

# The First Attempts to Institutionalize Non-State Communities of Engineers and Technicians in the Russian Empire: Livland and Kherson Provinces

## Varfolomii Savchuk

Oles' Honchar Dnipro National University  
Prospekt Gagarina 72  
Dnipro, Ukraine  
varfolomey44@gmail.com

## Viktoriiia Dobrovol'ska

Kherson State Maritime Academy  
Prospekt Ushakova 20  
Kherson, Ukraine  
viado.ksma@gmail.com

**Abstract:** The purpose of the article is to identify and investigate the first attempts to institutionalize non-state communities of engineers and technicians in the Russian Empire, and to determine whether the Russian Technical Society was the first center to unify the engineering community. The period covered in this study (1850s–1860s) refers to the initial period of the emergence of scientific and technical societies in the Russian Empire, which are considered as a new type of a structural organization of science and technology. The article reveals that the first attempts to institutionalize non-state engineering and technical communities were successful in Livland and Kherson provinces. It has been confirmed that the preferred hypothesis in the matter of the Russian Technical Society does not correspond to historical reality. Two scientific and technical societies of Livland and Kherson provinces were analyzed in the article: the Society of Technicians in Riga and Odessa Society of Engineers and Architects. It was found that the mentioned societies, established in Riga and Odessa, can be considered almost the first scientific and technical societies in the Russian Empire, created even before the Russian Technical Society commenced its activities. For the first time, a detailed study of the process of their organization and activity was carried out. The article also highlights the legislative principles of the activities of

the mentioned societies. A comparative analysis of their statutes was carried out, identifying the common and distinctive features. The study proved the polytechnic nature of their activity and determined its priorities. Despite the fact that the Russian Technical Society turned out to be the most powerful scientific and technical society of the Russian Empire, attention is focused on the fact that the Society of Technicians in Riga continued its activities as an independent scientific and technical association. The article highlights the inaccuracies and some false statements about the studied societies. The attempt of marine engineers in the city of Mykolaiv to establish an independent public scientific and technical society in 1864 is also discussed.

**Keywords:** *engineering activities, first scientific and technical societies, institutionalization, non-state communities, Odessa Society of Engineers and Architects, Riga Society of Technicians, statutes*

## Introduction

In the 1840s, the Russian Empire comprised a number of administrative and territorial units: 55 guberniyas and 3 oblasts (Arsen'ev, 1848, pp. 156–158).

The Livland province was created on the territory of Swedish Livonia, to which the Russian Empire acquired rights under the terms of the 1721 Treaty of Nystad (Perebyinis *et al.*, 2016). In Ukraine, during the 18th century, the Russian Empire successively destroyed the Cossack autonomy. Its final liquidation ended with the destruction of the Zaporozhian Sich (1775), and the enslavement of peasants (1783) (Yakovenko, 1997).

In the 19th century, the territories of the modern independent Baltic States (Latvia, Lithuania and Estonia) belonged to the Governorate of Livland, the Governorate of Courland, and the Governorate of Estland. They had considerable autonomy and preserved part of their own class legal system next to the imperial legal system. In contrast, the Ukrainian areas, namely Volyn, Kyiv, Podil, Chernihiv, Poltava, Kharkiv, Katerynoslav, Kherson, and Tavria Guberniya, were subordinated to the central and local authorities of the Russian Empire.

Despite the existing differences in the system of regional governance, the structure of the organization of science was similar for all its regions. As is generally known, scientific and technical societies are the structural components of the organization

of scientific activities. At this time (i.e., at the time of serfdom) the first scientific societies were already established in the organizational structure of science in the Russian Empire in the form of scientific organizations, but became widespread in the second half of the nineteenth century (Soboleva, 1983, p. 142).

The second half of the nineteenth century is characterized by the dissolution of the feudal and serfdom system, the beginning of the industrial revolution and profound alterations in industry. The rapid development of world science in the 19th century is marked by a significant number of discoveries that launched new areas of scientific and technological progress: the development and practical use of electricity; creation of an internal combustion engine; implementation of new technologies in metal industry, engineering industry, armament; progress in chemical and petrochemical industry. Capitalist forms of organizing production also contributed to the emergence of new forms of organizing scientific research in the leading economically developed countries, creating prerequisites for the establishment of original scholarly tradition (scholarly traditions in chemistry by J. Liebig, biology by E. Fisher, physics by A. Kundt (Germany) and J. Thomson (England)). Research and production were moving closer together, and technical sciences were developing rapidly along with the natural sciences. (*Organizatsiya naukovoï... , 2015, p. 4*). Technical activity acquired a significant scientific basis and had the status of engineering. During the emergence of capitalism, there were objective prerequisites for engineering to gradually become a specialized profession, which was characterized by a combination of theory and practice, the use of scientific knowledge in technical practice (Kushlakova, 2016, p. 60). The reorganization in the Russian Empire took place in the 1860s–1870s and created favorable conditions for the economic, scientific and technological development of the country, the emergence of brainpower.

In contrast to other European countries, the organization of scientific research in the Russian Empire took place mainly on a state basis. Science developed due to scientific, pedagogical and research activities of scientists only at the Imperial Academy of Sciences and at higher educational institutions, especially universities. Scientific institutions were poorly connected, and communication between scientists was maintained only through personal contacts (Baranets & Verevkin, 2011, p. 161; Obukhovich, 2018, p. 23).

