"Foreign" Pharmacists and the Dissemination of Medical Knowledge in St. Petersburg in the Early Nineteenth Century

by

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Statement of Copyright

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Abstract

This thesis discusses the pharmaceutical community that was developing in 1800-1820 in St. Petersburg, the capital of the Russian empire. There are several layers of this exploration: first of all, this paper examines various aspects of urban medicine such as state regulations, topography and statistics regarding pharmacy shops in the city as important evidence of increasing concern about "public health" of the population. Secondly, the thesis contests the idea of backward Russian medicine and illustrates the complexity of processes that were happening while the pharmaceutical industry was forming. The last significant side of this discussion is people themselves – workers of the pharmaceutical industry. The research binds together all these layers to contribute to the social history of medicine approach. These aspects are essential to understand how the community was working, what positions in social and professional hierarchies pharmacy holders occupied and how this case reveals broader issues of knowledge transfer, professionalization and illustrate that professions that were united under the term "medical" were quite unlike each other.

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Introduction

Jürgen Osterhammel points out an extremely important feature of the nineteenth century. He describes it as an epoch when "a tension develops between easier transmission of diseases and more successful campaigns against them."[1] Increasing mobility of people and diseases led to the creation of a new environment, and one of the ideas that was born at this time was the concept of public health. The aspiration of the state towards mass health was reflected particularly in the cities. They undergo the processes of changes and reconstruction; a lot of completely new institutions and regulation were founded. One of the most illustrative examples of the formation of medical discourse in cities is the construction of sewerage in the majority of European cities. This innovation allowed to reduce significantly the overall mortality of the population in these, and mortality from gastrointestinal epidemic diseases by two to five times only a few years later.[2]

Generally speaking, epidemics in the eighteen and nineteenth centuries were the driving force in the development of the narrative about public health. The urban administration started to be more and more concerned about the health of the towns' inhabitans sine big cities because of the density of the population always were main centers of diseases distribution. That is why we can say that the increasing number of pharmacy shops could be considered as a part of the state's policy in order to maintain and improve public health. Zachary Neal describes cities as "dense clusters of all sorts of human activity including research, commerce, tourism and culture."[3] Apothecary shops appeared to be in the crossroad between commerce, research activity and medical discourse. This network of distribution of remedies was important for sustainable development of both cities and citizens and to some extent military service and soldiers. If we take a look at the functioning of the pharmacy shops it can bring additional insights and give broader understanding of public health's regularion and monitoring by the government.

[1] Osterhammel, Jürgen, *The Transformation of the World,* Princeton: Princeton University Press, 2014, P. 180.
[2] *Vsemirnaia istoriia: V shesti tomakh [World's history]*, editor Alexander Chubar'ian, Moscow: Nauka, 2014, P. 176.
[3] Zachary, Neal, *The connected city: how networks are shaping the modern metropolis*, New York: Routledge, 2013, P.1.

The first mention of the word "pharmacy" is found in the works of Hippocrates. In ancient Greece, the word *apotheca* meant a warehouse or storage. Of course, pharmacies of the nineteenth century were not similar to their predecessors to the same extent as they differ from modern pharmacies. Beginning from the Medieval times, these institutions combined the functions of not only a warehouse and a place for the sale of syrups and tablets, but also a laboratory where medicines were made. Sometimes there also was a garden, where herbs necessary for remedies were grown. This was also the case for the nineteenth century Russian empire.

Pharmacies in the eighteenth and nineteenth centuries were an important part of life not only in cities but also in the navy and army because there were state-owned pharmacies whose task was to provide the army with medicines. There were two main types of shops: state-owned (kazennye) pharmacies and private (*vol'nye*[4]). Kazennye are divided according to their functions: main (glavnaja) pharmacies were responsible for dispensing drugs to the civilian population and simuntaneously they performed the role of central pharmacy warehouses; field (polevaja) pharmacies were placed next to large troops and dispensed medicines to the military; hospital (gospital'naja) pharmacy shops that were attached to military hospitals. In this work, I leave state-run pharmacies outside the focus of the study because they were mainly connected to the military while I am trying to explore the urban medicine and its relations with the state authorities. Therefore, I am primarily inserested in institutions that provided the civilian population with medicines - *vol'nye* pharmacies. This focus on *vol'nye* pharmacies and their workers is conditioned, first of all, by a gap in the historiography, because, for instance, Soviet historians who were interested in this field in the 1940s and 1950s did not pay enough attention to *vol'nye* pharmacies, since they were considered to be a bourgeois manifestation. In general, the attitude among historians of the twentieth century to private entrepreneurship in the health sector was primarily negative. Some historians of the Soviet era even claimed that "... besides, private pharmacists cared

[4] The term vol'nye means "free" in Russian and in terms of pharmacies in mean that they were private pharmacies. New pharmacies were exempted from military stanchions, and pharmacists were exempted from military service and taxation status.

little about the benefits of the population, but only sought to enrich themselves, deceived and robbed the people".[5] Moreover, the closer look at the history of pharmacy can give us many interesting insights about the state's attitude and regulation of people and spheres that were in a hybrid and fluid position as we will see later. Hybridity was inherent in many aspects of the pharmaceutical industry, there were not rigid boundaries that would define this business and people who were involved in it. Pharmacy shops were at the crossroad of emerging science discipline, old crafts tradition, apothecaries themselves in the Russian case had very vague identity as we will see in the course of this thesis. Here I will be talking exclusively about the pharmaceutical community in the Russian empire and all my observations refer only to apothecaries and pharmacy shops in St. Petersburg and the first quarter of the nineteenth century. It should be admitted that medicine, surgery, pharmacy, and nursing were not completely identical and each brach developed according to their own rules and regulations.

Another important historiographic discussion concerning the Russian medicine in general is the issue of backwardness of Russian medicine. On the one hand, medicine in the Russian empire was long considered to be backward in comparison to the Western states. Historians of the twentieth century mentioned that "Prior to the Revolution, Russia was extremely backward in its medical provision for the mass of the people."[6] This point of view was prevailed for a long time probably since the very beginning of the early modern times when there was not so-called Russian medicine, because it was mainly based on the physicians and other medical personnel from the Western states, especially territories of the Holy Roman Empire.[7] Andreas Renner illustrates that this thinking was also characteristic for the nineteenth century: "Older research, for example by Baltic German doctor Alexander Brückner, overemphasized the foreign impact on the Russian

[5] Zarkhin, Iosif, *Ocherki iz istorii otechestvennoi farmatsii XVIII i pervoi poloviny XIX veka* [Essays on the history of domestic pharmacy business in eighteenth and the first half of the nineteenth century]. Moscow: Medgiz, 1956, P. 48.
[6] Newsholme, Arthur, *RED MEDICINE: SOCIALIZED HEALTH IN SOVIET RUSSIA*. Garden City, New York: Doubleday, Doran, 1933. P. 205.
[7] McCallum, Jack, *Military Medicine: From Ancient Times to the 21st Century*, California: ABC-CLIO, 2008. P. 280.

history of medicine. In Brückner's writings, physicians do not only appear as the incarnation of medical progress but of Western civilisation in general. For him, physicians, like all other experts from abroad, were a vehicle of the Westernisation of a backward country; thanks especially to migrants from Germany or the "literati" from the Baltic provinces, Russia can be ranked among the civilised nations."[8] This point of view was formulated by the person from the nineteenth century, even though this period in Russian historiography was described as the period of the rise of "national science", with the leading figures of prominent Russian scientists such as the founder of field surgery Nikolay Pirogov and surgeon and physiologist Nikolai Sklifosovsky.

Nevertheless, the discussion is ongoing, and the situation is definitely much more complex than a simple definition of "backward". Renner mentions that Alexander Brückner overemphasized the importance of foreign specialists. The author describes the other side in this discussion, speaking about the Soviet scholars "highlighted the independence and originality of Russian medical practitioners. Were it not for the intrigues of foreign doctors at the court of Catherine, Russian physicians would have played a much more decisive role in the development of eighteenth-century medicine."[9] Nevertheless, Renner claims that both these visions to be an exaggeration and heterogeneity of the medical professionals did not necessarily stated the backwardness of the country. Although, as we will see in the course of this paper, pharmaceutical community at least until the 1820s was rather a homogeneous one.

The first pharmacy in Russia was opened in the second half of the sixteenth century. It was opened by the English pharmacist James Freshham during the reign of Ivan the Terrible in 1581. This can be considered a rather late date, since in Europe already in the fifteenth-century pharmacies were not an exception, but rather an ordinary phenomenon in the cities. In my work, I want to pay attention to the period when, in my opinion, pharmacy network in the Russian Empire began to develop most actively, namely, at the beginning of the nineteenth century. The selection

[8] Renner, Andreas, "Progress through power? Medical practitioners in Eighteenth-century Russia as an imperial elite" in *Acta Slavica Iaponica*, No. 27 (2009) P.44.
[9] Ibid.

of chronological data frames is chosen because of several reasons. Firstly, during this period (the first two decades of the nineteenth century), there is already an extensive development and production of remedies, but this is still the world of traditional *materia medica*, herbs, minerals and spirits, which existed before the development of organic chemistry and the synthesis of drugs in the second half of the nineteenth century. This is a transitional period between when pharmaceutical knowledge was still a part of the craft tradition and the training of pharmaceutical personnel did not take place within the walls of higher education institutions as it would starting in 1811. This is the beginning of the period of pharmaceutical knowledge "professionalization" and starting point for compulsory pharmaceutical education at universities in the Russian empire.

Moreover, the turn of the century was a period of acceleration of the development of the pharmacy network in the Russian Empire and in St. Petersburg in particular. By 1804, about 14 free pharmacies already existed in the capital, and by 1815 their number had increased to 30. Unfortunately, there are no specific statistics on the state of the pharmacy chain in the Russian Empire during this period, but it would be logical to assume that St. Petersburg, as the capital of the empire, was the most attractive city for private business, therefore, most likely, the city had the largest number of pharmacies.

Unfortunately, the question of pharmaceutics, pharmacy business and workers of the industry remains mainly unexplored. Russian-language historiographical tradition in the area of history of medicine primarily concerns the history of "great ideas" and institutional history, concentrating on studying questions about the training of medical personnel in academies and universities, the formation and development of hospitals, and most of all historians interested in biographies of great scientists.[10]

Another problem of historiography is related to the fact that the history of medicine until recently was written primarily by medical scientists, not historians. This situation leads, firstly, to

[10] As examples of classic history of medicine see Sorokina, Tat'iana, *Istoriia meditsiny* [The History of Medicine], Moscow: Akademija, 2008; Budko, Anatolii, *Istoriia meditsiny Sankt- Peterburga XIX — nachala XX v.* [The History of Medicine in St.-Petersburg in 19th – 20th century], St.-Petersburg: Nestor-Istorija, 2010.

aforementioned focus on institutional history and other aspects that have already been mentioned. However, the most important problem of the work of medical scientists, pharmacists, etc. is directly connected with sources. So, for example, the work of Viktor Salo[11] (Candidate of Pharmaceutical Sciences) dedicated to the history of pharmaceutic in Russia contains references to the Complete collection of laws of the Russian Empire which are not leading to the correct statute. Moreover, references to archival documents are not drawn correctly, and the reader would not learn anything about the name and the content of the file. This historiographical tradition is not a new one and according to Anastasia Afanasyeva: "since its appearance in the nineteenth century, the history of medicine was created by representatives of the medical profession and was designed to record the process of a gradual increase in medical knowledge: therefore, outstanding doctors, scientists and important medical discoveries were in the focus of history of medicine."[12]

However, the main trend today is the opposite: the history of medicine ceases to be a field of knowledge in which mainly professors of natural sciences work and works are written exclusively for medical students. Thus, the history of medicine is becoming a field of study for professional historians. Despite the fact that Henry Siegerist, in his work "The Great Doctors: A Biographical History of Medicine" in 1951, spoke of the significance of the "wider social context"[13] in the history of medicine, only the next generation of scientists, starting in the 1970s, began to cultivate this idea. Gradually, under the influence of scientists' interest in the "history of the masses," the history of medicine ceases to be the history of medical faculties, which is written within the walls of these same faculties, and it is embedded in the context of the history of society as a whole. Of course, there are still significant gaps in historiography, as Roy Porter writes about in his article "Patient's Vision. The history of medicine "from below"[14], but the history of medicine

[11] Salo, Victor, *Istoriia farmatsii v Rossii* [History of pharmacy in Russia], Moscow, 2007, pp. 256.
[12] Afanas'eva, Anastasiia, "Istoriia meditsiny kak mezhdistsiplinarnoe issledovatel'skoe pole [The history of medicine as an interdisciplinary research field]", in *Istoricheskaia nauka segodnia: teorii, metody, perspektivy*, edited by Repina. Moscow: LKI, 2011. P. 419.
[13] Ibid. P. 420.
[14] Porter, Roy. "The Patient's View: Doing Medical History from below." In *Theory and Society*, no. 2 (1985): 175-98.

is becoming more "social", integrating the classical story of medical schools and medical scientists into a wider context, where there is a place not only for the institutions and biographies but also for people in general.

