



About the Book «Railway Confusion» by N. P. Verkhovsky. Part 1



News from the Archives

N. P. Verkhovsky, an experienced railway manager, wrote a book entitled «Railway Confusion» and devoted to comprehensive solution of a wide range of topical problems of organisation of the activity of railway companies. In 1910, he presented the book in a special report to the 8th Department of the Imperial Russian Technical Society. The report was positioned as a focused review of the contents of the oeuvre. Extracts from the first part of the report publishing below are dedicated to the detailed and argued reflexions of the author on the requirements for the educational background of engineers and railway CEOs. If we use modern terminology, then the speaker highlighted career trajectory more suitable to finally occupy the position of managers, development of professional and soft skills, leadership and team building, the role of railway high educational institutions, mainstream issues to be included into curricula. Then the speaker refers to almost comprehensive set of issues referring to staff management and social policy towards the employees. The issues covered included organisation of railway education, high and higher school activities, social care regarding railwaymen's children, health and many other aspects.

Keywords: history, Russian railways, education, staff management, higher schools, universities, children and youth police, railways social police, career, skills.

Verbatim of the report of N. P. Verkhovsky and the conversation in the 8th Department of Imperial Russian Technical Society on December 2, 1910, under the chairmanship of A.N. Gorchakov.

Chairman. – Gracious sirs! The program of Nikolai Petrovich's report is placed on the agenda. As you can see, it is very extensive, at least in terms of the number of lines it occupies.

The program of the report of N. P. Verkhovsky. The emergence of the idea of compiling the book «Railway confusion».

Contents of the book

A. About personnel:

1. An extremely careful and strictly considered choice of new railroads' heads and managers.
2. Preparation of engineers for the post of future head and manager of the road, the most serious and difficult on the railways.
3. Preparation of all personnel for railway activities through the following organisation:
 - a) Lower educational schools and colleges.
 - b) Secondary specialised technical schools.
 - c) Evening courses.
 - d) Lectures.

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Текст статьи на русском языке публикуется в первой части данного выпуска.*

e) Societies for the assistance to school children.

f) Dormitories for school children.

g) Amusing regiments.

h) Libraries, reading room.

i) Bulletin of the railways.

j) Gymnastic and sports societies.

k) Railway Sobriety Societies.

l) Establishing a qualification for the service of railway engineers and other employees.

B. On streamlining the life of employees – introduction of the following measures:

1. Arrangement of churches.

2. Organisation of resorts.

3. Improvement of residential premises and services to them.

4. Promoting employees' railway construction.

5. Proper distribution of land.

6. Organisation of reasonable and moral amusements.

7. Organisation of credit institutions.

8. Development of the issue of women's labour.

9. Development of the issue of remuneration and bonuses for the work of employees, their bonus and gradual increases in salary and correct regulation of work and rest.

10. Changes to holiday rules.

11. Revision of the articles of association of the pension fund.

12. Increased distribution of insurance.

13. Organisation of courts of honour and community courts.

C. On organisation of railway management:

1. Organisation of railway districts.

2. Organisation of local management councils of the same composition but with greater rights and responsibilities.

3. Organisation of ministerial audits of roads.

4. Organisation of congresses of senior employees.

5. Establishment of the dominant position of the Traffic Control Service.

6. Reorganisation of the Collection Service.

7. Reorganisation of accountancy reporting.

8. Increase in number of Legal Departments.

9. An increase in the staff of the medical service and its provision with large material resources.

10. Change in the program of activities of the Commercial Departments.

D. About measures on general issues:

1. Weakening of antagonism between employees.

2. Regulation of free travel and use of service and protection cars.

3. Fight against ticketless travel.

4. Reducing correspondence.

5. Fight against the dominance of non-Russian foreigners.

6. Fight against theft.

7. Reform of the rental of station buffets.

E. On technical equipment of railways:

1. Gradual systematic rearrangement of station tracks in accordance with the functions of the station.

2. Gradual systematic restructuring of warehouses and platforms for loading and unloading goods and changing types [of delivery].

3. Organisation of major and minor repairs of rolling stock on more rational grounds with regard to Traction and Traffic services.

4. Gradual, systematic distribution of different types of steam locomotives along the roads and destruction of types of steam locomotives and cars that do not correspond to modern technology.

5. Construction in the required quantity of a fleet of special cars – refrigerators for transportation of perishable goods over long distances.

F. On the internal organisation of the economy of services:

1. Elaboration and legalisation of a systematic system for changing sleepers and rails and coefficients for the cost of repairing the upper track of railways and the number of workers per verst of the section.

2. Development of special rules for repair of equipment of the traffic service.

3. Development of special rules for accounting for tarpaulins, shields, livestock bars, to avoid their loss along the roads, as well as rules for their maintenance and repair.

4. Development of special rules for sealing the cars.

Speaker – Gracious sirs! The Chairman of the 8th Department of I. R. Technical Society asked me to report on the main points I have taken on the content of my book. I willingly undertook this, desiring to exchange opinions with the venerable assembly on the various questions raised by me. Of course, I cannot report to you my entire book. I have reduced as much as possible...