Volodymyr Vernadskyi, academician of the Imperial Academy of Sciences in St. Petersburg, later the first president of the Ukrainian Academy of Sciences, indicated in his *Works on the History of Science in Russia* that:

scientific creative work [...] in the XIX century was associated with [...] a government organization: it arose from actual requirements of the government or found a place unexpectedly for the government and often against its will [...]. It was created by the country's brainpower, representatives of the liberal professions, whose activities were recognized by the government for the sake of [...] the specific use—professors, doctors, pharmacists, teachers, engineers—was created by their personal efforts, upon their own initiative or through the organizations they created. (Vernadskyi, 1988, p. 65)

## Main research objectives

As previously noted, in the mid-nineteenth-century Russian Empire, scientific societies as a special form of research activities were not particularly common. There were a few of them; however, that set the wheels in motion for growing their number and finding new forms of associations, including public scientific societies of the engineering community. These societies began to emerge as a reaction to the active development of industry which led to the strengthening of communication between representatives of various fields of scientific and technical science knowledge.

Ye. V. Soboleva has noted in this regard that

strengthening the activities of scientific societies in the post-reform period was manifested primarily in the formation of a new type of similar organizations, i.e., scientific and technical societies (hereinafter the STS—*the authors*). This kind of society was brought to life by the demands of the developing industry and the aspirations of top-level scientists and engineers to create associations capable of meeting these demands. (Soboleva, 1983, p. 143)

That is, until the post-reform era, scientific and technical societies were practically non-existent in the Russian Empire. But was their absence definitive? Where did the first associations of the engineering community originate?

The scientific and technical societies hold a special place in the development of national science, because their research activities in comparison with academic science, which did not have a significant impact on the development of technical sciences, was closer to the needs of production, it was more diverse, and involved more scientists, engineers, and specialists (Filippov, 1975, p. 41). The role of

scientific and technical societies, through which the communication of national scientists and engineers with representatives of production was carried out, proved extremely important (Soboleva, 1983; Filippov, 1975; Kushlakova, 2016; Ryzhov, 2013).

The primary centers of education and science were mainly Moscow and St. Petersburg, where the prerequisites for the formation of scientific and technical associations matured. St. Petersburg, as the most developed industrial city, was a powerful center of scientific and technical ideas because the main technical educational institutions of the state, e.g., the Institute of Technology and the Mining Institute, were situated there (*Organizatsiya naukovo...*, 2015, p. 4). For a long time, the absolute majority of scientific institutions in the Russian Empire were located in St. Petersburg and Moscow. Therefore, it is no coincidence that the views of researchers of public scientific and technical societies were primarily concentrated in these cities. From their research, the unalterable opinion emerged that the first organization of this type in the Russian Empire was the Russian Technical Society (RTS), established in 1866 (Soboleva, 1983; Filippov, 1975). This has already been pointed out in some historical and scientific works (Savchuk, 1992; Kushlakova, 2016). The establishment of the Russian Technical Society was successful, and its activities lasted for more than a decade.

An analysis of historiography shows that today we know more about the attempts to organize scientific and technical societies, which led to the society's long-term operation. However, not the least important is the matter of attempts to create and operate certain STS, which operated for a short time, were little known and under-researched. This blurred over the initial attempts to create societies, and were eventually forgotten. The problematic nature of the issue is that its solution allows expanding the boundaries of the activity (both chronological and functional) of scientific and technical societies in the Russian Empire in general and its regions in particular. The study of such attempts is important because it allows clarifying the role of urban communities in shaping the scientific potential of the country, popularization of technical knowledge, establishing scientific communication of scientists and engineers of various settlements of the Russian Empire, from the Baltic to the Black Sea. Moreover, the initial attempts were not always inherent to Moscow and St. Petersburg. The so-called "periphery" often showed more activity in this case. Today, the matter of organizing and operating the first public associations of engineers and technicians in the Russian Empire still remains insufficiently studied.

The article aims to identify and investigate the first attempts to institutionalize non-state engineering and technical associations on the territory of the Russian Empire in the 1850s and 1860s, their implementation, legislative basis, results, and their relationship with other scientific and technical associations. Based on the conducted research, it also explores whether the Russian Technical Society was the first unifying center of the engineering community.

## Historiography of the problem and sources

The first scientific and technical associations of engineers and technicians in the Russian Empire began to emerge in the 1850s and 1860s. Therefore, in order to identify the priorities regarding the emergence of the first such associations, this historical period was chosen for the study.

The historiography of public-scientific associations includes some studies on the emergence of scientific-technical societies of the engineering community in the 1850s–1870s, and their subsequent activities.

Architectural societies were among the first to emerge. A society of architects was established in Moscow in 1867 on a private initiative, which lasted until 1932. (Kirichenko, 2007). In the *Historical Note on the Activities of the Moscow Architectural Society for the First Thirty Years of Its Existence*, it was stated that it was the first society in Russia aimed to “promote the development and dissemination of artistic and technical knowledge related to architecture” (*Istoricheskaya zapiska...*, 1897). In addition, the Society for the Dissemination of Technical Knowledge was founded in Moscow (1870), and the Polytechnic Society at the Moscow Technical School (1878) (Ryzhov, 2013). In 1866, the Russian Technical Society was founded (Krichko, 1991). All these societies were established in St. Petersburg or Moscow. However, all of these are more or less well-known societies, and the process of their formation and activity has been studied.

However, the same architectural societies (especially regional ones), despite the fact that they were among the first to emerge, were hardly studied. I. I. Komarova drew attention to this in 1995. In the abstract of her dissertation in paragraph ‘The Societies of Architects’, she noted that “the dissertation analyzes the operation of the societies of architects, which began to stand out from the middle of the 19th century and to the beginning of the 20th century. There were about

ten of them: Riga Society of Architects (1858); Odessa Society of Architects and Engineers (1862) [...]” (Komarova, 1995). Komarova addressed the history of Riga Society of Architects also in a previous publication (Komarova, 1985). However, information about its establishment and activities is fragmentary. In addition, there is some confusion in the articles concerning the dates of the establishment of Riga Society of Architects and the Society of Technicians in Riga. Also, the process of its organization and legal bases of activity have not been studied.