There are a very small number of monographs covering the history of pharmacies and in general pharmaceutics science in the Russian Empire. [15] Authors more often focus on the history of medicines' inventions and leave researches of institution where these medicines were sold out of the scope. More complicated objects for the research like workers and customers also neglected in these realms. In addition, the social aspect of urban medicine is missing in these kinds of works. This focus on institutional history and physicians' biographies is easy to explain. Doctors usually carried out their education in universities, thus this plot in the history of medicine is well-provided with sources, and it is easy to identify people who studied in universities. Pharmacies did not have their own archives as universities did, so it is much more complicated to build a narrative that would focus on people thanks to the paucity of sources.

Even though today the history of medicine is a dynamically growing and prospective direction for research, such aspects of pharmacy history as apothecaries and their role in the life of St. Petersburg of the nineteenth century remains poorly understood. There is no information about the number of pharmacies in the Russian empire and St. Petersburg, very little research has been made on the question of pharmaceutical education not even in Russian empire, but also in other European states.[16] For instance, there is still no comprehensive work concerning the training of pharmacists and the formal requirements set for them by the Russian medical authorities, as well as data about state regulations concerning the pharmaceutical business.

[15] Salo, Victor, *History of pharmacy in Russia.* Moscow, 2007; Koroteeva, Natalia, *State policy in the field of Russian pharmacy in the 16th - the beginning of the 20th century*. Kursk, 2010; Zarkhin, Iosif, *Ocherki iz istorii otechestvennoi farmatsii XVIII i pervoi poloviny XIX veka* [Essays on the history of domestic pharmacy business in eighteenth and the first half of the nineteenth century]. Moscow: Medgiz, 1956.

[16] Kletter, Christa, "Austrian Pharmacy in the 18th and 19th Century" in *Scientia Pharmaceutica*, no. 78, (2010) P. 397–409; Kulikov, Vasilliy, "Podgotovka farmatsevticheskikh kadrov v Rossii v 16 - 19 vekakh" [Preparation of Pharmaceutical Personnel in Russia in the 16-19 centuries], in *Vestnik farmacii*. 2016. №4. P. 99-104.

Sources

There are important questions that I will discuss in the thesis, for example, how the Russian state regulated activity of free pharmacies, how foreigners could pursue their business in the realm of the Russian imperial context, and how the landscape of imperial city shaped activity of pharmacy owners. Nevertheles, I will try to concentrate primarily on the social dimension of the history of medicine. I want to shift the focus from institutional history and pay attention also to the people who were involved in the pharmaceutical business. However, as I will show in this section, the aspiration to comprehend the social dimension of the history of medicine is a complicated task. The main limitation of the array of sources that I am going to describe is that most of them are official state documents that are in collections of state institutions, while private sources are entirely absent. The vast majority of documents provide only some basic information about the life, education and social status of pharmacists if they provide it at all.

The community of pharmacists is very unexplored one in comparison to, for example, physicians. This is partly can be explained because of the scarcity of the sources. Pharmacists did not have their own institution that could create an organized collection of documents and transfer it to an archive, while physicians had records from universities and many documents can be found in collections of Medical board. Therefore, data about pharmacists are scattered across various archival collections sometimes not really connected to the institution of medical supervision. Another important problem is the organization of Russian archives. First of all, the vast majority of archival documents are structured not very meticulously, titles of some documents are changed and sometimes they do not fully represent its content. The other problem is that there is a small number of documents that could be missing. Some of them are listed in catalogs but you cannot reach them either because they were lost during transportations or because of other reasons. The other case is that you can suddenly find a document which is not mentioned anywhere.

It happened that I discovered one interesting document that I will talk a little more about. This is a grievance that was sent by a pharmacist to the local government. He writes: “There are

some bullies who ring the bell of the pharmacy at night. Some stray boys tugged at the bell so hard that my pharmacist's assistant ordered the student to run down and if it was possible to catch one of them, bring him up, which the student did when he caught one of these boys and brought him up."[17] Then he describes how this boy was spanked by some of his workers. The story did not end there and soon after this event, a father of the boy came to the pharmacy and "dishonored me with abusive words".[18] The father also sent a complaint to the government, and pharmacist's helper (the term was *gesell*, a more important rank than student, but he was subordinate to pharmacist and provisor) and a student were imprisoned. Pharmacist described the situation and asked for help because his workers were prisoned together with criminals and he begged to free them.

What can we learn from this case? First of all, Russian archives are often in bad conditions and a lot of fascinating documents are lost in chaos. The second take is that there could be fascinating stories that are hidden from our eyes. This small extraordinary evidence of the pharmacist's personal life could be extremely useful to a researcher. From this small document, several assumptions can be made. First of all, since it was night when all this happened, it seems reasonable to say that workers, students and pharmacy owner lived together like in guilds where people could work and live. Secondly, there is a piece of information about the inner structure of the pharmacy. The person had to go down to catch the hooligan, so it seems that the pharmacy had at least two floors – one functioned as a shop and another as a living space. These useful remarks are based only on the one document, but this is rather the exception than the rule. Usually, documents that I work with are very similar and contain only a small amount of information about people who were involved in the pharmaceutical industry. Keeping all these limitations and restrictions regarding sources in mind I will introduce the types of documents that I work with.

I use several types of primary sources in this thesis. I explore various record-keeping documents: applications for opening pharmacies, certificates of purchase and sale of pharmacies,

[17] Central State Historical Archive of St. Petersburg (C.s.h.a.) Collection 185, Inventory 1, File 143. Ob ekzamenovanii inostrannogo farmacevta na provizorskoe zvanie. [On the examination of a foreign pharmacist for the title of pharmacist]. 1804.
[18] Ibid.

documents on examination of free pharmacies and information about the establishment of tests for medical officers. The majority of my sources come from the Central State Historical Archive's (CSHIA) collection of Fizikat. Fizikat is an institution that was established in St. Petersburg by decree of July 15, 1786, for the supervision of hospitals, pharmacies, the activities of metropolitan and county doctors and veterinarians, the sanitary condition of St. Petersburg and for the prevention of diseases of people and animals. The Medical Board administered it, and after 1803, the Ministry of Internal Affairs. The Fizikat was abolished in connection with the establishment of the Medical Department of the Petersburg Provincial Government in 1868. In my work, I used various official documents: petitions for opening pharmacies, certificates of purchase and sale of pharmacies, documents on examination of free pharmacies, and data on the establishment of examinations for medical officials. Also, several documents were taken from the collection of the Medical Department of the Ministry of the Interior in the Russian State Historical Archive. In my work, I use data from the above sources in order, firstly, to determine the number of pharmacies operating in St. Petersburg in the first twenty years of the nineteenth century, and secondly, to obtain information about their (pharmacies) geographical location, and thirdly, to establish the names of pharmacists, provisors and gesells, who were participating in pharmaceutical business in the Russian empire.

The second group is published sources. There are various laws from the Complete Collection of Laws of the Russian Empire, regulating the activities of pharmacies and describing the situation of workers in the pharmaceutical industry in the Russian Empire. The legislation is needed to have an idea of how the pharmaceutical industry was regulated at the state level and the working conditions of employees in this industry. I also use the literature of the end of the eighteenth and beginning of the nineteenth centuries that is directly connected with St. Petersburg. Firstly, this is the work of Andrei Parfenovich Zablotsky-Desyatovsky, which collected a variety of statistical data on St. Petersburg and which was published in 1836. Moreover, there is Johann Gottlieb Georgi's book "Description of the Capital City of St. Petersburg", published in 1794. In

these works, the main point of interest is not only statistics but also a description of St. Petersburg, its geographical location and a detailed depiction of city parts, their "status" and functionality. Georgi's work also well-provided with visual sources, such as, for example, plans of St. Petersburg of the nineteenth century that could help in the creation of a map of pharmacy shops.

The last type of source that I use in my research is the online database Erik-Amburger-Datenbank, which contains data on foreigners in pre-revolutionary Russia. This database provides very general information about various foreigners who lived in the Russian Empire, including data on pharmacists working in Satin Petersburg in the nineteenth century. I found this database to be extremely useful in terms of biographies' recreation out the date of birth, religion, sometimes even marital status of pharmacists and workers. This source is the most important for the attempt to the origins and movements of these workers, and this is almost the only source that contains some personal data in comparison to official documents.

Structure of the thesis

My thesis contains three chapters. The first one is devoted to the pharmacy shop themselves, their location within the city limits, and the various laws and regulatory aspects of the pharmaceutical business in the Russian empire. Here I discuss the importance and prestige of various parts of the city, the process of opening a pharmacy, and its structure and role in provision population with medicines and briefly touches upon questions of the consumer of remedies. In general, this part of the thesis concentrates on characteristic features of urban medicine and place that pharmacy shops were occupied in state's attempts to support necessary level of the public health.

The second chapter explores the rise and development of pharmaceutics and chemistry, the history and peculiarity of this process in early modern Muscovy and modern Russian empire. Here I explain why there appeared the idea about the Russina backwardness in terms of medical science development, and how this concept is contested in the contemporary historiography. Therefore,

this chapter focuses on local and foreign markets of medical ingredients, history of medical science, the difference between chemistry and pharmaceutics and features of "Russian science".

The last chapter is the central to the thesis and it touches issues related to workers of the pharmaceutical industry. Here I discuss patterns of education, some life background of pharmacy workers, their hybrid identity and special position inside the Russian community. In addition, I want to rise a discussion about knowledge and structures that pharmacy holders transferred from Western states to the Russian empire, its role in the functioning of the pharmaceutical business in the capital of the empire.

