there are any jobs out there. You worry that you will not make enough money.

My prediction: 40 years from now (2020) the service sector will keep increasing but not as fast as used to be (1880-2020).

How?

*Distribution of the labor force by sector 1880-2060*



What is Universal Basic Income (UBI)?

Universal Basic Income (UBI) is a form of social security that guarantees a certain amount of money to every citizen within a given governed population, without having to pass a test or fulfill a work requirement. Every Universal Basic Income plan can be different in terms of amount or design.

Simply Universal Basic Income:

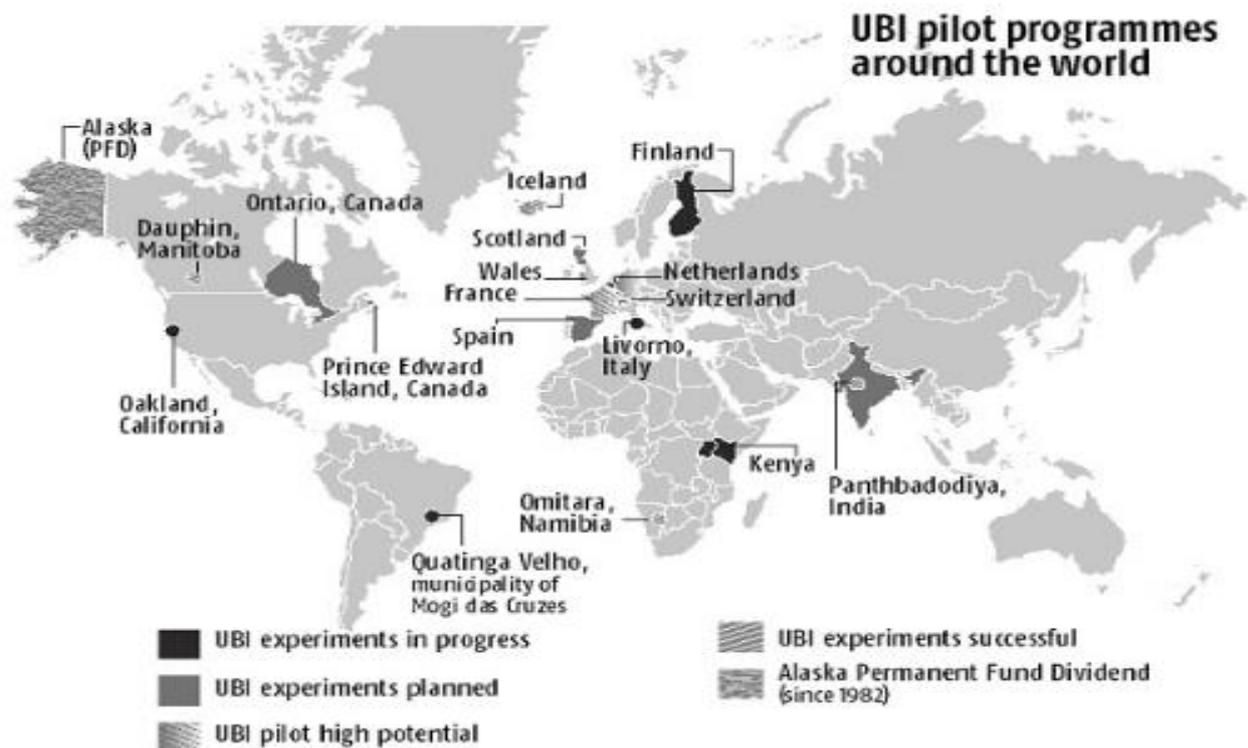
Everybody gets a regular check, in identical amounts, just for breathing.

What are the benefits of Universal Basic Income?

-UBI improves the mental health of recipients because it reduces conditions of scarcity, poverty, and financial insecurity, major sources of stress for millions of people.