The confusion about the founding dates of Riga Society of Architects and the Society of Technicians in Riga, in addition to those already mentioned, can be found in other sources (*Spravochnik nauchnykh...*, 2021a; 2021b).

This is due to the fact that no one has studied the establishment and operation of these societies in the context of the general development process of scientific and technical societies of the Russian Empire in detail. The exception is a paper by the author of this article, in which he made an attempt to examine the first meetings and societies in the Russian Empire (Savchuk, 1992, pp. 51–55). The list of the main works studying the societies discussed here is limited to the abovementioned ones. In addition, their activities were mainly addressed from the architectural aspect. It should be noted that in this period before the establishment of the Imperial Russian Technical Society (IRTS) there were attempts to establish a technical society in the city of Mykolaiv in Ukraine. Yu. I. Huzenko, in his paper, has discussed the role and early history of the Mykolaiv division of the Russian Technical Society in the 1860s (Huzenko, 2006, pp. 80–84). However, he used only the materials from the local archives, without referring to Russian archives and publications of the Russian Technical Society. This narrows the evidentiary basis of his statements. A historiographical analysis of these societies leads to the conclusion that they have not been fully studied, especially in the context of the general process of imperial institutionalization of the communication of the engineering community in the Russian Empire.

The historiographical analysis of the problem also determined the focus of our research—namely, the scientific and technical associations in Livland and Kherson provinces in the 1850s and 1860s. According to the proposed hypothesis, these associations were the first attempts to institutionalize extra-state communities of engineers and technicians in the Russian Empire.

## Results

In the 1850s and 1860s, the scientific and technical associations of the engineering community in the Russian Empire were rare. The search and study of the first attempts to institutionalize non-state engineering and technical communities allows us to argue that, outside of St. Petersburg and Moscow, similar attempts were most actively pursued in Livland and Kherson provinces during this period. Figures 1 and 2 show the process of establishing and the activity of scientific and technical societies of the Russian Empire in these provinces, namely the Society of Technicians in Riga (1858), the Society of Engineers and Architects in Odessa (1864), and the Society of Marine Engineers in Mykolaiv each of them had their own features.



Figure 1. Map of 1858 with an image of the Livland Province (Zuev, 1860).





Figure 2. Map of 1857 with an image of the Kherson province (Zuev, 1860).

The results of the research of these societies, presented in this article, allow us to determine the legal basis for the organization of the above-mentioned societies, the peculiarities of their statutes, the principal areas of activity, and to substantiate the conclusion about the priority of the emergence of such associations in the Russian Empire.

## The Society of Technicians in Riga

The Society of Technicians in Riga was established 1858. Its first president was Baron F. von Fircks. A particular feature of its establishment was that it started operating before it was approved the society's statute. As this document had not been approved yet, a request was made on behalf of the society to the Governor-General Duke Suvorov for a permission to start operation. The president of the society received from the duke "a verbal response that his lordship permits the meetings of the Society until its final approval and at the same time will petition for its official recognition" ('Otchety deystviy...', 1860a, column 437). More than three dozen meetings of the society were held in the first reporting

year 1858/1859. Only between September 20, 1858 and April 28, 1859, thirty meetings were held ('Otchety deystviy...', 1860a, columns 436–437).

This is an important point, as it shows that the Society of Technicians began its operation and was active in 1858. In some publications of the Russian Empire, it is noted that “since 1859 there is a Society of Technicians in Riga” (*Enciklopedicheskiy slovar*, 1901, pp. 122–123). This means that the timekeeping in this publication is specified from the time of approval of the statute. In the reporting year 1858/1859, the total of 26 ordinary meetings and a special meeting were held ('Otchety deystviy...', 1860a, column 440). The number of the society members in the first two years was insignificant. There were 16 members in September, a year later the number had increased to 38 ('Otchety deystviy...', 1860a, column 437). At the end of the reporting year in 1859, the society had 45 members. The statute was finally “highly approved” on October 20, 1859, under Decree no. 34987. The statute was published in a number of newspapers and magazines, including the official publication of the government (*Senatskiye vedomosti*, 1859), and the architectural bulletin *Arkhitekturniy Vestnik* (*Ustav obshchestva...*, 1860, columns 255–258), which outlined the principal provisions and directions of its operation.

The close relationship between the engineers of St. Petersburg and Riga is evidenced by the fact that the architectural bulletin provided its pages for the publication of annual reports and papers of the Riga Society of Technicians. After the society's statute was approved, the bulletin immediately reported this event and noted that “the editorial board is honored to offer the Society of Technicians in Riga its full readiness to place the society's annual reports on the pages of its bulletin” (*Arkhitekturniy vestnik*, 1860, columns 1–2). These reports were received, translated and printed, by the architectural bulletin in Germany. The bulletin's period of operation, however, was short, lasting only for two years. The Society of Technicians in Riga continued to operate even after the Russian Technical Society was founded. Information about it is contained, in particular, in a reference source from 1900. (*Obshchestva Lifyandskoy gubernii*, 1900, p. 46).

## The Society of Engineers and Architects in Odessa

In Ukrainian territories in the South of the Russian Empire, the question of the institutionalization of non-state communities among engineers, architects, and technicians was raised in 1864, initially in Odessa.

On January 29, 1864, seventeen representatives of the engineering community of the city of Odessa held the first organizational meeting of the future Odessa Society of Engineers and Architects (OSEA). The meeting outlined the rules for holding the meetings of the future society and sent a corresponding request for its establishment to P. Ye. Kotsebu, the Governor General of the Novorossiysk and Bessarabia districts.