First of all, I must explain why I had the idea of compiling such a book.

The idea of compiling a book. The constant dissatisfaction with the railway of the public, population, economic, industrial and trade organisations, and financial spheres, expressed in the press, as well as the constant complaints of railway employees about their dissatisfaction with their legal, moral and material existence, and the appearance in the press of the book of the non-technician, gave only a reason to express the author's thoughts inspired by many years of practical experience – thoughts are versatile, covering acute railway issues.

I was led exclusively by the utilitarian side of the business, in the interests of the railways, where I was born, grew up and served for 39 years. As a product of the railway industry, I lived through everything I wrote about, and as I disapproved of the activities of many commanding officials with whom I had to serve, I could not be passive about it. This explains some harshness in assessment of the specific facts I have indicated. Having become related to the railway business and sincerely grieving for its defects, I tried to point out those measures that, in my opinion, could help to streamline it.

Without claiming to be infallible, I expressed my views on the matter as they developed in me during my long service. I did not try to be objective, as I cited a lot of specific facts from my own practice.

It is impossible to report to the venerable assembly everything that is written in my book on 15 printed sheets in the short time given to me, so I will limit myself to a brief summary of only the most important chapters.

In the planned systematic improvement of the railway business, I attached the greatest importance to the personnel, as a reasonable mechanism that moves the whole thing. I will start my report with it.

Personnel. The unpreparedness of engineers to take the position of head of the road. Selection, appointment, and training of engineers for the activities of the head of the road. – The main impulse, the active energy of the whole business on the railway lines is the head of the company – the head of the road and the manager of the road. He is the bearer of a unifying and guiding principle, which should guide all the work of the railway to the

possible successful achievement of the totality of the tasks assigned to it.

Satisfying the needs of the state, industry and trade, the cultural and economic interests of the population and the administration of an industrial enterprise with a multi-million turnover is an extremely important, serious, and responsible task. Let us consider how the heads of roads, in the present setting of the matter, can be prepared for successful fulfilment of such versatile, extensive and cardinal duties.

The study of special railway engineering at the Institute of Railways and all subsequent activities of the engineer, both in the construction of roads and in their operation in the service of the track, only prepare him for acquiring experience in knowledge in the field of engineering technology.

The head of the track service, who is usually appointed as the head and manager of the roads, does not have the opportunity not only to study, but even to get acquainted superficially with operation of the road within the functions included in the field of technical traffic, economic and trade spheres. He is so busy with his own business, concerning the repair of the track and buildings, and the projects of new works and their implementation, that he does not have the opportunity to get acquainted with the tasks of the road to meet state needs, industry and trade, the cultural and economic interests of the population and the area along which it runs operating railway.

The head of the road is charged with the duty to be «first of all a good master of the business entrusted to him», but how can one be a good master in a business whose main functions, the operational side of the matter and all the issues of technical and commercial traffic related or arising from it, are completely unfamiliar to him?

The financial success of every railway, as of a commercial enterprise, depends chiefly on correct operation of trains and disposal of rolling stock, that is, precisely that part of the matter in which the railway manager, who first served in the track service, is the least competent. This branch of operational affairs, which requires the most knowledge and experience, is completely unknown to him, as he did not go through school in the traffic service.

Disposal of rolling stock is such a difficult element of the railway business, which even

a specialist, the head of traffic service, cannot always cope with, what directives can an inexperienced head of the road give him?

The correct movement of trains and the correct circulation of steam locomotives and cars depend, of course, on the orderliness of the traffic service, but on the indispensable condition that it is provided with the necessary assistance from other services, especially the traction service. In the latter case, the interests of the two services clash.

To resolve disputes and mutual disagreement between the services, the authority of an arbitrator in the form of a head of the road is needed. If the head of the road is a layman in this matter, then what kind of arbitrator is he?

Under such conditions, it is extremely difficult for the traffic service to conduct business correctly and economically, and with the constant absence of the support of the head of the road, it is completely impossible.

The head of the road must direct all business, give his directives, and take his own initiative in improving the administration of the line and the conditions of the road, which often change according to the requirements of trade and industry. A person who is not competent in operation, as well as not familiar with the economic situation of the region, cannot carry out such a program. The correctness of this conclusion is confirmed by the scarcity of roads.

What is the position of an experienced head of traffic when he has to deal with a head of road who does not have the most elementary concepts of the traffic service, which is the alpha and omega of the railway business?

Strange as it may seem, but inexperienced road chiefs usually cannot deal with experienced and knowledgeable traffic service heads, and they strive to appoint such young traffic heads who themselves, having no experience and knowledge, would not dampen the absurd demands of their superiors.

A knowledgeable and experienced subordinate always hampers an inexperienced and undeveloped boss, because for any unacceptable proposal of the latter, the first will always find a lot of authoritative objections dictated by the experience of previous years.

Bringing the road into a state of proper organisation, order and profitability is obviously beyond the capacity of the road

heads, who are ignorant of operation of the road.

Things are handled quite differently by the head of the road, who previously served as the head of the traffic service, but, unfortunately, there can be no more than two or three such heads of the roads, and the roads they manage, of course, are not among the scarce ones.