-UBI improves physical health. With increased economic security, people are less prone to stresses, disease, and self-destructive behavior. A UBI experiment in Canada saw hospitalization rates go down 8.5%.

-UBI increases art production, nonprofit work and caring for loved ones because it provides a supplementary income for those interested in labor that is not supported by the market.



-UBI reduces bureaucracy – with no-strings-attached coverage, determining who is eligible is far simpler and the cost of administering benefits is greatly reduced.

-UBI increases entrepreneurship because it provides for basic needs in the early lean days of a company and acts as a safety net if the business fails. It also gives you more consumers to sell to because everyone has more disposable income. The Roosevelt Institute found that a UBI would create 4.6 million jobs and grow the economy by 12 percent continuously. UBI would be the greatest catalyst for new jobs, entrepreneurship, and creativity we have ever seen.

-UBI reduces bureaucracy – with no-strings-attached coverage, determining who is eligible is far simpler and the cost of administering benefits is greatly reduced.

-UBI improves relationships by reducing domestic violence, child abuse, financial stresses, and sources of conflict. It ensures that everyone has an optimistic sense of his or her own future and has the mobility to get out of abusive relationships.

-UBI helps people make smarter decisions. Studies have shown that people in straits of economic insecurity have a reduced cognitive ability equal to 13 IQ points. UBI would provide the security people need to focus on important things like their families.

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**The women suffering polycystic overian syndrome (PCOS) Женщины, страдающие синдромом поликистозных яичников**

**Annotation:** this article explores modern tendencies of diagnosis and treatment of polycystic overian syndrome. **Аннотация:** в статье исследуются современные тенденции диагностики и лечения синдрома поликистозных яичников.

**Background:** PCOS is a complex endocrine disorder which is most common in women of reproductive age. PCOS may first present in adolescence, but the incidence of PCOS in adolescence is not known, as diagnostic criteria for PCOS in the adolescent age-group is still not defined, PCOS symptoms tend to overlap with normal pubertal changes making the diagnosis even more challenging. The objective is to study prevalence and symptomatology of polycystic ovary syndrome (PCOS) in adolescent girls.

**Methods:** Prospective study between November 2017 and March 2018. 117 adolescent girls aged 15 to 19 years attending OPD with oligomenorrhea and/or hirsutism were advised for biochemical, hormonal, and ultrasonographic evaluation for diagnosis of PCOS

**Results:** Prevalence of PCOS in the study was 11.96% in the study

**Conclusions:** PCOS is increasingly encountered during adolescence, although the overall prevalence is low and evaluation of PCOS in adolescents is challenging. At this age, life style modification is imperative to prevent long-term metabolic and reproductive complications. group. The increasing trend of PCOS is predominantly seen in the child bearing age group of 15 to 30 years.

#### **INTRODUCTION**

PCOS is a complex endocrine disorder which is most common in women of reproductive age.<sup>1</sup> The primary underlying defect in PCOS remains unknown, but key features include insulin resistance, impaired gonadotropin dynamics, and androgen excess.

It affects 2.2 to 20 % of reproductive-aged women.<sup>2</sup> PCOS may first present in adolescence, but the incidence of PCOS in adolescence is not known, as diagnostic criteria for PCOS in the adolescent age-group are still not defined. Although polycystic ovarian morphology and features of hy-

perandrogenism are key factors for the diagnosis of PCOS in adults but adolescent girls during the early stages of puberty tend to have anovulatory menstrual cycles, higher androgen levels, and polycystic ovaries. Thus, PCOS symptoms tend to overlap with normal pubertal changes.<sup>3</sup> Due to these variations, the practice of using adult diagnostic criteria raises the concern for misdiagnosis in adolescent age group.<sup>4</sup> At the same time the diagnosis is important as behavioral modification and life style changes in adolescent age group plays an important role for the prevention of future complications and morbidity.