1. Pharmacies in St. Petersburg: legislation and cityscape

In Russia, the first pharmacy was opened in the second half of the sixteenth century. It was opened by the English pharmacist James Frencham during the reign of Ivan the Terrible in 1581. This was a rather late date because in Europe monastic medicine and pharmacy shops were known since late medieval times. Monasteries were centres of dissemination of medical knowledge, monks gathered herbs in gardens and created natural remedies. By the end of the sixteenth century, pharmacies across Europe were not a rare thing. Despite the fact that the first royal pharmacy in Tsardom of Russia was established at the beginning of the early modern period, for a hundred years it remained the only pharmacy in the state. At the end of the seventeenth century, *the Aptekarskii prikaz mainly* supplied a variety of medicines to pharmacies. However, medicines were available only for members of a royal family and military people and only in Moscow. Because remedies were accessible only for a very limited number of people, the majority of the population purchased medicines in a so-called *zelejnaja lavka*.[19] These shops were not regulated by the state and their position was semi-legal. The government started to be concerned by this issue when, in 1699, boyar Saltykov was poisoned by opium tincture that was bought in a *zelejnaja lavka*.[20] This situation drew the state's attention to the question of regulation the medicinal trade. Two years later a statute was issued that can be considered a starting point for the development of the pharmaceutical industry in Russia.

Unfortunately, there is almost no information about theses herbalist shops, what kind of medicines they were producing and who traded them. Therefore, I will not focus on these questions, I will briefly explain what consequences could experience people who consumed these hand-made goods. To understand this we need to move at the end of the nineteenth century. The first woman-pharmacist recalls how in 1889 she was appointed as a student to a pharmacy in one

[19] *Zelejnaja lavka* was a herbal shop where usually self-trained healers traded various herbs and medicines prepared on their basis.
[20] Salo, Victor, opt. cit. P. 36.

unnamed county town.[21] She describes that apart from an official pharmacy there existed some shop that released a variety of substances (it is hard to name them remedies) much cheaper than vol'nyaya pharmacy did. The owner of this shop was incense master who did not have proper education but it did not stop him from selling arsenic, opium and other unidentified mixtures. For instance, he proposed to heal a child's constipation with a mixture of ginger and pepper. Of course, this comparison of the seventeenth-century herbalist shops and the nineteenth-century store is a generalization but I suppose that they were pretty similar. Makers and sellers of goods in this kind of shop usually were not educated people, they most probably were self-trained healers who had little knowledge apart from some folk recipes.

Basically, medicines from the herbalist shop did not match any safety regulations. Of course, the majority of these substances were dangerous for people, and many consumers could be poisoned or die from taking these products. Therefore, the establishment of official pharmacies allowed to increase the level of medical help for the population and to lower the consumption of hazardous hand-made remedies. Pharmacy shops offered quality medicines that were prepared by educated pharmacists in more sterile conditions than it was in the case of herbal shops. Thus, people could be sure that they would receive true medicine that would not harm their health.[22]

This chapter will explore how the pharmaceutical network was developing in the capital of the Russian empire – St. Petersburg at the beginning of the nineteenth century when the network began to develop most actively. I will consider legislation regarding the pharmaceutical industry and how it was changing, how political events affected its development and what spatial location of shops could tell us about pharmacists and consumers of medical goods.

[21] Lesnevskaya, Antonina, Po neprotorennoi doroge: vospominaniia Antoniny Lesnevskoi [On a pathless road: the memories of Antonina Lesnevskaya] St. Petersburg: LiK, 2017, p. 38.
[22] Of course, sometimes some mistakes led to unpleasant consequences but at least a person responsible for this was punished and these situations were tracked by the state.

For the first time, private pharmacies were founded in Moscow in 1701 by decree of Peter the Great[23] whereas state-owned pharmacies existed since the sixteenth century. Together with the establishment of vol'nye pharmacies, this decree eliminated potion shops (illegal zelejnye lavki) and pharmacies became the only place where citizens could buy remedies. Free pharmacies in St. Petersburg appeared later, only in 1721, when Peter I issued another decree in the field of health care: "On the establishment of pharmacies in cities under the supervision of the Medical College…".[24] This law was supposed to increase the number of pharmacies in various cities of the empire, however pharmacists preferred to establish their business in large cities such as Moscow and St. Petersburg. It is not surprising that big, developed cities were the most attractive places for pharmacy owners. Nevertheless, this situation led to disbalance in the distribution of shops in the Russian empire, and pharmaceutical business was poorly developed in regions of the empire except for the aforementioned cities.

For example, Victor Salo writes that in the first half of the eighteenth century the pharmacy network in the provinces was in a "rudimentary state."[25] The author explains the shortage of shops by saying that "the absence of qualified workers throughout almost the entire first half of the eighteenth century did not allow to create a cost-effective pharmacy that would provide owners and personnel with the appropriate income".[26] However, not only vol'nye pharmacies were in a rudimentary state. The number of state-owned pharmacies was also quite low despite their ultimate importance. The main function of these shops was to provide remedies for the army and navy military and naval personnel, and occasionally for citizens. Even though the situation began to change in the second half of the eighteenth century, the number of shops was insignificant. Victor

[23] Full Collection of Laws of the Russian Empire (F.C.L.R.E..), 1st collection, Vol. 4, Paragraph. 1879 "About the establishment in Moscow of eight pharmacies so that no wines are sold in them, about the introduction of these to the Ambassadors order and about the destruction of *zelejnaja lavka*"
[24] F.c.l.r.e. 1st collection, Vol. 4, Par. 3811. "On the establishment of pharmacies in cities under the supervision of the Medical College, on assistance in seeking out medicines in the provinces, and on the existence of state hospitals under the supervision of the aforementioned College."
[25] Victor Salo, Opt. cit. P. 40.
[26] Ibid. P. 41.

Salo mentions that by 1811 there were 21 state-owned pharmacy shops[27] across the entire empire and two or three of them were located in St. Petersburg. The number of private pharmacies in the capital in the same year was a dozen times more. Therefore, private pharmacies were the most important centre of the trade in medicines especially for city dwellers. Nevertheless, in some cases, vol'nye pharmacies could provide navy and army with medicines, as it was it the time of Napoleonic invasion.

Even though private pharmacy shops in Moscow appeared much earlier in comparison to St. Petersburg, at the beginning of the nineteenth century, it did not differ much from the industry of St. Petersburg. So-called Peter's pharmacy monopoly of 1701[28] hindered the expansion of the pharmacy network in Moscow. The pharmacy monopoly stated that the production and sale of medicines should be carried out only through pharmacies, and in each district of the city, only one pharmacy was allowed to be opened. In order to open another shop in the same city district, the permission of the owner of the existing one was required. This circumstance guaranteed pharmacists a high and constant income. Many pharmacists prevented the establishment of new shops because they did not want to lose their medicinal monopoly.

Echoes of this policy could be seen even at the beginning of the nineteenth century. An example can be found in a petition regarding the pharmacy shop establishment written in 1804. Provisor Karl Imzen was asking the administration of St. Petersburg a permission to open a pharmacy in the city. The petition itself was presented in the ordinary fashion, though remarks of officials were not common for this type of document. A worker at Fizikat wrote that the administration allowed Imzen to have a pharmacy but another pharmacist, Gottlieb von Nippa, who opened his own pharmacy in 1800, had objections to the opening of a pharmacy by Karl Imzen. Nevertheless, the protests of Gottlieb were not taken into account by the Ministry of the Interior, although this minor event is reflected in the document. The response of the Ministry says:

[27] Victor Salo, Opt. cit. P. 101.
[28] F.c.l.r.e.. 1st collection, Vol. 4, Par. 1879.

"We do not find obstacles for Imzen to have a pharmacy, although the pharmacist Nippe asked that Imzen would not be allowed to have a shop."[29]

However, in order to cope with the stagnation of the system, Catherine II released a decree in 1784 that cancelled this monopoly. The text of the law clearly shows the empress's desire to develop a pharmacy network throughout the empire. It says: "Her Majesty deigned to make extreme efforts to multiply pharmacies in all Russian cities, and to multiply pharmacies in Moscow as well..."[30] This aspiration to "multiply pharmacies in all Russian cities" had become an impulse for the appearance of further decrees of the empress confirming her intentions regarding the development of pharmaceutical business. Two years later, on December 1786, she issued another law which was dedicated to province of St. Petersburg. This decree stated that "In order to establish pharmacies in all provincial towns of the St. Petersburg Governorate, 500 rubles shall be released for each city from the Cabinet to the local Provincial Board"[31], thus, the state was ready to sponsor the opening of new pharmacies in county towns of the province and by all means support pharmaceutical business in the empire.

The end of the eighteen – turn of the nineteenth centuries was a time when the pharmaceutical business experienced rapid growth and development with the support of the government. Moreover, this attention of authorities towards the development of pharmacy network was justified by the country's ongoing urbanization. Between 1782 and 1856 "the urban population increased by approximately 10 percent due to newly formed cities and by 90 percent due to an increase in the number of residents in old cities. Thus, urbanization in the second half of the nineteenth century was based on the process of intensive development of old cities." [32] Even though vast majority (almost 99 per cent) were cities with a population under sixty thousand people

[29] Russian State Historical Archive (R.s.h.a), Collection 1297, Inventory 55, File 103, About permission to provisor Imzen have a pharmacy.
[30] F.c.l.r.e. 1st collection, Vol. 22, Par. 16043. About permission to Medical College to establish vol'nye pharmacies in Moscow.
[31] F.c.l.r.e. 1st collection, Vol. 22, Par. 16488. About establishment of pharmacy shops in provinces of St. Petersburg.
[32] Mironov, Boris, *Russkii gorod v 1740-1860-e gody: demograficheskoe, sotsialnoe i ekonomicheskoe razvitie* [Russian city in 1740-1860], Leningrad: Nauka, 1990. P. 23.

it was still important to consider the public health concept. Of course, most of the attention went to the two cities which had more than a hundred thousand people living there – Moscow and St. Petersburg. Therefore, the majority of decrees were addressed to these cities. Both St. Petersburg and Moscow were important centers of commerce, trade and science and they had similar population – in 1805 it was 270 thousand people.[33]

Catherine II did not like the former capital of the Russian empire – Moscow – and preferred St. Petersburg. She considered it to be a more enlightened city.[34] When bubonic plague broke out in Moscow in 1771, it only confirmed her low opinion of the city. The disease that stroke the second city of importance in the country illustrated the inability of the government and local authorities to efficiently manage it as well as complete outdated structures and manner of the city's construction. People even "began gathering money for a silver cover that would enhance the icon's sacrality and hence the likelihood of a miracle to end the plague"[35] because authorities could not cope with the plague. It is not surprising that in terms of public health and healthcare institutions Moscow was far behind the capital. For instance, Moscow had only thirty pharmacy shops in 1861[36]. This is an extremely small number of apothecary shops for the second-largest city in the empire. In comparison, St. Petersburg – the capital of the Russian empire – had thirty vol'nye pharmacy shops in 1811, without mentioning the state pharmacies but their number was insignificant about two or three shops within the city limits.