As early as on February 17, 1864, Letter no. 1484 was sent from this department to the town governor of Odessa, in which the Governor General reported that “some of the engineers, technicians and architects in Odessa had asked me for permission to meet in order to facilitate the exchange of ideas about the arts, mechanics and mining, as well as to serve as a combined means and knowledge for the public and private interests of the population of the Southern Territory of Russia in these subjects” (SAOR, F. 2, inv. 1, f. 645a, p. 1). Kotsebu approved this request and noted in the letter that “he sees no obstacles to the permission of the existence of these private meetings in Odessa (SAOR, F. 2, inv. 1, f. 645a, p. 1v). He supported the idea of founding a society, assessing the meetings of engineers as “very useful”. In the same letter, he invited the town governor of Odessa to make his order known to the founding members upon a receipt by each of them.

However, officially this permit did not authorize the operation of Odessa Society of Engineers and Architects. The substance of the matter was stated in the report to the town governor of Odessa from architect Ozmidov, the society’s secretary:

Your Excellency, through an [assistant], ordered to inform the founders of the Society of Engineers and Architects that the Governor General of the Novorossiysk and Bessarabia districts did not find any obstacles to the opening of this society. Due to the fact that according to its statute, the Society cannot enter into the scope of its actions without publishing the statute of the society in newspapers, and due to the fact that the Governor General’s permission does not say whether it is allowed to print the statute [...] I have the honor to ask Your Excellency to issue the permission for the Society of Engineers and Architects to publish its statute in the *Odessa Bulletin*. (SAOR, F. 2, inv. 1, f. 645a, p. 15)

The issue rather quickly passed the bureaucratic hoops and was resolved positively. On March 28, 1864, the Governor General granted the required permission (SAOR, F. 2, inv. 1, f. 645a, p. 17). After the publication of the statute in the newspaper *Odessa Bulletin*, Odessa Society of Engineers and Architects started its operation in 1864.

The Society of Engineers and Architects operated from 1864 to 1871. For the first three years, it worked at full speed. The society was approached for help in resolving various industrial issues.

Among the cases resolved by the OSEA during these years, the following ones are worth noting. The society's library was established under the statute. One of the important initiatives of the society was an attempt to buy some premises in the building of the Odessa Society of Fine Arts to meet their needs. According to the plan, the society's meetings were to be held and a library placed there. The correspondence between the societies had been going on for a while, and a joint commission had been set up to consider the issue, but they never reached an agreement. Eventually, the OSEA library was housed in the building of the Society of Agriculture of Southern Russia in 1866.

Some technical issues related to urban planning in Odessa, property valuation, etc. were also resolved. For illustrative purposes, we address the appeal of Leon Mantser, an owner of a vodka distillery, to the society in June, 1866 "with a request to make examination of the premises of the burnt distillery and to evaluate the survived [in the original "surviving"—*the authors*] part of it" (SAOR, F. 333, inv. 1, f. 1, p. 16). It is also noteworthy that the number of the letter of response of the society is 345, which means that, in the first years of its existence, the society was quite active.

## A comparative analysis of the statutes of the Society of Technicians in Riga and Odessa Society of Engineers and Architects

It is known that the operation of public scientific societies was governed by their statutes, which are the hallmarks of the organization of science in this form. Our research of the statutes of the scientific and technical societies under consideration and their comparative analysis led to a deeper understanding of the main characteristics of the first STS founded in the Russian Empire, and to determining their certain differences and specific features. For the comparative analysis, a set of main indicators and characteristics of the activity

of any scientific and technical society was selected, such as its purpose, financial status, membership structure, regulation of activity, etc. The most important provisions of both statutes (*Ustav obshchestva...*, 1860, no. 3, pp. 255–258; *Ustav Odesskogo...*, 1864, p. 7) are summarized in the comparative Table 1.

Table 1. The main provisions of Riga Society of Technicians and Odessa Society of Engineers and Architects statutes (comparative analysis)

	<b>Riga Society of Technicians</b>	<b>Odessa Society of Engineers and Architects</b>
Date of establishment	1858	1864
Legal framework	Statute (1859)	Statute (1864)
Purpose of establishment	“to give technicians the opportunity to share their opinions, knowledge and mutually use the observations of each member”	“to promote the exchange of ideas about construction, mechanics and mining; to obtain and update knowledge in the subjects of construction art, mechanics and mining; to serve as a combined means and knowledge for public and private interests of the southern part of Russia regarding construction issues”
Meeting	Ordinary and special meetings	Ordinary and special meetings
Methods of achieving the goal	Creating a library (literature and periodical publications); discussion of topical issues and modern inventions at the meetings	Creating a library was one of the main goals of the meetings
Provision of finance	Membership fees (once a year)	Annual monetary fee: from engineers, technicians and architects—10 roubles per year; people other than technical specialists—20 roubles per year
The right to full membership	Military and civil engineers, architects, mechanics, machine builders, and other “people of knowledge”	Engineers, technicians and architects, as well as people who wished to contribute to the goals of society. Non-technical members did not have the right to vote on technical issues

The First Attempts to Institutionalize Non-State Communities of Engineers and Technicians in the Russian Empire: Livland and Kherson Provinces