The traction service, as an exceptionally special one with narrow horizons, also cannot provide sufficient preparation for taking up the post of head of the road.

From what I have said follows the urgent need to organise the full training of engineers for they can occupy the post of the head of the road. It seems to me that this can be done by the following measures. An engineer, distinguished by his talents, love for work, energy and ability to work, even in his youth should be carried out in three main services: track, movements and traction, appointing him to responsible senior linear positions, after a thorough study of which, he should be appointed head of service for four-five years, in each of these major services. After such a test, he should serve two or three years as an assistant to the head of the road, to familiarise himself with all other services and departments, especially with the commercial department.

Having gone through such a school and having practically acquired the qualification of a road head, the engineer will receive a completely universal knowledge of the functions of all services, gain great experience and, already as a head of the road, will be fully armed with all the serious requirements placed for a person holding such an important post. Only under such conditions is it possible to bring roads out of their chaotic state and make them profitable.

Another of the main qualities necessary for a person appointed as the head of the road is firmness of character. It serves as the base for direction of the entire local world.

Weakness of character is a very large and, one might say, unacceptable defect in a person holding such a responsible post.

In terms of seriousness and responsibility of the case, the head of the road is hardly no higher than a corps commander, or the commander of a large naval squadron, but these commanders are not appointed from among persons who have not passed all the



preparatory positions established by the qualification for such posts, despite even the patronage of aunts, uncles and all sorts of relatives. In Germany, examinations have been established for every railway position, why don't we introduce the skill I have indicated.

Before it is carried out, it is necessary to appoint heads of roads from assistants who are distinguished by their knowledge and experience. But at the same time, not from among the people who have already lost their ability to work, as is often done now, should be appointed to the position of assistant heads of roads, but, on the contrary, heads of services outstanding in their activity and energy, mainly from the traffic service, and thus preparing them for taking up such a serious post, as the post of head of the road.

Recently, that is, in 1909, two appointments of road heads took place, for the state and private roads, and both appointments fell on the former heads of traffic, engineers Enman and Borisov. This is a very gratifying phenomenon in modern railway life, which is of particular importance. It can be seen from it that the administration of railways and the boards of private roads, under the influence, obviously, of the trends of the new ministry, are taking the right path of appointing department heads, from among the specialists in the traffic service, as the most important service on which the success of the technical movement of the road depends. It would be a pity if this principle were not applied in subsequent appointments.

Strictly speaking, the principle by virtue of which it is customary for us, as if it is by heritage, because of long-standing precedents, to assume that the head or manager of the road should be a railway engineer, has not been clarified at all.

Our best managers, at that time, like I. E. Adadurov, S. Yu. Witte, who talentedly created a new railway business at that time, were not railway employees.

In England, the managers of the roads are all exclusively practitioners who have developed during service in various branches of the business, mainly technical, traffic and commercial railway operations, and have come to the fore through their useful and talented activities. They are not specialists in construction and mechanical engineering, but people of talent, intelligence and ingenuity, in

whose hands roads grew into profitable enterprises. They themselves are directly in charge of movement of trains and goods, without special traffic heads. There is no last post on English roads at all; there are only assistant managers working on their instructions.

To conduct the technical work of building, repairing buildings, tracks, managing steam locomotives, cars and workshops in England, there are specialist engineers who do not act as road managers, as they are not prepared for such activities.

I am far from thinking of preventing the railway employees from occupying the positions of heads and managers of roads, but I declare only the need, in the interests of the cause, for serious practical preparation of them for this difficult duty, in the manner I have indicated above. I insist on the need to adhere to the wise English principle, beautifully expressed in the saying: *«the right man on the right place»*.

In the institutes of railway engineers, additional courses in operation of railways should be opened, more detailed than those taught at present, as well as courses in statistics, accounting and commodity science for persons who intend to devote themselves to the operational service on railways. Candidates for the posts of managers and heads of roads should develop in themselves the commercial acumen necessary for the ringleaders of a large commercial business.

The talented head of the road directly takes upon himself the directive of the whole matter, in which he shows his personal initiative: he becomes an authoritative arbiter in case of misunderstandings between the heads of services and departments, bringing them together and coordinating them in joint affairs and cooperating their activities. He leaves behind only matters of special importance. He entrusts the rest to his assistants, the manager of affairs and the engineer of special assignments, who are charged with the duty of constantly keeping him informed of everything that happens on the road, reporting on everything done that is of serious importance, and in difficult and more or less important cases to consult with him and receive his instructions and orders.

The ability to impress everyone, to illuminate the matter and to warm all

employees with its impulse – this requires great talent, and this is the whole secret of the success of the road. Only that boss who, in terms of intelligence, talents and knowledge of the matter, stands head and shoulders above his subordinates, can impress them, cooperate with their work and serve as a real tuning fork for his orchestra.

The harmony of the choir in the railway business leads to order and income, – dissonances to disorder and scarcity.