St. Petersburg had become the capital of the Russian Empire at the beginning of the eighteenth century, and like every capital it was the most progressive and fast-developing place in many aspects. That was true also for many medical, sanitation and other innovations. The turn of the eighteenth and nineteenth centuries was a period of acceleration in the development of the

[33] *Sankt-Peterburg 1703-2003: Iubileinyi statisticheskii sbornik* [Statistical compilation of St. Petersburg], editor I.I. Eliseevoi and E.I. Gribovoi. Vol. 2. St. Petersburg: Sudostroenie, 2003.
[34] Martin, Alexander, *Enlightened Metropolis: Constructing Imperial Moscow 1762-1855*, Oxford: Oxford University Press, 2013, P. 14.
[35] Ibid.
[36] Victor Salo, opt.cit. P. 99.

pharmacy network[37] in the Russian Empire and St. Petersburg in particular. At the very beginning of the century in 1804, about fourteen vol'nye pharmacies existed in the city, and throughout the first two decades, their number had risen to thirty. From the beginning of the nineteenth century, Russian authorities and officials were concerned about the shortage of pharmacies in the territories of the empire. The Russian historian of medicine, Victor Salo, notes in his work dedicated to the history of pharmaceutics that "according to the recognition of the Minister of Internal Affairs Victor Kochubey, in 1807 "there are still very few free pharmacies in Russia and, excluding capitals, most of the provinces have no more than one pharmacy".[38]

These claims about the shortage of shops used to appear in pharmacists' petitions when they asked permission to open one. For example, pharmacist Karl Gints motivates his desire to open a pharmacy on the Petrograd side by saying the following: "there is not a single pharmacy on that side,"[39] and adds that "many people who take medicine from me want me to establish the pharmacy on this side." Nevertheless, it is not yet clear how people could get medicines from this man if he had not had a pharmacy shop already. Even though provisors and pharmacists claimed that St. Petersburg did not have enough shops, this was an exaggeration, especially in comparison to the rest of the Russian empire. Kochubey rightly mentioned that other cities of the empire did not have "more than one pharmacy" and often cities did not have pharmacies at all, neither state-owned, nor vol'nye. For instance, until 1804, there was no pharmacy shop in Vyatka, and pharmacist Lille highlighted this issue in a petition to open a pharmacy.[40] Thus, the shortage of pharmacies was indicated not only by government officials but also by the pharmacists themselves. Nevertheless, these claims mostly concerned provincial cities disregarding St. Petersburg and Moscow. As for St. Petersburg, even though people willing to establish a pharmacy shop there

[37] This is not the network in terms of network business in several locations with one owner, label and organization. These pharmacy shops were run by various people and did not really have some interconnections and communication among them. The "network" here is just to generalize and tie several dozens of pharmacies together within the limits of one city.
[38] Victor Salo. Opt. cit. P. 98.
[39] R.s.h.a., C. 1297. I. 55. F. 159. On allowing Pharmacist Gints to open a pharmacy on the Petersburg side.
[40] R.s.h.a., C. 1297. I. 55. F. 145. On allowing Pharmacist Lille to open a pharmacy in Vyatka.

would appeal to the problem of the small number of pharmacy shops, it can be easily trusted. Most probably they pursued their own goals and the benefit by using this rhetorical figure.

As it was already said, the critical shortage of pharmacies did not affect seriously the capital of the empire. It can be seen on an example of a correlation between the number of pharmacy shops and citizens in the city. In St. Petersburg by 1805, there was about sixteen vol'nye pharmacies accounted for 270 thousand people living in the city.[41] The number of pharmacy shops rapidly grew during the first twenty years of the nineteenth century as a reflection of global changes and increase of mobility. I should emphasize here the importance of immigration, because the absolute majority of pharmacists who operated an apothecary shop in St. Petersburg came from territories of Saxony, Hamburg, Prussia, and Luxembourg, cities that were, until 1806, part of the Holy Roman Empire.[42] Already in 1820, there were almost two times more free pharmacies than at the very beginning of the century, that is, there were thirty-one pharmacies in St. Petersburg, not counting shops in smaller cities near the capital like Tsarskoye Selo, Kronstadt and Narva. Therefore, one pharmacy covered approximately eleven thousand inhabitants of St. Petersburg. It is crucial to mention because, in 1864, new regulations for the operation of pharmacies were introduced by the circular of the Medical Department. These new standards postulated that for every twelve thousand inhabitants of the city, at least one pharmacy should be in operation. As mentioned above, in 1820 even fewer people accounted for one free pharmacy in the capital of the Russian Empire, which indicated a rather intensive development of pharmacy business during this period.

However, in extraordinary situations, the underdevelopment of the pharmacy network could be vividly seen. The Patriotic War and foreign campaigns of the Russian army had become this event that demonstrated the gaps and problems in the pharmaceutical business of the empire.

[41] Zablotskii-Desiatovskii, Andrei, *Statisticheskie svedeniia o Sanktpeterburge* [Statistical data about St. Petersburg], St. Petersburg: Guttenbergova Tipografiia, 1836. P. 113.
[42] C.s.h.a. of St. Petersburg, C. 185, I. 1, F. 143. On the need for pharmacy gesells to have a special certificate in order to work in a pharmacy. 1804.

Usually, state-owned pharmacies provided the army with remedies but vol'nye pharmacies significantly outnumbered them and private shops had to share responsibilities with state-ruled shops during the war. Since St. Petersburg had the biggest network of shops, the burden fell on the private pharmacy business sector of the city. Anatoly Budko notes that "throughout 1812, and to a large extent in subsequent campaigns, St. Petersburg was an important centre for supplying the army with medical equipment. A big load fell on the St. Petersburg Tool Plant, pharmacies and drug stores, which sent surgical instruments, medicines, and pharmaceutical supplies to the newly established hospitals."[43]

Vol'nye pharmacies had to reorient for the needs of the army. Pharmacists actively participated in support of the military personell. For example, the service record of Karl Strauch of 1820 indicated that he "made donations from his fortune to the militia. In 1812, he prepared from state supplies a large number of different chemical and pharmaceutical drugs for the troops without any charge."[44] In general, it becomes clear that free pharmacies, along with state-owned pharmacies participated in providing the army with medicines. However, many pharmacists could not cope with the increased workload, and they had to sell their shops. Nevertheless, even during this extremely difficult period for the economy of the empire, the number of pharmacies did not decrease significantly. First of all, this happened because they were not closed. Usually, a bankrupt pharmacist would sell his shop to another person of pharmaceutical rank, therefore pharmacies continued to exist, but under the control of the new owner. Many pharmacists sold their businesses to younger pharmaceutical staff (provisors and even gesells), who sometimes even jointly managed a pharmacy, such as gesell Fedor Rinks who became the pharmacy owner and provisor Friedrich Barth who was managing the shop. Such cooperation was explained primarily by the fact that the owner of the pharmacy had the funds for which he kept the case, and the manager had

[43] Budko, Anatoly, *Istoriia meditsiny Sankt- Peterburga XIX — nachala XX v.* [The history of medicine of St. Petersburg XIX - early XX century]. St. Petersburg: Nestor History, 2010. P. 186.
[44] C.s.h.a. of St. Petersburg, C. 185, I. 1, F. 840. On the issuance of service record to pharmacist Karl Strauch. P.4.

sufficient education to directly manage the pharmacy since the gesells like Fedor Rinks could not do this.

Spatial dimension: pharmacies and the cityscape.

St. Petersburg was the biggest and extremely important city for the Russian empire since the eighteen century. Although it was built from zero at the very beginning of the eighteenth century, Petersburg promptly became an important centre of the economic and cultural life of the empire. In 1712, the title of capital of the empire was transferred from Moscow to the newly acclaimed Northern Venice. It was a city "situated on the delta of this very large river was connected by water to almost all of Russia. The Neva's estuary provided a spacious harbor for seagoing ships, and all sorts of commodities could be easily transported."[45] St. Petersburg was connected to the al parts of the Russian empire as well as to other European countries. This "window to Europe" became an important centre of trade, culture and knowledge circulation. The city represented a peculiar combination of foreign and native Russian knowledge, practices and materials. The process of pharmacy network establishment cannot be considered in isolation from the urban environment. Especially if we concentrate on the very local case of one city that was one of the most modern places in the entire Russian empire. This part of the chapter will explore the urban aspect of pharmaceutical network and more broadly the urban landscape of St. Petersburg. I will show how the city was functioning, what kind of visible and invisible "borders" were there and how the discussion of the cityscape can contribute to the research of consumers and speaking Roy Porter language to the development of the narrative about "patient's view".

It is not surprising that at the time when the pharmaceutical industry started to gradually develop and became available for ordinary people, particularly St. Petersburg was the main centre of various innovations implementation including pharmacy shops. Although Petersburg became one of the main places of pharmacists' attraction, as we will see later, the distribution of

[45] Knoll, Martin, Uwe Lübken, and Dieter Schott, eds. *Rivers Lost, Rivers Regained: Rethinking City-River Relations*. Pittsburgh, Pa.: University of Pittsburgh Press, 2017. P. 235.

pharmacies within the city was uneven. Before I go in the details regarding the number of shops in different city districts, I briefly tell about the city, its features and meaning of every part of the city. Since the timeline of my thesis is limited fo the first two decades of the nineteenth century, I will use a map of 1806 and Gottlieb Georgi's book "Description…Petersburg" published in 1794 and use names of city's districts according to them.

A combination of both visual and textual sources can help researchers to understand the city and to see visible boarders of districts and invisible lines that divided the city according to the wealth of its dwellers. If we take a look at the map of St. Petersburg in 1806[46] (this plan was actually made in 1839, therefore it is questionable whether it is fully accurate or not) there is a two main colours that indicate buildings. Red colour indicates stone buildings and orange one – wooden constructions. It sould be mentioned that St. Petersbutg was built on a marshland and it is even reflected on a map of the city from 1806.[47] This detail is significant because it strongly affected all urban landscape of the city and in general "construction was costly and difficult".[48] For example, it means that houses made of stone were more durable and reliabale whereas "wooden buildings quickly decayed".[49] First of all, this means that such areas of St. Petersburg as Liteyny, Narvskaja, Rozhdestvenskaja, Karetnaja, Vasilyevsky Island, Petersburg and Vyborgskaja district very often were in a run-down state because these city parts predominantly consisted of wooden constructions. As you will see later, these areas of Sain Petersburg were not among the most attractive places to start a pharmaceutical business.

Stone houses were almost exclusively concentrated in four Admiralty districts[50] of the city. These four districts were located in the very central part of the capital near the city's artery – river Neva. As it follows from the archival documents, Admiralty districts (mainly the first, second and

[46] See the map in the 1st attachment.
[47] Ibid. If you look at the map, you will see that almost all places that are not covered with forest or buildings are yellow and blue (especially on the south of the city). Blue colour here illustrate marshland or *bolotistaja mestnost'*.
[48] Knoll, Martin. Opt. cit. P. 235.
[49] Ibid.
[50] See the map in the 2nd attachment.

the third) for at least first twenty years of the nineteenth century were the centre of the pharmacy business. The first, the second and the third Admiralty districts had 6, 5 and 6 pharmacy shops respectively in 1809. Considering that at this time there were only 27 shops in general, almost two-third of all pharmacies were located in three parts of the city. Even by 1820, the situation did not change significantly, leaving the first Admiralty part in a leading position regarding the number of shops.

These districts of the city were popular among pharmacists for several reasons. First of all, they were situated in the very heart of St. Petersburg. Therefore, these parts were the most luxurious one, there was the largest number of stone houses, indicating the prestige of these areas in the city. Even the buildings located in the first and the second Admiralty part can already be judged on its importance in the context of the urban environment. Unsurprisingly, pharmacies tended to thrive in proximity to the Imperial Winter Palace, Palace Square, the Admiralty, St. Isaac's Church, New Holland and many other significant architectural monuments.[51] The information about a pharmacy shop's location within the city can reveal a new social dimension connected with medical practices. It is obvious that mostly people of certain affluence lived in these areas of the city. Pharmacists preferred to open shops in the poshest areas of St. Petersburg to attract the wealthiest citizens. Therefore, even if the number of pharmacies was quite high, it did not mean that all citizens regardless of their origin and financial status would have access towards a benefit of the enlightened metropolis. Thus, space and urban context could help in deciphering information about the social context and human interactions within the city.