Other forms of membership	Corresponding members—technicians outside Riga; honorary members--technicians known for their theoretical and practical work	Not available
Conditions of entry	The applicants declared their intention to the chairman of the society through a full member without voting. Quorum was no less than 1/3 of the present members' votes	New members were accepted without voting on the recommendation of two members, except for out-of-town technicians who declared their desire to the secretary of the society
Commercial activities	Not available	The meeting of engineers, technicians and architects offered to take over the consideration and discussion of projects, considerations and estimates for various structures, in various fields of construction, mechanics and mining, if they were sent by public or private institutions, as well as by individuals who donated to the meeting
Termination of membership	Upon written notification to the chairman	The information is absent in the Statute
Quorum for decision making	At least 1/3 of the members of the meeting must be present	At least 1/3 of the members of the meeting must be present
The order of meetings	Meetings were held mainly at the time of year when construction work stopped (calling special meetings was also possible)	Once a month—on the 15th day (calling extraordinary meetings was also possible)
Documentation	Each meeting was recorded in the minutes	Each meeting was recorded in the minutes
Dissolution of the society	The society could be dissolved only by the decision of the majority 3/4 of all its full members	Not mentioned

One of the main activities of both societies was the creation of a library (books, magazines, drawings), and in both societies the need to have information about foreign inventions and equipment was emphasized. There were other common features of the societies' activities: keeping minutes of the meetings, the availability of a membership fee, and the nature of the meetings. The statute of Odessa Society of Engineers and Architects was more democratic, because it involved not only specialists but also non-technicians, who, however, did not have the right to vote in the process of solving technical issues.

The peculiarity of the activity of OSEA was that the meetings offered paid services for considering and discussing projects, analytical solutions and estimates of various structures in various fields of construction, mechanics and mining. The customers were public and private institutions and private individuals. Payment for such services was made to the members who worked on these projects, as well as for the maintenance of the library. Another chargeable service was providing information about the quality and prices of structures, machines, tools and materials (the cost of one certificate was 1 rouble). Riga Society of Technicians did not provide commercial services. There were also some differences in how the meetings were organized.

The study of the statutes allowed us to determine the goal and objectives of both societies and clearly demonstrated their orientation to engineering in various fields of technology, not only in architecture, although the latter was definitely predominant in the early years of both societies, especially in Riga Society of Technicians. However, the reports of Riga Society of Technicians give examples of its activities in other areas. For example, the report 'On hydrogen and hydrocarbon gas' (Gagen) or 'On saltpetre extraction in Russia' (Baron F. von Fircks) ('Otcety deystviy...', 1860b, column 439). This means that the classification of these societies as purely architectural does not correspond to reality, both in terms of the norms and reality of their operation.

The perception of these societies as purely architectural by some researchers has led to corresponding errors in some respected publications. Thus, the handbook of scientific societies of Russia contains inaccurate names: instead of Riga Society of Technicians it mentions Riga Society of Architects, which was established in 1858 as a society of engineers and technicians. The statute of the society was approved in 1889; also, Odessa Society of Engineers and Architects is referred to as Odessa Society of Architects and Engineers. The names given in this reference source do not correspond to the names indicated in the statutes, thus confusing two societies: Riga Society of Technicians, established in 1858,

with its statute approved in 1859, and Riga Society of Architects, established in 1879 (*Obshchestva Lifylandskoy gubernii*, 1900, pp. 44, 46). The Riga Society of Architects, whose date of origin goes back to 1858, is also present in the dissertation abstract on the history of associations of architects in the Russian Empire (Komarova, 1995). In 1858, however, the Riga Society of Technicians was established, and operated, and its statute was approved in 1859. This is confirmed by the *Brockhaus and Efron Encyclopedic Dictionary*, which dates the establishment of Riga Society of Technicians to 1859 (according to the date of approval of the statute) (*Enciklopedicheskiy slovar*, 1901, pp. 122–123).

### Non-state attempts to unite the marine engineers of Nikolaev

In the same year, 1864, another attempt was made to institutionalize non-state engineering communications in the Black Sea region. The marine engineers of Mykolaiv tried to implement this idea for the first time. According to the *Notes of the Mykolaiv division of the Imperial Russian Technical Society*, “in 1864 the IRTS had not been found yet, but engineers and mechanics of fleet in Mykolaiv came up with the idea of organizing a society where engineers and mechanics, who had dedicated their lives to the fleet, could exchange ideas and observations to extend their knowledge” (*Kratkiy istoricheskiy ocherk...*, 1904, p. 7). In this regard, the marine engineers submitted a report to the Commander-in-Chief of the Black Sea Fleet and at the same time to the military governor of Mykolaiv, B. O. Glazenap. The governor supported the petition, but it had no positive results. The first attempt ended unsuccessfully, but the idea to establish such a division was kept by the corps of engineers in Mykolaiv.

The second attempt dates back to 1869. At that time, the industrial development of Mykolaiv gained a fresh impetus. The famous rocket engineer General K. I. Konstantinov moved to Mykolaiv in 1864. Upon arrival, he took charge of the construction of the Mykolaiv military rocket plant. The number of engineers and technicians in the city increased. The need for professional communication was felt more and more acutely and prompted a new attempt to establish a technical society. However, by this time, the Imperial Russian Technical Society had already been established, and operated. It was no longer a matter of establishing a separate society, but a Mykolaiv division of the Imperial Russian Technical Society.

One of the five mechanical engineers who tried to establish the local RTS division in 1864 was Lieutenant Ksenofont Petrovych Seleznirov, a mechanical engineer, who initiated the authorization to create a division again. This request



was supported by the director of the hydrography department in Mykolaiv V. I. Zarudnyi and his technical assistant M. I. Ilin. This time, the initiative was supported by the authorities and had a positive outcome. As a result, the Minister of Internal Affairs of the Russian Empire O. Ye. Timashiv gave the permission to create the Mykolaiv division of the Russian Technical Society (MD RTS).

The meeting which announced the opening of the division took place on April 29, 1869. It was attended by 22 members of the society (*Zapiski Russkogo...*, 1869).