## **METHODS**

Cross-sectional study between November 2017 and March 2018. 117 adolescent girls aged 15 to 19 years attending OPD with oligomenorrhea and/or hirsutism were advised for biochemical, hormonal, and ultrasonographic evaluation for diagnosis of PCOS on the basis of Rotterdam's criteria.

PCOS was defined by Rotterdam's criteria having presence of any two of the three features:

- Oligo/amenorrhea: Absence of menstruation for 45 days or more and/or less than 8 menses per year.
- Clinical hyperandrogenism: Modified Ferriman and Gallway (mFG) score of 8 or higher.
- Polycystic ovaries: Presence of more than 10 cysts, 2-8 mm in diameter, usually combined with increased ovarian volume of more than 10 cm<sup>3</sup>, and an echo-dense stroma in pelvic ultrasound scan.

### ***Inclusion criteria***

Adolescents aged 15–19 years, not married, and had menarche more than 2 years before the

study.

### ***Exclusion criteria***

Those who were known case of thyroid disorders, hyperprolactinemia, Cushing's syndrome, and who were not willing to participate, were excluded from this study.

A structured questionnaire was given to all the participants. Questionnaire included the following components-knowledge assessment, anthropometric assessment, clinical history; menstrual history included irregularity as well as presence of oligomenorrhea after two years of menarche, and hirsutism/ androgen production assessment (skin problems, and hair distribution).

Evidence of ovulatory dysfunction included consecutive menstrual intervals of more than 90 days, 2 years after menstrual onset; menstrual intervals persistently less than 21 days or more than 45 days 2 or more years after menarche. Evidence of androgen excess included moderate to severe hirsutism; persistent acne unresponsive to topical therapy; and persistent elevation of serum total and/or free testosterone. Body mass index of up to 23 was taken as normal, between 23 to 24.9kg/m<sup>2</sup> was taken as overweight, and more than 25kg/m<sup>2</sup> was considered as obese according to the WHO criteria.

Blood samples were collected between 08:00 and 10:00 h with an overnight fasting for following hormonal estimation.

- Prolactin to rule out hyperprolactinemia
- TSH to rule out hypothyroidism
- 17-hydroxyprogesterone to rule out 21-hydroxylase deficiency (CAH)
  
- LH; FSH; 17-OHP; DHEA-sulfate, Androstenedione.

### **RESULTS**

Out of 117 adolescent girls 14 girls had PCOS. Thus, the prevalence of PCOS in the study was 11.96%.

| Age group         | No. | Percentage |
|-------------------|-----|------------|
| Early adolescence | 3   | 21.42      |
| Late adolescence  | 11  | 78.58      |
| Total             | 14  | 100        |

When the study group was further subdivided into early and late adolescence, it was observed that PCOS was more prevalent in late adolescence. Age wise distribution of study population shows that the majority, that is 78.58% of adolescents were in their late adolescence.

| Variables       |            | PCOS present | PCOS absent | %  |
|-----------------|------------|--------------|-------------|----|
| BMI             | Non-obese  | 7            | 90 (87%)    | 50 |
|                 | Overweight | 6            | 13 (13%)    | 43 |
|                 | Obese      | 1            | nil         | 7  |
| Total           |            | 14           | 103         |    |
| Waist/hip ratio | <0.85      | 9            | 97 (94%)    | 64 |
|                 | >0.85      | 5            | 6 (6%)      | 36 |