The talented distribution of labour among his direct employees provides the head of the road with enough free time to travel along the line, not only during the mandatory spring and autumn inspections, but also at any other time when the personal presence on the line of the head of the company makes it necessary. In order not to return to the road heads anymore, I will touch upon the issue of their reward; it seems to me that their salaries cannot be considered exaggerated in comparison with the remuneration received by representatives of private large commercial firms. A decrease in salaries will only cause the impossibility of attracting capable and talented people to occupy these positions, who, by their energetic and reasonable work, can develop movement of goods on the road and give it the opportunity to become profitable. A bad boss, of course, does not deserve a large salary, but such a person cannot be put at the head of the business, since he is harmful to the business, regardless of the salary received.

It must be taken into account that the activity of the head of the road is not determined by the hours assigned for classes; it is not interrupted day or night, weekdays or holidays. Every minute he must be fully armed with urgent orders. Just as the movement of trains on the roads is not interrupted, so is the activity of the head of the road uninterrupted. Such a state of something costs the nerves of the organism and, in the issue of remuneration, should, in all fairness, be taken into account in favor of the heads of roads.

The most correct thing would be to give part of the salary depending on the profitability of the road, but it is almost impossible to work out a general, universal coefficient for such remuneration, due to the difference in the work of each individual road. It would be necessary to develop a coefficient for each road

separately, which presents significant difficulties.

In any case, one of the elements of the additional remuneration offered by the «Non-Technician», depending on the production of new works, I consider unacceptable. The road heads are already most busy with the technical construction part, despite the fact that there is a specialist track master with a technical office on the road, and the material interest of the road head in savings on new buildings will interest him even more actively in this part of the matter, to the direct detriment of others, more important commercial service industries.

The bonus factor for the head of the road should be worked out only depending on the net profit of transportation, on the success of the turnover of the rolling stock and on the productivity of its work.

The calculation of the bonus factor requires such a subtlety in determining the function of the road that it will probably never, or at least for a very long time, be applied.

The results of the financial activity of the road are currently completely dependent on tariff rates, on the mass of mandatory unpaid transportation of the postal department, the prison administration, poorly paid military and resettlement state transportation, the mass of requirements for roads by the Railway Administration and the Ministry of Railways, in view of the regulation of the case, and on the Highest passages, as well as the military department, in the interests of extreme importance – the defence of the state.

All these transportations and requirements, usually exceeding the size of estimated assumptions and appropriations, cause unforeseen expenses that are inaccessible to accounting for the cost of the road; they undoubtedly have a serious influence on profitability of the road and thus represent factors that introduce elements that are difficult to take into account and even often complete confusion in the calculation of bonuses, the basis of which should be purely mathematical quantities that are quite tangible and accessible to accounting.

It remains only to apply to the chief of the road the method of additional remuneration with large bonuses for successful results of the road operation, as is done by the boards of private roads. Under such a system, of course, it is necessary to reduce the size of the



estimated salary to such a minimum at which it, together with awards, would be equivalent to real salaries of the chiefs of roads.

The idea of bonuses should not include the desire to reduce salary of the head of the road, but only the desire to coincide with a fairer payment for the utility of labour.

Personnel training. – I will turn to the issue that is one of the most difficult tasks of the department, namely, preparation of personnel for reasonable performance of their duties, guaranteeing, to the maximum possible, safety of movement of passengers, integrity and success of transportation of goods.

Nowhere, in any other enterprise, the success of a business is not so partially dependent on individual qualities, properties, knowledge, experience, good and bad will of each individual employee, young and old. Despite the special importance of such a formulation of the matter, on which the lives and property of citizens on the railways depend, to our shame, very little has been done in this regard.

Let us consider all the institutions organized on the railways for personnel in relation to preparing them for railway activities and ensuring their mental, moral, family, hygienic and material existence.

Let us see if it is possible to put the conditions for existence of railway personnel in such a position in which people would go to the service of the railways with a store of knowledge, education, would go not because there was nowhere else to go, but in order to apply their knowledge, strength and energy to the cause of such a corporation, the service in which would provide some privileges to worthy agents and which it is impossible for the first comer to get into.

Educational institutions, lower schools and colleges. – For more than half a century there have been railways, but so far nothing significant, systematically defined in training of personnel has been done.

Reorganization of railways must begin with organization of the life of personal. It is necessary to raise its low cultural level and establish legal and domestic security.

There are attempts at several separate roads to organization of various educational institutions a common program has not yet been worked out, although at the deliberative congresses of the leaders of movement

questions about this have been raised more than once, the developed reports and projects of measures have been read.

So far, only one South-Western road is richer than others in schools that provide some education for the children of employees and training for the employees themselves, but they are still far from systematic, school, special training of employees for various special branches and occupations.

In the educational issue, it is necessary to distinguish between two categories of institutions that have a very distant connection with each other – these are lower educational schools for minors and secondary schools – specially preparatory for adults.

The former ones provide a general, lower education, which is necessary for every child, no matter in what field he may labour in the future. The only thing these schools have to do with railway business is that they are supported by railway loans and teach the children of railway employees. They teach only literacy, prayers and the first rules of arithmetic.

This training is carried out at school age, which cannot be utilized by the railways for carrying out any practical work. It constitutes only the basis and impetus for further education for pupils and pupils who have the means and the ability to improve.