The division initially consisted of two departments: marine and mechanics, with 12 and 22 members, respectively, so the total number of members of the society at that time was 34. However, “on July 19, 1869 Mykolaiv military governor B. O. Glazenap received a letter from this division, which stated that it had three departments: mechanics, chemistry and marine” (Guzenko, 2006, p. 81). This means that, in fact, in less than three months, a new department appeared—that of chemistry. According to Yu. I. Guzenko (2006, p. 81), it included “many officers of the Mykolaiv fortress artillery, teachers of the Mykolaiv gymnasium and pharmacists.”

Among the members of the department of mechanics, established in 1869, were three of the five first initiators of the creation of the MD RTS in 1864. These were a mechanical engineer Lieutenant Ksenofont Petrovych Seleznirov, a mechanical engineer Lieutenant Ivan Lukych Fedosieiev and a mechanical engineer, Junior Captain Mykyta Mykhailovych Popov. The Mykolaiv military Governor Adjutant General B. O. Glazenap was among the members of marine department.

However, the activities of the division did not initially succeed. Although the first activities of the newly formed society were quite intense, soon (on January 12, 1871) the head of the Mykolaiv division K. I. Konstantinov fell ill and died, the majority of the maritime department was at sea for a long time, and some members of the society were transferred to other cities. All these factors together led to the shutdown of the activities and, on April 3, 1872, the organization ceased to operate.

The analysis of the first attempts to institutionalize non-state engineering and technical communities in the Livland and Kherson provinces and their discussion allow us to reach balanced conclusions about the situation that developed in the engineering communities of the Russian Empire in the 1850s and 1860s.

## Conclusion

Even before the creation and legalization of the existence and activity of the Russian Technical Society, there were attempts to organize non-state institutions of the engineering community in the Livland and Kherson provinces, which were among the first of such associations in the Russian Empire. The main purpose of these societies was to provide professional communication outside state institutions. The engineering community in Riga and Odessa managed to establish acting scientific and technical societies, such as Riga Society of Technicians (Riga, 1858), Odessa Society of Engineers and Architects (Odessa, 1864), which preceded the Russian Technical Society. But the attempt of marine engineers in Mykolaiv to establish an independent technical society (1864) turned out to be unsuccessful.

It is found that the societies established in Riga and Odessa were institutionalized. The statutes, which defined the operation, management system, sources of funding, membership in the societies and other organizational and functional components of the societies were not detailed to perfection. They had their own characteristics, which were influenced by regional factors.

The founders of the societies, as a rule, were well-known representatives of the engineering community and they were included, most often in the regional elite.

The studied scientific and technical societies of the Baltic States and the Black Sea region were not mono-, but polytechnic in nature, uniting specialists in various fields of engineering. The extent of the polytechnic nature of the societies varied. In some of them, the architectural activity came to the fore, which, on the one hand, gave modern researchers grounds to identify these societies as architectural rather than technical. On the other hand, this approach has led to the erroneous use of the names of some societies (which do not comply with their statutes) and confusion in the definition of the chronology of a number of important events in the activities of the societies. Relevant clarifications are made in this article.

The obtained results provide an opportunity to continue research on the further activities of Riga Society of Technicians and Odessa Society of Engineers and Architects, and attempts of institutionalization of non-state communities of engineers in Mykolaiv. The study is also important in the context of further elucidation of the peculiarities of the process of the emergence of scientific and

technical societies in the regions of the Russian Empire, as a manifestation of the social activity of the engineering community.

## References

- Arseniyev, K.** (1848), 'Statisticheskiye ocherki Rossii' [Statistical sketches of Russia], Sankt-Peterburg: Tipografiya Imperatorskoy Akademii nauk. Retrieved from [https://viewer.rusneb.ru/ru/000199\\_000009\\_003561612?page=517&rotate=0&theme=white](https://viewer.rusneb.ru/ru/000199_000009_003561612?page=517&rotate=0&theme=white) [accessed 29 Aug 2021]
- Baranets, N. G. & Verevkin, A. B.** (2011), 'Organizatsiya nauki v universitetakh i nauchniye obshchestva v XIX—nachale XX veka' [Organization of science in universities and scientific societies in the 19th—early 20th century], *Sibirskiy nauchnyy vestnik*, no. 1(3), pp. 160–166. Retrieved from <https://readera.org/14113565> [accessed 29 Aug 2021]
- Filippov, N. G.** (1976), 'Nauchno-tekhnicheskiye obshchestva Rossii (1866–1917 gg.)' [Scientific and technical societies of Russia], Moskva.
- Guzenko, Yu. I.** (2006), 'Mikolaivske viddilennia imperatorskoho Russkoho tekhnichnogo tovarystva u 90-kh rr. XIX st.' [Mykolaiv Division of the Imperial Russian Technical Society in the 1890s], in *Naukovi pratsi. Istoriiia, tekhnika, ekolohiia, filolohiia, ekonomika, pedahohika, politychni nauky, tekhnohenna bezpeka, kompiuterni tekhnolohii: naukovo-metodichni zhurnal*, vol. 48, no. 35, Mykolaiv: MDGU im. P. Mohyly, pp. 80–84.
- Istoricheskaya zapiska...* (1897), *Istoricheskaya zapiska o deyatelnosti Moskovskogo arkhitekturnogo obshchestva za perviye tridsat let ego sushchestvovaniya. 1867–1897* [Historical note on the activities of the Moscow Architectural Society in the initial thirty years of its existence. 1867–1897], Moskva: Lito-Tipogr. O. Yu. Sheyvel. Retrieved from <http://tehne.com/library/istoricheskaya-zapiska-o-deyatelnosti-moskovskogo-arhitekturnogo-obshchestva-za-pervye-tridcat-let-ego-sushchestvovaniya-1867-1897-moskva-1897> [accessed 29 Aug 2021]
- Kasanov, A. S.** (2009), 'Nauchniye obshchestvenniye organizatsii v Rossii vo vtoroy polovine XIX—nachale XX vv' [Scientific public organizations in Russia in the second half of the 19th—early 20th centuries]. Retrieved from <http://ist-konkurs.ru/raboty/2009/1181-nauchnye-obshchestvennye-organizatsii-v-rossii-vo-vtoroj-polovine-xix-nachale-xxv> [accessed 29 Aug 2021]
- Kirichenko, E. I.** (2007), 'Moskovskoye arkhitekturnoye obshchestvo (1867–1932) v istorii russkoy kultury' [Moscow Architectural Society (1867–1932) in the history of Russian culture. 1867–1932], Moskva. Retrieved from <http://www.rusarch.ru/kirichenko1.htm> [accessed 29 Aug 2021]