The second reason is closely connected to the aforementioned organization of urban space in St. Petersburg. The city was divided by river into several semi-autonomous parts that were connected only by several floating bridges. The first permanent bridge was built rather late "in 1850 between the admiralty side of the city and Vasilyevsky Island remarkably improved city

[51] *Ob"iasnenie k istoricheskim planam stolichnogo goroda Sankt-Peterburga s 1714 po 1839 god* [Historical plans of St. Petersburg], izdannym po Vysochaishemu Gosudaria Imperatora poveleniiu, St. Petersburg, 2007. P. 172.

life."[52] Before the construction of Blagoveshhenskij bridge people had to use floating bridges to cross the river and to get from Vasilyevsky island, Petersburg or Vyborgskaja that were located at the one bank of the river the to the Admiralty, Liteyny, Moscow etc. districts. At winter, people could cross the river on ice but it was really dangerous. However, during summer there was another opportunity to cross Neva – using a boat. Nevertheless, it is hard to estimate whether this type of transportation was common or not because there is not much literature about this apart from information that "instability of the water level, combined with strong winds, impeded the loading and unloading of barges. This also made crossing the Neva in small boats particularly dangerous."[53] It is also unclear if this transport was available for ordinary people. However, from Full Collection of Laws of the Russian empire, it is obvious that the population of St. Petersburg used boats even though it was not legal. The law of 1743[54] forbade rowers to transport people who were not state officials on boats belonging to state institutions of the empire. However, irrespective to the legality of this process, it is important to highlight that people had to pay some sum of money to boatman in order to cross the river. Unfortunately, this plot is poorly explored in academic literature regarding people's lives in the city but the main point here is to understand that sometimes it was not free of charge to get from one district of St. Petersburg to another.

The similar situation can be seen with floating bridges. The law from 1741 is a bright example of how this functioned. People and carriages which crossed the floating bridge had to pay money as it was also in case of boats. This statute was applicable to all estates and ranks of people apart from soldiers and dragoons. The law named "Prescription, who should be let free through bridges established on the Neva River" referred specifically to one case when General-policmejster (general police chief) drove over the bridge in a carriage and did not pay for it because, as he said, he is not ordered to take money from him and henceforth he will not pay. The similar problem appeared with palace footman and page-boys who refused to pay while crossing

[52] Knoll, Martin. Opt. cit. P. 238.
[53] Knoll, Martin. Opt. cit. P. 245.
[54] F.c.l.r.e. 1st collection, Vol. 11, Par. 8758.

the bridge. Therefore, this edict clarified that these people also were obliged to pay an unspecified amount of money that would later probably be used to repair and take care of floating bridges. It is interesting that twelve years later, in 1753, a decree "on the destruction of internal and petty fees"[55] eliminated some fees including bridge fees, however, it was not applicable to the capital of the Russian empire.

Why is all this relevant to the discussion on pharmacy shops' distribution in St. Petersburg? First of all, these two examples of floating bridges and boats illustrate that movements across different districts of the city were not equally accessible for people. Due to the difficulties of moving around the city located on the islands, and the fees for using bridges or boats, residents of the capital tried to settle as close as possible to the place of service or study. Artists, scientists, students lived on Vasilyevsky Island because there were located Imperial Academy of Arts and Russian Academy of Sciences, artisans preferred to settled on Petersburg district while aristocrats, officers, officials inhibited Admiralty. Only from this information, it is obvious why Admiralty held leading positions in the number of shops per district. Not only the majority of the population lived there or nearby (in districts that were not separated by wide river Neva) but these people, for example, state officials could afford themselves to go and buy remedies at some pharmacy. Therefore, it seems reasonable that there were only two or three (it differed throughout 1800-1820) pharmacy shops on Vasilyevsky island that was dwelled mostly by students and scientists who not always had enough money to go to some pharmacy.

If we go back to the discussion about public health and pharmacy shops as guides of this new concept we can assume that there was amusing dynamic. There is a map illustration mortality rate in St. Petersburg by districts at the end of the nineteenth century[56] and if we compare it to the chart illustrating the division of pharmacy shops according to districts of the city we will see some similarities. It should be acknowledged that the map represents the end of the nineteenth century

[55] F.c.l.r.e. 1st collection, Vol. 13, Par. 10164.
[56] See the attachment 4 with the map.

while the chart covers only the first two decades of the same century and it cannot be a precise and accurate interpretation of the map that was released fifty years later. Nevertheless, it is still interesting to make some hypothesis based on the chart. For example, this map demonstrates that the Liteyny, first and the second Admiralty districts that had the highest number of drugstores experienced the lowest mortality rate. Oppositely, the most deprived districts had the highest deaths rate. Generally speaking, it seems that these two pieces of evidence correlate with each other and that pharmacy shops were indeed conductors of public health policy. However, it could be also regulated by reverse logic: apothecaries tried to establish their shops in the best districts of the city and these areas were better provided with some commodities such as plumbing and clean water. It is definitely a more complex process that had its own interconnections, variables and aspects that need to be considered. Nevertheless, I think it is still important to show that research on urban medicine can benefit from using data about cityscape and draw insightful conclusions.

2. Science or craftsmanship? Pharmaceutics at the crossroad.

The last chapter of the thesis will be devoted mostly to the hybrid identity of pharmacists but before we turn out attention to people it is necessary to discuss pharmaceutics itself. As we will later see that professional activity, concepts of subjecthood, foreignness and Russianness were rather fluid and not clearly framed. However, similar mobility and variability were inherited also to pharmaceutical science. Here I understand that the term science appeared later in the nineteenth century and before the appearance of this concept, "science" was rather called a natural philosophy or *Naturwissenschaft*. For example, Denise Phillips in this passage explains what subjects were included in the area of *Naturwissenschaft*:

> ""The three fields Karsten covered—natural history, natural philosophy, and chemistry—were usually treated as separate sciences, each deserving a textbook of its own. These three subjects had generally recognized parameters, which Karsten described briefly in his introduction. Natural history dealt with specific natural bodies, plant, animal, and mineral. Chemistry described the composition of matter and the rules that governed how different fundamental elements combined"[57]

One aspect that should be acknowledged here is that natural philosophy included chemistry but pharmaceutics are not mentioned here, and I will explore the difference between these two subjects and how they functioned in realms of the Russian empire.

Alchemy and its role in the development of medicine and pharmaceutics

In order to understand the specifics of development and difference between the pharmaceutics in the Russian empire and Western countries, it is necessary to turn our gaze to the medieval and early modern times. In Europe, this tradition was older because it had started earlier with the emergence of alchemy. Alchemy laid the foundation for experiments and studies of nature and the world. This protoscience revealed many properties of various groups of elements, and this information would later be used by medical, pharmaceutical and other professionals in their

[57] Phillips, Denise, *Acolytes of Nature: Defining Natural Science in Germany, 1770-1850*, Chicago: The University of Chicago Press, 2012, P. 31.

activities. Even equipment came to chemistry from alchemy, for instance, pharmacists and chemists had distilleries in their laboratories which were initially used for alchemical experiments. It is still hard to draw a clear border between the alchemy, iatrochemistry, and pharmaceutics. Many famous alchemists, simultaneously with their natural-philosophical searches tried to solve some pharmacist tasks of substances purification or drugs' preparation and vice versa. For example, this connection was obvious even for early modern writers. Van Ravesteyn published a book in 1657 under the title "Pharmacia Galenica & Chymica, Dat is: Apotheker en Alchymiste." Already from the name of this book we can say that pharmacy and alchemy considered to be interconnected in the early modern time.

From this, we can see that in the seventeenth century the apothecary business and the alchemy still were closely-knit. Therefore, accumulation of experimental knowledge that was described by alchemists led to an emergence of the new academic field and "chemical revolution."[58] It is hard to establish a year or even a decade where alchemy transformed into a new form of science. However, the influential seventeenth-century chemical "textbooks", composed by the French apothecaries Nicolas Lemery and Etienne Geoffrey, already had been highly critical of alchemy.[59] To sum up, the chemistry and pharmaceutics as new types of sience appeared quite late, apprixomately at the end of the seventeenth century. Chemistry and pharmaceutics borrowed various practices and tools that came from alchemy and iatrochemistry. Fox example, even distillation vessels that were used in the fifeteenth century by alchemists could be found in eighteenth-century apothecary shops and chemists' laboratories. The knowledge of plants species, proportion of ingredients in medicines, and properties of each herb came in pharmacopeias and other apothecary books from recipes of chemical drugs initially introduced by the Dioscorides and Paracelsian medical-chemical movement.[60]

[58] Klein, Ursula, "Not a Pure Science: Chemistry in the 18th and 19th Centuries." In *Science*, Vol. 306, No. 5698 (2004) P. 981.
[59] Marketing Nature: Apothecaries, Medicinal Retailing, and Scientific Culture in Early Modern Venice, 1565-1730: dissertation of Sean David Parrish in Philosophy, Duke University, 2015. P. 196.
[60] Klein Ursula. "Not a Pure Science" P. 982.

It is obvious that alchemy played crucial role in the formation of chemistry and pharmaceutics. However, it is necessary to mention that alchemical experiments and researches mostly were common for Europe whereas in Muscovy there was not such persistent interest in this field. There were very few alchemists who visited or lived in Muscovite Russia, and the absolute majority of them were foreigners by the court of the tsar. For instance, Arthur Dee who travelled to Russia in 1621 and became a royal physician there had a strong interest in alchemy and even wrote "Arcana arcanorum"[61] while living there. However, this was rather an exception, because alchemy in Russia was not as widespread as in Europe and researchers were not obsessed with finding a philosopher's stone. William Ryan writes that "despite the evidence of occasional interest in alchemy, in particular at the level of the court, no further alchemical texts appear in Russia."[62] This information is essential for the understanding of the special dynamic that chemistry and pharmaceutics experienced in the Russian context. The majority of medical personnel came from abroad and they could not practice alchemy in Muscovy. Thus, it is not surprising that further development of new sciences was much slowlier than in Western countries due to the absence of alchemical practices. This extract from the text of Mary Conroy describes very well the state of affair regarding the pharmaceutical industry:

> "Since Russia had no guilds in the medieval period (for pharmacists or other professions or crafts), since she had no medical schools until the early eighteenth century and no university until the mid-eighteenth century; since it was in France and Germany that alkaloids were discovered and the chemical industry soared in the nineteenth century, it might be thought that pharmacy in Russia was on a pitifully low level and that Russians were in tutelage to Western Europe."[63]

The question of the Russian backwardness

[61] Ryan, William, "Alchemy and the Virtues of Stones in Muscovy." In: Rattansi P., Clericuzio A. (eds) Alchemy and Chemistry in the 16th and 17th Centuries. International Archives of the History of Ideas, Vol 140. (1994) P. 155.
[62] Ibid. P. 156.
[63] Conroy, Mary, Pharmacy in Pre-Soviet Russia in Pharmacy in History, Vol. 27, No. 3 (1985), P. 115.

Indeed, the domination of "western" specialists, knowledge and structures was prevalent even in the beginning of the nineteenth century. Although, this question has two layers that should be acknowledged and discussed. One the one hand, the prevalence of foreign specialists in undeniable. Elena Vishlenkova, a prominent contemporary Russian historian of medicine, cites *leib-medik*[64] of the emperor Yakov Vasilievich Willie who stated that

> "With great difficulty - he wrote - it was still possible to find professors for every [medical] science. It was almost impossible to get around a single one when replacing the departments without foreigners; even often it was necessary to entrust the same professor with the teaching of several sciences, use mediocre talents to the post, and finally entrust the other part to such a person who either did not know at all how to directly apply it to other parts of medicine, or who does not have sufficient knowledge of the Russian language"[65]

However, this is only one feature that was common for the development of Russian science. The second point is also important although it is definitely less well-known. Rachel Koroloff gives an interesting point of view on Russian medicine and remedies production. Although her paper focuses on the seventeenth-century Muscovy, this research reveals all complexity of discussion around remedies' manufacturing in early modern Russia, however, this was also a common feature of the Russian empire in the nineteenth century. The author acknowledges that "development of medical practice in Russia, however, has long been viewed as a distinctly foreign import. <…> the historians' focus remains largely on the Western physicians, such as James Frencham, who feature prominently in the narrative of early Muscovite medicine.."[66] This is a common thing for the Russian medicine's historiography that many researchers highlight in their works.