The category of the latter represents a single phenomenon, but as a rule, railway boys who have been educated in lower railway schools are scattered in various fields of technical, economic and social life, as applicants prepared for a future independent life in order to guarantee their own maintenance and their future family or elderly parents.

Some of them, of course, return to the railways when they reach adolescence or adulthood and are attached by their parents or relatives to various positions, such as the telegraph office, all kinds of offices and linear positions of markers, sealers, weighers, conductors, repair workers, etc. Those trained in the skill go to railway repair and traction workshops.

Secondary special schools. – The second category of schools is secondary special, preparatory, and of these there are only technical railway schools. These educational institutions prepare young people directly for railway activities, as road foremen and,

especially, machinists. Strictly speaking, only these schools can be considered as institutions that prepare young people for railway activities. But, unfortunately, there are few such schools, no more than one or two per road, and there are none at all on new roads, which is why the contingent of trained people is very small. There are currently 41 schools.

There is also a special kind of preparatory institutions – these are evening courses. But they are not very common, and then only on some old roads.

The management of the railways has a special task, which in its seriousness is the alpha and omega of the entire railway business – this is precisely development of a systematic planned organization of schools, schools and courses so common that not a single railway position of any technical nature, in a universal meaning of the word, has not been replaced by anyone other than a person specially trained to occupy it.

Only such preparatory educational institutions can develop a technically trained cadre of personnel of junior employees who can provide a guarantor of the correct and conscious performance of their duties.

It should be introduced as a rule for unswerving execution that no special position on the roads should be replaced except by presenting a certificate of education and passing a test in the appropriate special school.

At present, persons who do not have a certificate of passing the exam are not accepted for positions related to technical movement of trains, and even all such persons newly entering the roads are tested in examination boards organized at traffic offices or movement service departments. Passengers can be sure that the employees on whom safety of sending trains to hauls and ordering their movement along the station tracks depends, are really familiar with their business. Their service mistakes are possible only due to inattention to performance of official duties, and not due to unfamiliarity with them and with the established rules. In this regard, the roads provide passengers with a real guarantee.

But train safety on the hauls is directly dependent on correct, thorough and skilful inspection of all the running parts of the cars, the lubrication of axle boxes, on correct maintenance of switches and tracks, why all the junior employees, whose duties are to perform

these functions, as inspectors, oilers, switchmen, maintenance workers and senior workers, must be trained in their specialty and examined.

But one cannot be complacent about organization of examination committees, i. e. verification of acquired knowledge; it is also necessary to provide employees and outsiders with easier ways to study the railway business in special schools, colleges, i. e. to acquisition of this knowledge.

They are especially needed by a contingent of people who are preparing themselves for technical activities in movement of trains. In practice, telegraph operators are usually prepared for this activity, and then only through a long observation at the stations of the matter of technical movement between their work. On many roads, various manuals and catechisms are sent to the stations, serving as manuals for studying the rules established on the roads. Such a distribution should be built into a system, made mandatory, so that the employees of each station have at hand the means for inquiries and self-study.

Practical study and training in the manuals and catechisms only make it possible to pass the exam for the right to be on duty on movement. But this is absolutely not enough, schools and systematic courses are needed.

Will there be no systematic, planned training of employees, there will be no suitable people, and as a result of this order and correctness of the course of the whole thing.

There are private railway courses in the capitals, but, unfortunately, they train specialists not so much in the railway business as in the commercial one.

In St. Petersburg, under the Imperial Russian Technical Society, there are special railway courses. But all this is a drop in the ocean, compared with the actual need for training of railway technicians.

The railways have taken it upon themselves to take care of the education of the younger generation of junior railway employees.

The duty is quite honourable, but, unfortunately, loans allocated for education are almost always insufficient on all roads, as a result of which the children of not all railway employees who do not have the means to use city schools and state educational institutions can study in them. In this case, the children of employees who live at small stations and do not have schools suffer especially.



Indeed, all railway schools are located at large stations, where there is a significant contingent of employees.

The only way for the children of employees at intermediate small stations to receive primary education in such schools is to settle them at large stations in foreign families. But this involves substantial expenses that only a few of the employees can afford, the youngest as workers, watchmen, switchmen and others who receive a small salary, are forced to refuse it and leave their children – illiterate.

Of course, by chance, sometimes employees are at the station, and more often their wives, who take it upon themselves to teach such children to read and write for a small remuneration, but this phenomenon is quite rare.

Although organization of schools for initial education of children of employees is not of direct benefit to railways, nevertheless this kind of activity is urgently needed to arouse in employees an interest in devoting themselves to the service of railways and to bind them to them.

In this regard, the roads should do their best to ensure that child education benefits are in the nature of attracting employees and evoke conscious gratitude to the roads for caring for children.

Education should be free, with the issuance of books, notebooks, pencils, pens, etc. school allowances in kind.

Railway Board Circular No. 765 of January 13, 1909, which established the rate of payment for education of children, should be repealed.

It is untimely to introduce payment for the right to study, when all of Russia is striving to organize compulsory and free literacy education for all.