- Komarova, I. I.** (1985), 'Arkhitekturnyye obshchestva v Rossii XIX—nachala XX vv.' [Architectural societies in Russia in the 19th and early 20th centuries], *Arkhitektura SSSR*, no. 5, pp. 108–110.
- Komarova, I. I.** (1995), *Obyedineniya arkhitektorov i ikh rol v obshchestvennoy i kulturnoy zhizni poreformennoy Rossii* [Associations of architects and their role in the social and cultural life of post-reform Russia]. Abstract of PhD dissertation, Moscow Pedagogical University.
- 'Kratkiy istoricheskiy ocherk...' (1904), 'Kratkiy istoricheskiy ocherk osnovaniya i deyatelnosti Nikolayevskogo otdeleniya imperatorskogo Russkogo tekhnicheskogo obshchestva' [A brief historical outline of the founding and activities of the Nikolaev division of the Imperial Russian Technical Society], *Zapiski Nikolaevskogo otdeleniya Imperatorskogo Russkogo tekhnicheskogo obshchestva*, Nikolaev, no. 1, pp. 7–15.
- Krichko, V. A.** (1991), *Prodolzhatya tradicii...: K 125-letiyu Russkogo tekhnicheskogo obshchestva* [Continuing traditions ...: For the 125th anniversary of the Russian Technical Society], Znanie.
- Kushlakova, N. M.** (2016), *Naukovo-tekhnichni obiednannia promyslovikh rehioniv Ukrainy (1870–1917)* [Scientific and technical associations of industrial regions of Ukraine (1870–1917)], Pavlograd: ArT Sintez-T.
- Obshchestva Lifyandskoy gubernii* (1900), [Societies of the Livland province], ed. by R. Ruts koy, Riga: Izdanie Br. Bashmakovykh. Retrieved from [https://docs.google.com/file/d/0B0K47JLp4QpadjdVWDlaTmRxaG8/edit?resourcekey=0-6Pnkj9F6ewSFx4J9VV\\_VkA](https://docs.google.com/file/d/0B0K47JLp4QpadjdVWDlaTmRxaG8/edit?resourcekey=0-6Pnkj9F6ewSFx4J9VV_VkA) [accessed 29 Aug 2021]
- Obuhovich, V. V.** (2018), 'Nauchniye obshchestva Rossiiskoi Imperii' [Scientific societies of the Russian Empire], *Sovremennaya nauka: aktualnyye problemy teorii i praktiki*, no. 5, pp. 23–27. Retrieved from <http://www.nauteh-journal.ru/files/ae1bea6c-fefc-4d5a-a1d5-a2b4a9a4c736> [accessed 29 Aug 2021]
- Organizatsiya naukovoyi...* (2015), *Oorganizatsiya naukovoi ta inzhenerno-tekhnichnoyi diyalnosti v Livoberezhnii Ukraini ta Prychornomoryi: persha polovyna XX stolittia (deiaki modeli i formy)*, [Organization of scientific and engineering activities in the Left Bank of Ukraine and the Black Sea region: The first half of the 20th century (some models and forms)], ed. by V. S. Savchuk, Dnipropetrovsk: TOV "ShA-PRES".
- 'Otchety deystviy...' (1860a), 'Otchety deystviy Obshestva tehnikov v Rige. Godovoy otchet za period 1858/59 goda' [Reports of the actions of the Society of Technicians in Riga. Annual report for the period 1859/60], *Arkhitekturniy vestnik*, no. 5, columns 435–438.
- 'Otchety deystviy...' (1860b), 'Otchety deystviy Obshchestva tehnikov v Rige. Godovoy otchet za period 1859/60 goda' [Reports of the actions of the Society of Technicians in Riga. Annual report for the period 1859/60], *Arkhitekturniy vestnik*, no. 5, columns 438–440.