Nevertheless, another important aspect of remedies production usually remains neglected. Rachel Koroloff mentions that the role of local knowledge in growing up, gathering

[64] This is the court rank of the medical kind. *Leib-mediks* were doctors or consultants at some person of the reigning house.
[65] Vishlenkova, Elena, "Scottish origins of the Russian medical elites in the beginning of the 19th century", in *Dialogue with Time*, Vol. 61 (2016) P. 216.
[66] Koroloff, Rachel, "Juniper: From Medicine to Poison and Back Again in 17th-Century Muscovy" in *Kritika: Explorations in Russian and Eurasian History*, Vol. 19, No. 4 (2018) P. 701.

herbs and making medicines was more significant than it is represented in historiography. She explains that not much attention was paid to the fact that "Russian medicinal plants were often created at a local level, how it travelled throughout the empire, and how it came to affect medical practice among elite foreign physicians located in the centre, in Moscow."[67] Thus, it seems that pharmaceutics in the Russian empire was mainly based on local materials. However, the situation regarding raw materials for medicines' production was far more complex and ambivalent.

One the one hand, some articles[68] support the idea that the home market of remedies in the Russian empire was quite strong. For example, onre research[69] claims that until the second half of the nineteenth century were produced in the empire on the local level. Elena Sherstneva writes that before 1850-60es Medical Board reviewed more cases on the manufacture of domestic remedies than on the import of foreign ones, however it is not clear how accurate this data is. There were documents on "reviewing" requests about the import of foreing medicines not "approving" of these requests. Therefore, we do not really know how many of these inquiries were rejected and numbers should be treated very carefully.

Nevertheless, it is undeniable that the government at the beginning of the nineteenth century was trying to impose import substitution on materials and herbs. Many ingredients were purchased abroad, and this situation started to cause certain concerns at the state level. There were at least several precedents when foreign medical materials were restricted or banned from importing as an attempt to pursue a protectionism policy. For example, in 1807, the medical department of the Navy ministry issued an edict that postulated to refuse from Canadian balsam and laurel oil (lavrovoe maslo) because they were found to be unnecessary. The medical department offered to replace these materials with turpentine and "other oils."[70] Another case was

[67] Koroloff, Rachel, Juniper: …. P. 701.
[68]Koroloff, Rachel. Opt. cit.
[69]Sherstneva, Elena, "Zavisimost' farmatsevticheskogo rynka rossiiskoi imperii ot importa lekarstvennykh sredstv v nachale 20 veka "[Dependence of the pharmaceutical market of the Russian Empire on the import of medicines at the beginning of the xx century] in *Remedium*, Vol. 11 (2015) pp. 43-45.
[70] R.s.a.n. (Russian State Archive of the Navy). C. 130. I. 1. F. 157. On the replacement of laurel oil and Canadian balsam with other oils and turpentine.

concerning the import of the *Angostura trifoliata* plant's crust from North America.[71] It was classified as poisonous and banned in the Russian empire. This was even reflected in the Full Collection of Laws of the Russian empire in the edict which prohibited to hospitals and pharmacies to buy this ingredient.[72] Sometimes it is hard to draw a line between inport substitution practice and safety concerns. However, if the case of *Angostura trifoliata* was positioned as care about the population's health, another statute about medican ingredient seems more like an attempt to limit the flow of the foreign goods. *Bobrovaia struia* or Castoreum "known under the name of English is a fake one, and it does not have such an effect as a real Siberian"[73] therefore it was forbidden to sell this castoreum in pharmacies of St. Petersburg. We can not be totally sure whether the Siberian *bobrovaia struia* was more effective and better or it was just a trick to decrease imported materials. Nevertheless, it is obvious that under ont reason or another the state tried to cut the number of foreign materials and to urge medical personnel to use local herbs and other ingredients.

Apart from herbs and remedies, there were foreign pharmacopoeias[74] that were imported in the empire. Despite the fact that in 1778 there were printed "First Russian State Civil Pharmacopoeia" in Latin, pharmacy workers still asked to bring "to the Kronstadt pharmacy in Sweden, London, Württemberg and Edinburgh Pharmacopoeias".[75] In general, despite attempts to restrict the import of goods from abroad, this rarely reached the legislative level. These examples illustrate that although some of the herbs could be cultivated in Russia, as Rachel Koroloff states, still many other goods were imported from abroad. Therefore, the importance of foreign specialists and imported raw materials for Russian pharmaceutics and medicine is hard to overestimate.

[71] R.s.a.n. C. 130. I. 1. F. 156. On the exclusion from the pharmacy catalogs of angustica crust.
[72] F.c.l.r.e. 1st collection, Vol. 29, Par. 22734. "About non-prescription for hospitals and regimental pharmacies, the so-called Angustour crust."
[73] C.s.h.a. of St. Petersburg, C. 185, I. 1, F. 210. Predpisanie o zapreshchenii upotrebliat' po aptekam Amerikanskuiu bobrovuiu struiu [Prohibition of Consuming American Beaver Spray in Pharmacies]
[74] Pharmacopoeia was a collection of standards and regulations establishing quality standards for medicinal raw materials
[75] R.s.h.a, C. 1297. I. 11. F. 145. On the delivery of foreign pharmacopoeias to the Kronstadt pharmacy. P. 132.

However, the Russian empire was not only the recipient of foreign herbs, pharmacopoeias and specialists but the state also actively participate in international drugs' trade. Especially vivid it was on the example of the rhubarb trade because this case reveals the importance of the Russian empire for the Western European countries in medico-economical aspects. The article by Matthew Romaniello[76] illustrates that rhubarb transfer is the perfect example of significance of the raw materials that provided the empire for the Western medical community.

St. Petersburg was the main point of herb transportation to the West. However, the interesting moment in this story is that the Russian empire was rather a mediator between China and Europe. Although it is not yet clear what kind of medicinal plants Russia exported, and was it the herb brought from China through Kyakhta or was it the *cherenkovii* rhubarb that grew at the territory of Siberia. In any case, the role of the Russian empire in this trade illustrates that the flow of goods and materials was not one-sided. The topic of medical herbs and drugs exported from the Russian empire is not well-developed, however, it can be a great example of another side of the view on the backwardness of the Russian empire's medicine and its role in the manufacturing of the Western remedies.

Chemistry and pharmaceutics, academic science and craft: is there a difference?

From all aforementioned information it is clear that Russia skipped an important stage of the science development – alchemical experiments. Therefore, Muscovy and later the Russian empire had to rely on knowledge that came to the state with foreign specislists. Nevertheless, "science, as everyone knows, has been immensely successful in Russia."[77] Although originally researchers were not native Russians, they worked very productively and contributed to many areas of sciences. Thus, it is obvious that the structure and hierarchy of sciences in the empire

[76] Romaniello, Matthew, "True rhubarb? Trading Eurasian botanical and medical knowledge in the eighteenth century" in *Journal of Global History*, Vol. 11, 2016, P. 3–23.
[77] Gordin, Michael D. "The Heidelberg Circle: German Inflections on the Professionalization of Russian Chemistry in the 1860s." Osiris, Second Series, Vol. 23 (2008) P. 24.

resembled similar patterns that were in the Westerns states, for instance, in Germany. Here I explore relation of chemistry and pharmaceutics to each other and if there was any significant difference between scientists and pharmacists in West and in Russia.

In general, there is not so much distinction between chemistry and pharmaceutics. Ursula Klein describes how the working process was going on in an apothecary's laboratory. She highlights that "hundreds of remedies manufactured by means of chemical techniques such as distillation, dissolution, and extraction with solvents."[78] Already from this passage it is clearly seen that chemistry and pharmaceutics used the same methods, equipment and knowledge to produce "distilled acids, sublimated essences, precipitated salts, extracted vegetable and animal oils, composite elixirs, ardent spirits, volatile ethers, and so on were substances produced in the apothecary's laboratory to be subsequently sold as chemical remedies."[79] Ursula Klein in her short paper highlights that it was common for pharmacists to practice chemistry alongside with their business, and mentions that "pharmaceutical art and academic chemistry overlapped in the eighteenth and early nineteenth centuries, in Germany and elsewhere in Europe." [80]

However, it is not clear if this example could be extrapolated in the case of the Russian empire. Of course, there was an example of Johann Tobias Lowitz who had been working in the state's Main pharmacy and later became professor of chemistry in the Russian Academy of Sciences. Lowitz had education at the University of Göttingen even though he was not able to finish his studies. Nevertheless, when he started to work at the pharmacy in St. Petersburg, he was able to conduct certain researchers there and in his home laboratory. Therefore, we see that it was possible to combine both academic science and artisan craft. However, he had a higher education (not finished but this is still important) and worked at the biggest state pharmacy in the city. People who were engaged in free pharmacies usually did not acquire higher education and had to enjoy

[78] Klein, Ursula, "Blending Technical Innovation and Learned Natural Knowledge: The Making of Ethers," in *Materials and Expertise in Early Modern Europe*, 2010, P. 125.
[79] Ibid.
[80] Klein, Ursula, "Pharmaceutical and Chemical Laboratories in Eighteenth-Century Germany" In *Neighbours and Territories: The "Evolving Identity of Chemistry" 6th International Conference on the History of Chemistry*, Vol. The "Evolving Identity of Chemistry", 2007. P 343.

training that was held directly in shops, not at universities. Moreover, I doubt that pharmacists who pursued business had home laboratories to make experiments. Thus, it seems that owners and personnel of vol'nye pharmacy shops were mainly working in the field of pharmaceutics and not chemistry. Russian case demonstrates that between chemists and pharmacists was a gap conditioned by education and money to a certain extent. Probably, this situation started to change when pharmaceutical education entered the universities. But the beginning of the nineteenth century set some borders for pharmacists that they could not cross and enter the field of academic science.

Nevertheless, there is an interesting dynamic that was happening in terms of scientific and professional societies in the Russian empire. The first pharmaceutical society in the Russian empire was established in 1818 which is a rather early date, in comparison, the Pharmaceutical Society of Great Britain was organized only twenty years later. What is more intriguing is that the Russian Chemical Society came into existence only in 1868. Surprisingly, the community of powerful academic science was established years later after the formation of the local Pharmaceutical Society. Maybe this was an outcome of the fact that in the capital of the empire pharmaceutical community was represented by the absolute majority of people of "German" origin. It could be that they took the first German "Pharmaceutical society" that appeared in 1796 in Berlin as an example and recreated its structure and functions, although it can not be said surely.