But railways must go further to provide all children of employees with the opportunity for initial education. Stand still is to go back – say the English, i.e. to stand still means to go backwards. In the matter of education, one must work hard and for a long time in order to achieve its correct organization.

At large stations with schools, it is necessary to arrange hostels for accommodation of children living outside these stations. On some roads there are such hostels based on the funds of employees, but

they are very rare, and their existence is far from being ensured.

Dormitories should be run by road training staff, i.e. committee of educational institutions. For housing and supervision of children, the most minimal payment should be collected if it cannot be done free of charge.

In general, all the conveniences and privileges provided to children from the side of the road should have an enormous moral impact on employees and, of course, will be taken into account by them and taken into account by outsiders when choosing occupations and services.

This is one of the main tasks of training worthy and reliable employees, and it is necessary to pay special attention to it.

Meanwhile, from the reporting data, we see that the railways, in the educational respect of the children of employees, have done very little, and the railway population is completely not provided with primary education.

By January 1, 1907, there were 322825 children of school age on all railways, of which only 75035 people were studying, and, consequently, 247790 remained out of school education, i.e., more than 75 % of the total child population.

As regards the number of railway schools in comparison with the length of the railways, there is only one school for 127–128 versts – their number is still so small. In this regard, the Department of Railways still needs to do a lot to force employees to seriously consider the educational benefits of railways, the provision of roads to them.

Strictly speaking, the opportunity to receive initial education for railway children cannot be called a privilege, this should be the responsibility of the railways, since with the comparative sparseness of the population in Russia in general and the dispersion of stations throughout the vast territory of the country, no other department can take care of education of children of employees on the roads. A lot of work and money must be invested in the state treasury to bring this issue back to normal.

As regards the quality of the lower schools, practice has shown that two-year schools are needed, with a two-year teaching that provides a more thorough, completed primary education.

In these schools, it is necessary to organize meals for children with breakfast.

The programs of our technical railway schools also need to be reviewed. There is something wrong with them. They, like all our Russian educational institutions, suffer from the vastness of theoretical information and the comparative insignificance of practical studies.

At technical railway schools, it is necessary to improve the conditions of the hostel for those students who come from afar, and such are the largest percentage. Their living conditions are often extremely difficult, interfering with the correct course of studies in schools.

For correct formulation of educational work, a broad organization of societies for the assistance of student children is necessary.

Physical exercise. – The education of youth and children in railway schools and colleges will be incomplete if gymnastic exercises, marching and games are not introduced into them. Giving the children of employees mental education, it is necessary to take care of development of their physical strength and the correct growth of the body in order to prepare completely healthy disciplined youth, able to endure all the hardships of the future life and be worthy citizens of their Fatherland, ready both for difficult railway activities and for carrying military service to defend their fatherland.

Nothing teaches order, endurance and discipline as much as training in military formation. They need to occupy the children by devoting at least an hour daily to it. I would teach marching to girls too. From a hygienic point of view, marching teaches you how to walk, run, breathe and hold your torso correctly. It is equally useful and necessary for both men and women.

Railways need healthy young people, and they, in turn, need healthy wives and mothers of their future children railway workers.

Children learn military exercises very easily and indulge in them with great pleasure. It is useful science and entertainment between class lessons. The energy excited in young organisms by systematic bodily movements will be usefully turned to mental studies, and the latter will go more successfully. No wonder the ancient culture promoted «Mens Sana in corpore sano».

To fulfill the integrity of the program of railway education, it must be national-moral and hygienic-physical.

In my opinion, militarization of the railway school is a panacea for all the devastation that has taken root in the railway sphere, and its most radical treatment should be started from young shoots that are accessible to easy perception and assimilation of discipline and order.

If a lot of objections were raised against the project of militarization of adult railway workers put forward by General von Wendrich, then one can hardly object to militarization of young people without violating common sense and good wishes for the good of the cause. All countries are militarizing the youth in the interests of proper development of the organism and future protection of the state. We should not be left behind.

The amusing regiments of Peter the Great laid the foundation for the Russian invincible army, which created a colossal state; school railroad regiments form the future cadre of railroad employees who will finally establish order and improvement of roads.

The deeply fruitful idea of militarizing the school has recently been suggested by our Sovereign, the railways, as pioneers of culture and civilization, should also go ahead of other departments in the school industry and contribute to fulfillment of the plans emanating from the throne, which are so useful for ensuring the future of the roads themselves and, in fact, so easy to do. This should be recognized by the chiefs and administrators of the roads and measures should be taken for speedy fulfillment of the royal desire. The voice of the Minister of Railways would cause intensified activity of all roads in this matter.

Unculturedness is our great weakness, and in order to acquire culture, education, education, education is necessary.

The body at the helm of education, the Committee of Educational Institutions, must work energetically and tirelessly to do everything possible for the railway schools both quantitatively and qualitatively.

Libraries and reading rooms. – Railway libraries, reading rooms, and assistance in ordering newspapers and magazines also contribute a lot to mental and moral development of employees. Every effort should be made by senior officials, as well as by the railway department, to establish good permanent and mobile libraries on all railways, especially on new ones, which are most in need of credit for their establishment.