- Perebyinis, Ye. P.; Shushkivskiy, A. I.; Shpytal, A. H. & Filts, B. M.** (2016), 'Latviia' [Latvia], *Entsyklopediia Suchasnoi Ukrainy*, vol. 16, ed. by I. M. Dziuba, A. I. Zhukovskiy, M. H. Zhelezniak, etc. Retrieved from <https://esu.com.ua/article-53396> [accessed 17 Oct 2022]
- Polnoye sobraniye...* (1861), *Polnoye sobraniye zakonov Rossiyskoy Imperii* [Complete collection of laws of the Russian Empire], *Sobraniye vtoroye*, vol. XXXIV. Otdeleniye vtoroye, 1859, St. Peterburg: Tipografiya II Otdeleniya Sobstvennoy E. I. V. Kantselyariyi.
- Ryzhov, S. D.** (2013), 'Istoriya sozdaniya Russkogo tekhnicheskogo obshchestva' [The history of the creation of the Russian Technical Society], *Vestnik Rossiyskogo universiteta druzhby narodov*, Seriya: Istoriya Rossii, no. 4, pp. 67–72. Retrieved from <https://cyberleninka.ru/article/n/istoriya-sozdaniya-russkogo-tehnicheskogo-obshchestva/viewer> [accessed 29 Aug 2021]
- Savchuk, V. S.** (2019), 'Mykolaiivske viddilennia Rosiiskogo tekhnichnogo tovarystva: pershi sproby vidkryttia' [Mykolaiv Division of the Russian technical society: The first attempts of opening], *Aktualni pytanmya istorii nauky i tekhniky*: Proceedings of the 18th All-Ukrainian Scientific Conference, 26–28 September, Kramatorsk, pp. 265–268.
- Savchuk, V. S.** (1992), 'Perviyе inzhenerniye sobraniya i obshchestva v Rossiyskoy Imperii' [The first engineering assemblies and societies in the Russian Empire], *Voprosy istorii estestvoznaniya i tekhniki*, no. 1, pp. 51–55.
- Soboleva, E. V.** (1983), 'Organizatsiya nauki v poreformennoy Rossii' [Organization of science in post-reform Russia], Leningrad: Nauka, Leningr. otdel.
- Spravochnik nauchnykh...* (2021a), *Spravochnik nauchnykh obshchestv Rossii* [Reference book of scientific societies of Russia], Alfavitniy ukazatel. Retrieved from <http://www.snor.ru/?m=catalog&an=alf> [accessed 29 Aug 2021]
- Spravochnik nauchnykh...* (2021b), *Spravochnik nauchnykh obshchestv Rossii. Rizhskoye obshchestvo arkhitektorov* [Reference book of scientific societies of Russia. Riga Society of Architects], Retrieved from [http://www.snor.ru/index-m=articles&an=sc\\_396.html](http://www.snor.ru/index-m=articles&an=sc_396.html) [accessed 29 Aug 2021]
- SAOR (1864), 'Ob uchrezhdenii v Odesse obshchestva inzhenerov, tekhnikov i arkhitektorov' [On the establishment in Odessa of a society of engineers, technicians and architects], F. 2, inv. 1, f. 645a, pp. 1, 1turn, 15, 17, State Archives of Odessa Region.
- SAOR (1865–1877), 'Perepiska Odesskogo obshchestva inzhenerov i arkhitektorov s Novorossiyskim i Bessarabskim general-gubernatorom i Odesskim gradonachalnikom o prisoedinenii k russkomu tekhnicheskomu obshchestvu' [Correspondence of the Odessa Society of Engineers and Architects with the Novorossiysk and Bessarabian Governor-General and the Odessa City Mayor on accession to the Russian Technical Society], F. 333, inv. 1, f. 1, p. 16, State Archives of Odessa Region.

SAOR (1868–1871), ‘Perepiska s Russkim tekhnicheskim obshchestvom ob obrazovanii v Odesse Novorossiyskogo otdeleniya obshchestva, spiski uchrediteley, ustav Odesskogo obshchestva inzhenerov i arkhitektorov za 1864 g.’ [Correspondence with the Russian Technical Society about the education of the Novorossiysk division of the society in Odessa, lists of founders, the statute of the Odessa Society of Engineers and Architects for 1864], F. 333, inv. 1, f. 3, pp. 35–38, State Archives of Odessa Region.

*Enciklopedicheskii slovar* (1901), ‘Tekhnicheskiye obshchestva’ [Technical societies], in F. A. Brokgauz & I. A. Efron (ed), *Enciklopedicheskii slovar*, vol. XXXIII, Termicheskiye oshchushcheniya–Tombazi, Sankt-Peterburg: Tipografiya Akc. Obsh. “Izdatelskoe delo”, Brokgauz-Efron, pp. 122–123.

Ustav obshchestva tekhnikov v Rige (1859), [Statute of the Society of Technicians in Riga], *Senatskiye vedomosti*, no. 98.

Ustav obshchestva tekhnikov v Rige (1860), [Statute of the Society of Technicians in Riga], *Arkhitekturnyj vestnik*, no. 3, columns 255–258.

Ustav Odesskogo obshchestva inzhenerov i arkhitektorov (1864), [Statute of the Odessa Society of Engineers and Architects], Odessa: Tip. L. Nitshe.

**Vernadsky, V. I.** (1988), ‘Trudy po istorii nauki v Rossii’ [Works on the history of science in Russia], Moskva: Nauka.

**Yakovenko, N.** (1997), *Narys istorii Ukrainy z naidavnishykh chasiv do kintsia XVIII st.* [An outline of the history of Ukraine from the earliest times to the end of the 18th century], Kyiv: Kritika.

*Zapiski Russkogo...* (1869), ‘Inogorodniye otdeleniya. Nikolaevskoye otdeleniye’ [Out-of-town departments. Nikolaev department], *Zapiski Russkogo tekhnicheskogo obshchestva*, no. 7–8.

**Zuev, N. I.** (1860), *Podrobnyi atlas Rossiiskoi Imprii* [A detailed atlas of the Russian Empire], St. Petersburg: Tipografiya I. I. Glazunova. Retrieved from <https://www.flickr.com/photos/132527901@N07/albums/72157651488062927/with/16951221048/> [accessed Oct 2022]

**Varfolomii Savchuk**, DSc, is a professor at the Oles’ Dnipro National University, Ukraine, specializes in the field of history of science and technology. His doctoral dissertation is titled *Historical and Scientific Analysis of the Activities of Natural Science Societies in the South of Ukraine, Crimea and Bessarabia: The Second Half of the XIX—Early XX Century*.

**Viktoriia Dobrovolska**, PhD, Candidate of historical sciences, is an associate professor at the Kherson State Maritime Academy, Kherson, Ukraine, specializing in the field of history of science and technology. Her doctoral dissertation is titled *History of Women’s Education in the South of Ukraine (1901–1910)*.