3. Foreign pharmacists in the Russian empire: education, business and life.

Так как в разных краях и язык не один,
А изменчив и разнообразен, -
Он, покинув аптекарский здесь магазин,
Там открыл аптекАрский магАзин.[81]

This citation from the book of Vladimir Jabotinsky[82] describes quite well the whole concept of this chapter. Here I will particularly explore stories of people who left their home country and travelled to the Russian empire in order to start their own business. This chapter is devoted to the exploration of various aspects of life and professional activity of people who owned a pharmacy shop in the Russian empire. In this part of the research, I will illustrate the social background of these people, their education, and examine how this professional community was embedded in Russian society. Pharmacists in St. Petersburg empire did not have some clear and unified identiry. They were caught inbetween label of immigrants, foreigners and Russified people, Russian subjects and non-Russian subjects. They did not really have some specific estate or even place in Table of Ranks as some other medical profesionals. This paper can contribute to a larger discussion about St. Petersburg's foreing population. The main research question in this chapter is how Russian state regulated activity of this people, how foreigners could pursue their business in the realm of the Russian imperial context.

Ranking system: the hierarchy in a pharmacy

There were several ranks in the hierarchy of pharmacies. Unfortunately, there is no comprehensive work or compilation of laws that would explain the duties and responsibilities of pharmacy workers in detail. I will try to create a full picture of the ranking system and distribution

[81] Since the language is different in parts of the world,
Since its really diversified, -
He left the pharmacy shop in hometown,
And opened pharmAcy now.
from Jabotinsky, Vladimir, *The five: a novel of Jewish life in turn-of-the-century Odessa*, Ithaca: Cornell University Press, 2005, pp. 203.

[82] Jabotinsky (1880 – 1940) was a Russian Jewish Revisionist Zionist leader. He also wrote fictional literature in Russian and articles both in Yiddish and Herbew.

of duties among the people who were working in pharmacies. All of the following information and points that I will provide here are taken from archival documents about education and exams for pharmaceutical personnel and from Russian laws regarding regulation of the pharmaceutical business.

The highest rank in this system was the rank of the pharmacist. Only a person who successfully passed an exam and got a diploma could acquire his status. A pharmacist could operate a pharmacy shop and prepare remedies. The second rank was *provisor*. Archival documents testify that people of this rank also could operate a pharmacy and prepare mixtures. *Gesell* – the word originated from German, that means apprentice – was the lowest rank, who could only prepare mixtures. Sometimes *gesell* could also own a pharmacy if he was rich enough to provide it with money, but he would still need a *provisor* or druggist to be the head of the pharmacy.

Gesells also could prepare remedies according to doctors' prescriptions. There are several court cases which indicated that *gesells* were accused of wrong proportion in mixture or even in replacement of ingredients. For instance, *gesell* Linder who worked in Kronstadt pharmacy prepared mixture that poisoned a michman. As the result, the culprit was expelled from his workplace.[83] It seems that for the majority of cases particularly *gesells* were responsible and punished in these situations. The other case happened in the pharmacy of St. Petersburg and again it was a gesell who was accused of selling the wrong drug. However, *gesell* Neumann received a less severe punishment than his colleague from the Kronstadt pharmacy. Neumann "for such indiscretion, was demoted to the student, and do not return to him the title of gesell, otherwise as according to the testimony of the Fizikat and the pharmacist himself".[84] This kind of accidents were monitored by the government, people who were responsible for these mistakes received punishment and even the owner of a shop were either fined or he was reprimanded. Although, it

[83] R.s.h.a. C. 1297. I. 5. F. 11. "About release to michman count Kekutov poisonous remedies in Kronstadt pharmacy, and about expulsion of gesell Linder from the pharmacy".
[84] C.s.h.a. of St. Petersburg. C. 185. I. 1. F. 118 A. "On the violations committed by Gesell Nouman during the dispensing of medicine from the pharmacy".

is possible to reconstruct some of personnel responsibilities and functions in a pharmacy using the information from archival sources, the data is still not very extensive, and the ranking system cannot be presented as a coherent narrative.

Therefore, I will appeal to the German case in this respect. Example of former lands of the Holy Roman empire is relevant for the case of Russian pharmacies for several reasons. Later in this chapter, it will be seen, the vast majority of pharmacy holders were German-speaking people who came from the Western territories, for example, one book on the history of the German pharmacy speaks plainly that apothecary helpers "settled in the foreign lands. The pharmacies in Russia and Hungary, some also in the northern states owe the origin and the development of apothecaries to such German pharmacists." [85] Moreover, there were some common features that the Russian empire and German principalities shared. For instance, "in most eighteenth-century German states, apothecaries were not organized in guilds, as they were in France and Italy" and there were no guilds in Russia as well that makes this comparison even more relevant and obvious.[86] Considering all mentioned, it is useful to see how hierarchies inside the pharmaceutical business were organized in order to understand more about pharmaceutical personnel in the Russian empire.

In the German case the nomenclature was quite similar to what I have described above. Until the end of the nineteenth century in pharmacy worked *Lehrling* (student), *Knecht* and later *Geselle* (Knecht translates as a servant but with time it became Geselle that translates as assistant) and the last one was *Gehilfe* (assistant or helper).[87] There is quite extensive description about the duties of student in pharmacy who should "amid other things collect herbs, to take care of the drying process, to sweep, to wipe the vessels on Saturdays, to remove cobwebs, to close the shops, in winter to grind and compose the gum, to cut the wrapping paper, to fill in the boxes with white

[85] Here I want to express my deepest gratitude to Kateryna Pasichnyk who helped me in finding this book and translated it for me. Adlung, A., Urdang, G., *Grundriß der Geschichte der deutschen Pharmazie*. Berlin: Verlag von Julius Springer, 1935, P. 155..
[86] Klein, Ursula, Blending Technical Innovation…. P. 144.
[87] Ibid. P. 152.

paper, to select the drugs, to be careful with everything, if necessary to replace, and in all other things to follow an example of a good assistant."[88] Unfortunately, there are no such detailed definition of other people obligations, however, it is possible to take some evidence from archival materials and suppose the way other workers were functioning in shops. First of all, it seems that *gesell* was responsible for making remedies since the majority of cases regarding wrong recipes and an improper mixture of ingredients were connected with them. Thus, *provisor* or pharmacist performed mostly a managerial role observing the work of other personnel. Even though there were *gesells* who were convicted and sometimes fired for their mistakes, pharmacists and provisors were ordered to better coordinate and monitor work in their pharmacy. They were also fined as an example and warning for other pharmacy managers.

"Foreign" pharmacists?

The most important document for my research is a file that is called "On the need for pharmacy *gesells* to have a special certificate to work in a pharmacy" which was written in 1804.[89] The document was created in accordance with a decree of administration of St. Petersburg because "in many free pharmacies, pharmacy *gesells* were accepted despite the apothecary statute, they were not examined in their knowledge by Medical board. Fizikat – an institution for the supervision of hospitals, pharmacies, and activities of doctors – prescribed to closely observe that free pharmacies would not accept people who did not take an exam."[90] This document contains information about all workers (from the highest ranks – apothecaries and *provisors* – to the lowest – students) from free pharmacies. It includes a table with questions that pharmacists had to answer and then send answers to Fizikat.

[88] Ibid.
[89] C.s.h.a. of St. Petersburg, C. 185, I. 1, F. 143. On the need for pharmacy *gesells* to have a special certificate in order to work in a pharmacy.
[90] «Vo mnogikh vol'nykh aptekakh priniaty aptekarskie gezeli v protivnost' aptekarskogo ustava predvaritel'no v znanii sim so storony Meditsinskogo Upravleniia ne ispytannye. Predpisat' Fizikatu strozhaishe nabliudat', chtoby soderzhateli vol'nykh aptek vpred' ne prinimali meditsinskikh chinov v znaniiakh ne utverzhdennykh». CSHA of St. Petersburg, C. 185, I. 1, F. 143. P. 1.

Most probably pharmacy owners or at least one of the workers filled the table, because the handwriting differs in each document, therefore, tables were written by different people, not one official. Since the pharmacists themselves or their workers answered the official questionnaire, there is a valuable opportunity to understand what was their primary language for communication in the pharmacies. This document is exemplary in this respect. It illustrates that tables which officials received from free pharmacies were written by personnel in German. This testifies that indeed "German" people prevailed in pharmacies and that is why very few non-"German" specialists were involved in the pharmaceutical business.

The document itself is organized as a table; hence, all pharmacists had to write the same information. The table contains the following questions:

1) Names, age of apothecary, provisor, gesells and students.

2) When were they born? Who were their parents?

3) Where and how long the person had been studying?

4) When, where and through what institution did they get the rank of provisor, apothecary or *gesell*.

5) Attestation in pharmaceutical knowledge and training in chemical and pharmaceutical science.

The document and the information that it provides are important in many respects. First of all, the majority of archival documents are written in Russian and it was difficult to understand the right variant of the foreign name. For most cases the spelling of names and surnames of pharmacy workers, which were written in Russian, varied file to file. For instance, Trinkler in Russian was misspelled as Tinker or Tinkler.[91] However, since the document about pharmacy workers was written in German, all names avoided a fate to be misspelled. Often people in Fizikat sometimes russified names and in the document, Johann could turn into Ivan. There is also an interesting observation connected to names and surnames of pharmacy shop keepers. When they appealed to

[91] C.s.h.a. of St. Petersburg. C. 185, I. 1, F. 143.

the Russian authorities, sometimes they also used russified version of names. (example from sources). However, since the Fizikat's document about pharmacy workers was written in German, all names avoided a fate to be misspelled.

This basic information – names and surnames in their native language – was useful in searching of data about these people. For instance, there was information about many pharmacy workers from St. Petersburg in Erik-Amburger-Datenbank database. This database provides some general data, such as date and place of birth and death, profession (they were stated as "Apotheker"), and it indicates that a person worked in St. Petersburg. This source also includes additional information about the marital status of apothecaries, their children and confession which is extremely valuable. Usually such personal data was not stated in any archival document. The information about confession of pharmacists can clarify their nationality while records about family status may shed light on the question of kinship networks and its role in pharmaceutical business.

Thus, the analysis of these sources allows to make some interesting and significant observations. For instance, since Erik-Amburger-Datenbank database has information about family status of people, it became possible to investigate how sons of pharmacists inherited a fathers' apothecary shop, as it happened in the case of Gottlieb von Nippa[92] and his son Christian Friedrich.[93] Although there is no direct indication that the pharmacy was inherited by Christian, his education as pharmacist and his profession of "Apotheker" that are mentioned in the database allows to conclude that he continued his father's business. The same situation was relevant for Johann Friedrich Fechner whose son Karl Christian became a pharmacist in St. Petersburg. Other people sometimes originated from the families of medical personnel as Philipp Christian Fischer whose father was a surgeon.[94] However, there were families when pharmacist's children could not

[92] Erik-Amburger-Datenbank URL: https://amburger.ios-regensburg.de/index.php?id=64534&mode=1 (Access: 15.04.2019)
[93] Erik-Amburger-Datenbank URL: https://amburger.ios-regensburg.de/index.php?id=64533&mode=1 (Access: 13. 03.2019)
[94] Erik-Amburger-Datenbank URL: https://amburger.ios-regensburg.de/index.php?id=63971&mode=1 (Access: 20. 09.2019)

have the proper education that was needed to manage the pharmacy. For example, one of the sons of the pharmacist Heinrich Ludwig Kloster had become a jeweler[95], thus it is not clear what happened to the shop and whether it was sold to another person. Therefore, there is not much information about the dynasties of pharmacists and their families before the twentieth century.[96] Generally, this period from 1800 to 1820 is simply too short to start a discussion about long and influential dynasties in pharmaceutical business. Nevertheless, these examples illustrate that dynasties were more or less common not only for physicians but also for community of pharmacists.