In the same way, it is necessary to check the literary and technical work of senior employees and the articles they publish in state-owned journals to pay a fee, as a kind of incentive to work.

Railway Bulletin. – I find it extremely useful for employees not only to read special technical articles on various branches of the railway business, but also to write them, placing them in special journals and in my Bulletin, the publication of which on every road, state and private, should be introduced into the custom. The prototypes of such «Bulletin» can serve as «Bulletin of the South-Western and Transcaucasian roads».

The roads should exchange such «Bulletins» in order to borrow everything useful from each other and keep abreast of the affairs of other roads.

Literary and technical works of railway employees, placed in these «Bulletins», should be paid by the line-by-line payment in order to attract more forces and arouse a desire to study railway questions and to write down observations and research.

Arranged here in St. Petersburg, on the initiative of the Minister of Railways S. V. Rukhlov, evening lectures in the assembly hall of the Institute of Railway Engineers are extremely useful and instructive not only for students of the institute, but also for railway employees and for the public.

Railway sobriety societies. – In order to distract the youth from bad and harmful passions and strengthen their organism, it is necessary to organize gymnastic and sports clubs under the administrations. Athletics, Swedish and military gymnastics, marching, shooting, boating, skating, skiing, riding and cycling, playing tennis, bowling – these are activities that would maintain the health and good spirits of employees and at the same time would unite them with each other and develop corporate solidarity, destroying the antagonism harmful to the cause and to themselves, which, unfortunately, is being introduced into railway life.

Introducing the listener into the details of the life of railway employees, I cannot keep silent about one very regrettable defect that has penetrated into the mores and life of railway workers and, in a certain way, constitutes a raft of the flesh of society itself and the entire population. This defect is alcoholism.

Unfortunately, in recent times this enormous evil has been making especially strong progress everywhere, including on the railways.

The interest in safety of passengers and employees requires that employees of such executive services as movement and traction be people who are completely healthy, with sharp eyesight and hearing, and always in control of their full mind. Alcoholism deprives them of all this.

A lot of investigations of all kinds of cases on the roads find out the abnormal state of the employee responsible for the incident. This abnormality arises solely on the basis of the influence of wine vapors.

It can be unmistakably said that absolute teetotalers on the railways are an insignificant minority. Many office workers regularly drink one or two glasses of vodka before lunch and breakfast. This is the most correct, if it is no longer possible to completely abandon alcohol, and is almost harmless to the body and service, and in the northern latitudes it can even be useful. Many employees drink immoderately, but at least in a timely manner, outside of duty; many suffer from drunkenness, but, what is worse and more dangerous, they are hopeless alcoholics who are always half drunk. They are the most dangerous subjects, who, coming to the service, apparently in a normal standing, soon get drunk from the drunk glass brought with them, and, remaining unnoticed by the elders in the service, cause by their unconscious actions a lot of wrongdoings, which often, under unfavourable circumstances, become fatal.

Practice reveals the occurrence of accidents from omissions made simultaneously by several employees of different services; if at least one of the employees turns out to be executive, then misfortune is warned. Let me take a specific example. The switchman, despite checking the switch by the assistant on duty, moved the switch almost in sight of the train, placing it mistakenly on the track already occupied by the train. The driver, inattentive to the service, did not pay attention to the position of the switch, and there was a collision of trains. An attentive driver, efficient, will notice the wrong position of the switch and take timely measures to slow down the train, or stop it, and misfortune is prevented.

In view of arrangement of service on the railways, in which the action of one employee is checked by others, misfortunes occur much less often than they could occur. The biggest cases usually occur with inattention of a whole series of persons, and vice versa – attentiveness and sobriety of one paralyzes the oversights of others.

Thus, often the health and life of passengers and employees themselves, as well as the integrity of private and state property, hangs, so to speak, in the balance, from the oversight of employees, which is greatly enhanced under the influence of the monopoly product.

The sober behaviour of employees on the railways is more necessary than anywhere else, and the fight against alcoholism should be one of the main concerns of superiors.

Medicine recognizes the attraction to wine as a disease. Drunken drunkards, indeed, are sick people – they need to be treated. Those in whom this passion has not yet turned into an illness must be artificially diverted from wine by all means.

Meanwhile, on our roads in this regard, no measures have yet been taken, either medical or administrative. We don't have a sobriety society, and we don't hear about their origin. Even in the press one hears no voices about measures to weaken and eliminate alcoholism among railway workers. Dismissal from the service of drunkards is the only measure in the fight against alcoholism. But after all, an alcoholic, dismissed from one road, enters another, continues the immoderate use of alcoholic beverages and serves until a new catastrophe. Dismissal from service does not correct and does not cure the patient, but only pushes him off his shoulders onto others, without destroying his harmful influence.

Life itself and service on the roads is favorable for development of alcoholism, which is especially developed among the unmarried youth of the telegraph traffic service. Duty shifts to sleep, and sleep to duty. At short intervals, having nothing to do, they look for pleasant conversations with comrades, in which gossip plays a paramount role; they wash the bones of the elders and push out all the dirt of the younger ones, and to calm the overwhelmed nerves, a cup walks around during the conversation. After it, of course, disputes, quarrels and often a scandal, and, in the end, non-performance in the service.