*Association between PCOS and BMI.*

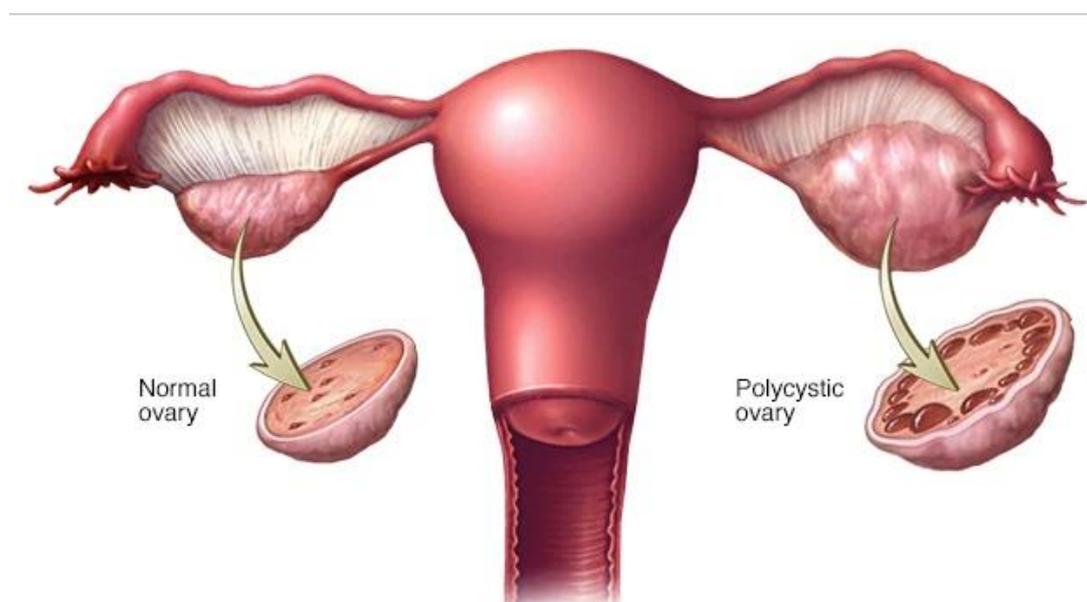
**DISCUSSION**

In adolescents, the exact prevalence of PCOS in India is unknown due to paucity of data. Different studies in India on PCOS have reported a prevalence of 3.7 % to 22.5 % and even up to 36 % in adolescents. The significant variation in different studies is due to lack of consensus on diagnostic criteria.

Prevalence of PCOS in this study was found to be 11.96 %.

**CONCLUSION**

Diagnosis of PCOS in adolescence remains a challenge because of overlapping of symptoms of PCOS with normal pubertal changes in adolescents. Although overall incidence of PCOS in adolescents is low but the incidence of PCOS among adolescence has seen an increasing trend. Early diagnosis is important to inculcate early life style modifications which will prevent metabolic and reproductive complications. Lifestyle modifications for weight reduction and dietary modifications and psychological counselling plays important role in these young girls for preventing long term complications.



## AUTHOR'S TALK

In this section I will give my opinion about PCOS case in INDIA and a personal talk with a lady and her struggles with the PCOS.

According to me in INDIA or I can say near about whole world the cases of PCOS will increase , the main reason is lifestyle and environmental factor .The main environmental reason is environmental toxins ,it has significant impact on human health and reproduction . These are chemical pollutants in environment that have adverse effect on biological organisms, this pollutant may be inhaled, absorbed through skin and mucous membranes, or ingested. Scientific evidence has emerged showing significant reproductive health. Most of the case PCOS leads to infertility in reproductive ages, some effective treatments are available but in some case, it becomes severe, now I will put my work on woman who covered her journey of PCOS.

Name – MAMTA GUPTA (age 27)

“When I was adolescent, since time of puberty, I had a problem with my periods it was late by month to several month, I visited gynecologist but it was unnoticed and undiagnosed, after my marriage I had a problem with pregnancy till one year I tried to conceive but it was failed. I visited again gynecologist after that I came to know that I diagnosed with severe pcos, I was overweight. I underwent several medical procedure through five year but I failed every time my doctor told me to have IUI (intra uterine insemination) I did it four time but I not succeed, it was my worse condition, I did yoga, workout and reduced my weight. Then I moved to artificial reproductive technique, it was very costly I did IVF (IN -VITRO FERTILIZATION) I succeeded in that now I have a baby”.



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