Abroad, they have long recognized the harm of alcoholism among railway workers, and measures are being taken to combat it. England as early as 1882 took up this issue and began to organize unions and societies to combat drunkenness. It was followed by Norway in 1892, then Sweden in 1901, Germany, Switzerland and Finland in 1902, Denmark and France in 1903, Austria in 1906 and finally Holland in 1909.

In 1907, a congress of teetotalers was held in Stockholm and the International Union for the Temperance of Railway Employees was organized. In 1909, there were the following number of members of this union: in England – 43 000, Sweden – 4 500, France – 3 200, Finland – 900, Switzerland – 550, Denmark – 500, Germany – 460, Norway – 450 and Austria-Hungary – 125, for a total of 53 685 members.

Here in Russia it is necessary to organize a sobriety society for railway employees with branches on each not only state, but also private road. On the organization of the Committee of the Society in St. Petersburg, it must join the international union.

I submitted a note about this to the Minister of Railways and made a cry in the journal «Ways of Communication». May God grant that this idea be realized as quickly as possible and that a solid society develop, spread all over Russia to establish sobriety among all railway workers.

The sobriety of employees is a guarantee of order, and order is the threshold of profitability. We will strive for order and bring the roads out of their scarce state.

Establishment of a service qualification for employees. – In one of his talented articles, M. O. Menshikov expressed himself so figuratively and appropriately for this case that I allow myself to quote him: «For any business that claims to be above mediocrity, deep interest is needed; the more serious the matter, the more necessary it is to amuse the doer, to captivate him by the very process of action».

This property is extremely necessary for the railway business, but it is often lacking in modern senior employees. Since the choice of a certain activity is a matter of career, then it cannot amuse or captivate. The modern boss is very often a man of the twentieth; peace and quiet – this is its main service principle.



Of course, there are happy exceptions, and it would be strange and too bleak if there weren't any.

I have expressed my personal opinion here, based on many observations, but I do not claim to be infallible. As a railway enthusiast, I would be heartily glad to be wrong.

Satisfaction of religious needs. – Having reported to the venerable assembly the issues that embrace the interests of the personnel, I will move on to measures to meet the religious needs of linear employees. Only the needs of the latter can be discussed. All service personnel living in cities do not need management concerns; city churches and clergy are at their service. The line is another matter, and especially in the sparsely populated areas of our vast outskirts.

Organization of churches. – On outlying roads passing in sparsely populated areas, it is necessary to have car-churches, as a temporary measure for large stations and as a permanent measure for small stations. Churches should be built at large stations. If there are no radical appropriations and the funds of employees are insignificant, then I would consider it possible to build adobe or sand-beaten churches.

On old roads it is not uncommon to find beautiful railway churches at large stations, which arose solely on the voluntary offerings of employees. The old roads are rich in personnel of personnel who have settled in the field for a long time and, of course, have some savings, some of which can be shared without loss for a good cause. It all depends on the initiator. Such a person will appear, – you see, in a year or two, and the good news will be heard, calling the Orthodox to prayer.

The railway environment is a great force, you just need to wish and be able to direct it to good deeds. Through self-help and unity, many necessary and useful institutions can be created for the soul and body. Where there is a real owner, there is work in full swing. More of them only!

Medical and sanitary organisation. – The directorates and boards of the railways have always been stepmothers to the medical side of things. The development and improvement of the railway business went on as usual, without touching the medical part, which was always in the paddock. The figures for the road consumption of the entire network for the

medical and sanitary part vividly confirm this conclusion.

In 1875, the expense per verst of the road was – 26,37 rub., in 1887–40,37 rub., in 1901–79 rub., in 1907–126,26 rub.

In addition to hospitals, outpatient clinics and waiting rooms, it is necessary to establish own railway resorts for treatment of pulmonary and rheumatic pains, which mainly affect employees.

Benefits for medical treatment in most cases do not reach the goal. In my time, on Privislinskaya still private road, the management acted very prudently, entering into an agreement with resorts for treatment of employees, for whom it itself paid a fixed fee.

At present, some roads pass through the steppes, in which herds of horses graze and where it is quite possible to organise koumiss-healing establishments, as well as near salt springs, in which it is possible to arrange railway bathing.

Tashkent road is a great convenience for establishment of a koumiss-healing institution, common to all employees of the railways, as well as salt baths at Iletsk salt mines.

The chief doctor of this road, Mr. Orlov, has already chosen an appropriate place for these resorts, and he is busy with a loan. 2000 roubles were allocated for 1909 and 1910. But this is too small a sum to be able to do anything in this direction.

I submitted a note to the Minister of Railways on establishment of a koumiss-healing facility at Ber Chogur station and salt baths at Iletsk station, proposing in the project an allocation of 2 000 roubles for each road, which were transferred to Tashkent road to organize resorts that could be used by all roads. It is desirable to involve private roads for treatment of their employees.

I do not know what the result of my project will be, but the execution of it will be a great gain in the interest of caring for junior employees and their families.

End of part 1

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The final part will be published in one of the next issues of our journal ●