However, there should be mentioned another interesting even though quite an obvious dynamic in terms of opening of pharmacies in St. Petersburg. While comparing reports of pharmacies about personnel in their shops that were written in various years it can be seen that some new pharmacy shops were established by former students and workers of other pharmacists. There were many pieces of evidence when a person who worked as a gesell or provisor later started his own business in the city. So, for instance, one of the former employees of Neumann's shop, pharmacist Damitz, opens a pharmacy in the third Admiralty part in 1805.[97] A student of Johann Krause, provisor Kemmerer, opens his own pharmacy in the second Admiralty part in 1812[98]. A few more examples can be given with Apothecary Brandenburg and *gesell* Imzen, Moldenhauser and Gorlovil, pharmacist Tiel and his student Otto Stieber. Therefore, epy pharmaceutical community of St. Petersburg was very connected and at a certain extent close, and people transferred some practice and knowledge that they got from the studies to newly established pharmacies.

[95] Erik-Amburger-Datenbank URL: https://dokumente.ios-regensburg.de/amburger/index.php?id=27170&mode=1 (Access: 20. 10. 2019)

[96] There were widely known dynasties of, for instance, Ferreins in Moscow and Derigners in Tsarskoye Selo (near St. Petersburg), but these dynasties appeared only in the second half of the nineteenth century and later.

[97] C.s.h.a. of St. Petersburg. C. 185, I. 1. F. 214. O razreshenii aptekariu Damitsu otkryt' apteku v 3-i Admiralteiskoi chasti, v 1-m kvartale. [On permission to pharmacist Damitz to open a pharmacy in the 3rd Admiralty part, in the 1st quarter]

[98] C.s.h.a. of St. Petersburg. C. 185, I. 1. F. 451. O razreshenii provizoru Kemmereru otkryt' vol'nuiu apteku vo 2-i Admiralteiskoi chasti, v 3-m kvartale, v dome N 159. [About permission to pharmacist Kemmerer to open a free pharmacy in the 2nd Admiralty part, in the 3rd quarter, in the house N 159]

The archival document provides information about the parents of pharmacists. Of course, there is no detailed description with names, birthplaces and age of parents, but workers had to indicate the occupation of their, most likely, fathers. Many pharmacy owners originated from families of "*kaufmann*" (merchants), and not surprisingly they had pharmacy shops in the most luxurious parts of the city. Some of the parents took other less common posts, for example, the father of one of the students was a priest, and another worked as a steward for some noble Russian family. However, there is certain confusion concerning this information, probably because the document was filled by pharmacists themselves. For example, there was a case where father of student in pharmacy was a steward[99] of Count Platon von Musin-Pushkin. This example seems strange, because Platon from this dynasty died in 1743, long before 1804. Thus, the document should be read critically and carefully in order to avoid such kind of mistakes.

Other evidences allow to establish a number of pharmacists who were and who were not subjects of the Russian Empire. The document illustrates, that at the end of the 18th and the beginning of the nineteenth century, pharmacy holders mostly were first-generation German-speaking immigrants, who were born outside the Russian Empire, in cities such as Hamburg, Brandenburg, Wesenberg, and Württemberg. They were trained in the territories of Memel, Berlin, Hamburg, Luxembourg, in the lands of the former Holy Roman Empire.[100] According to a number of archival documents, it follows that the absolute majority of pharmacy holders were foreign nationals or Russian subjects of foreign origin. By 1817, of the twenty-nine pharmacists mentioned in the document, only about ten were Russian subjects.[101] Also, most pharmacists were Prussian and Saxon subjects, nine and six people respectively.

The question about why some people accepted Russian subjecthood and other did not is crucial for understanding of position of pharmaceutical personnel in the ranking system of the Russian empire. One of the reasons for accepting Russian subjecthood was probably economic

[99] *Upravitel'* in Russian.
[100] C.s.h.a. of St. Petersburg, C. 185, I. 1, F. 143.
[101] C.s.h.a. of St. Petersburg, C. 185, I. 1, F. 670. On the notification of the committee for the equation of duties on the property status of citizenship of holders of free pharmacies.

considerations. Russian subjects were released from paying some taxes. For example, in 1818, a thirty-year-old pharmacist Jacob Zander turned to the Fizikat with the question where he was wondering whether he should pay for address card or not. He argues that "this right not to pay this tax was granted to our estate."[102] However, it turns out that all foreigners are among those receiving tickets and, hence, they should pay the fee without respect to estate and its privileges. There were several ranks of foreigners who were released from this burden. Firstly, foreign nobles (*dvoriane*) were withdrawn from taxes; people who had noble ranks (*znatnyi chin*); wives, widows and children thereof (noble ranks); and finally consisting of the directorate by the imperial theatres. This tax was not applied to Russian citizens, but to foreigners. In general, position of pharmacists, provisors and other medical ranks is a complicated one. They did not belong to physicians as such and were not included in Table of Ranks, hence, the question about their position in the professional communities of the Russian empire and society in general remains open.

Another peculiarity can be found if we compare the community of physicians and pharmacists that operated in the Russian empire. The first group was not extremely homogeneous as the second one. For example, Elena Vishlenkova explains that "foreigners, diluted by a handful of Russians with Western degrees, taught students in medical-surgical academies and medical faculties of universities"[103] whereas people who belonged to the pharmaceutical community were exclusively limited to immigrants who got their training in the German principalities. Moreover, physicians tried to adapt to new realities and many of them had become Russified. As for pharmacists, it seems that they remained very close, homogeneous and "German" during the revised period from 1800 to 1820. However, it is difficult to say for sure how these people acted in ordinary life outside of the shop. Some of them took Russian subjecthood and some did not; all pharmacists that I was able to find in the online database (10 people) appeared to be Evangelical Lutheran but there is a chance that other workers converted into Christianity. There is no

[102] C.s.h.a. of St. Petersburg, C. 185, I. 1, F 671, On the procedure for collecting a tax fee from owners of free pharmacies and midwives. P. 13.
[103] Vishlenkova, Elena, Opt. cit. P. 217.

information about the language which they used in everyday life. There is much less certainty in an experience that they had in comparison to physicians, for example. The pharmaceutical community definitely was a homogeneous one while another branch had more diversified personnel but it is hard to establish the cause of this division since there are very few documents that would tell more about it.

Pharmaceutical Education in the Russian empire.

Even though the field of history of medicine and especially pharmaceutical business has become a very promisning and fast-devloping area of researches,[104] the topic of pharmaceutical business and education in the Russian empire is extensive and yet not well studied, although there is a certain body of work on this topic.[105] Pharmaceutical education throughout the seventeenth and partly eighteenth centuries was a rather craft tradition than an institutionalized medical profession as, for example, physicians.[106] Workshop-style teaching was strong, andmany people did not have the opportunity to enter this closed community unless they were relatives and friends of pharmacy shop holders. Vladimir Kulikov argues that until the beginning of the seventeenth century, "pharmacy students received theoretical training and practical skills at pharmacies and pharmacy gardens".[107] Christa Kletter's article also proves that "to become an apothecary the young man first had to do a five-year-long apprenticeship in a pharmacy."[108] Ursula Klein in her article dedicated to pharmaceutical education uses the word "apprenticeship," that refers primarily to the craft.[109] This situation happened in the first place because there was pharmaceutical education in a university in comparison to, for example, the hospital school, that was established

[104] Simon, Jonathan. "Pharmacy and Chemistry in the Eighteenth Century: What Lessons for the History of Science?" In Osiris 29, no. 1 (2014); Kletter, Christa, "Austrian Pharmacy in the 18th and 19th Century", In Scientia Pharmaceutica, no. 78, (2010); Klein, Ursula, "Blending Technical Innovation and Learned Natural Knowledge: The Making of Ethers," in *Materials and Expertise in Early Modern Europe,* ed. Klein U. and Spary E., Chicago: The University of Chicago Press, 2010; Klein, Ursula "Apothecary-Chemists in Eighteenth-Century Germany," in *New Narratives in Eighteenth-Century Chemistry*, ed. Lawrence M. Principe, 2007.
[105] Kulikov, Vasilliy, "Podgotovka farmatsevticheskikh kadrov v Rossii v 16 - 19 vekakh" [Preparation of Pharmaceutical Personnel in Russia in the 16-19 centuries], in Vestnik farmacii. no. 4. (2016). pp. 99-104.
[106] Add info about degrees in medical science and physicians' education.
[107] Kulikov V.A. Opt. cit. P. 99.
[108] Kletter, Christa, Opt. Cit. P. 398.
[109] Klein, Ursula, "Not a Pure Science" P. 981.

in 1707. It was mainly focused on the training of medical personnel not professional pharmacists. Curriculum of the hospital school included anatomy, *materia medica* (pharmacology), surgery, and "internal diseases".[110] Although, this school provides some basics of pharmacology its aim was to train nursing staff. military medicine was subject of special attention from state, since it performed important functions related to the country's defense. Thus, even in the eighteen century, pharmaceutics was considered to be a handicraft tradition. In general, this statement can be applied to the beginning of the nineteenth century in the Russian empire, because institutions of higher education

Training in pharmaceutical science took the following route: a person who wished to study first undertook an apprenticeship at a pharmacy, where he learned for five to seven years, after which, passing an exam and receiving the title of gesell, he was sent for an "internship" to a military field pharmacy for another 2-3 years. The exam itself consisted of two parts: theoretical and practical, during which the examinee had to pass a chemical and pharmaceutical test. After successfully accomplishing both parts of the exam, a person was given a certificate indicating that the requested title had been obtained, and he was also billed[111] for several sheets of stamped paper and charged printing fees.[112] Later, having passed another exam for the title of pharmacist or *provisor*, a person could open his own business and become the owner of a pharmacy.

For example, Christian Fischer who was a *gesell* in 1803 wrote about his education: "I've been studying pharmaceutical science for 5 years, and for 15 years I was *gesell* at various pharmacies."[113] He does not indicate any higher educational institution where he had been studying for 5 years, therefore, we are talking here about the traditional way of teaching at that time through the interaction of an apprentice with a master (pharmacist or provisor). In general, this document

[110] Delvig, Vladimir, "Place and role of the Moscow hospital in the history of the reform of Russian medicine in 1707-1735" in *Society. Wednesday. Development (Terra Humana)*. Vol. 26. (2013)
[111] For three sheets of paper the pharmacist had to pay 90 kopeika. In comparison, one pood (40 pounds) of rye in 1804 costed 67 kopeika, (Mironov, Boris, *Khlebnye tseny v Rossii za dva stoletiia (XVIII—XIX vv.)* [Bread prices in Russia during eighteen and nineteen centuries], St. Petersburg: Nauka, 1985).
[112] C.s.h.a. of St. Petersburg. C. 185, I. 1, F 133. "About examination of *provisor* Imzen to rank of pharmacist."
[113] C.s.h.a. of St. Petersburg. C. 185, I. 1, F 77. "On receiving the title of pharmacist by gesell Fischer."

sustains the idea of his education except that Fischer practiced in pharmacy science for 20 years and that he had a certificate of passing the exam for the *gesell* rank.

First signs of the incorporation of pharmaceutical education in the system of higher educational institutions started to appear at the very beginning of the nineteenth century when "in 1808 the first higher pharmaceutical department was established at the St. Petersburg Medical and Surgical Academy."[114] This department was organized to prepare and educate pharmacy workers on the rank of provisor. However, this project did not succeed and four years later it was shut down. It is interesting to understand why there was a failure of the state's attempt to regulate the education of pharmaceutical industry workers. Moreover, it is surprising why this significant milestone is mainly neglected in the contemporary historiography and this case does not revise thoroughly. I would guess that this was closely connected to the master-apprentice relations and traditional type of education that was happening in the pharmacies itself. At the beginning of the nineteenth century, this pattern was still very strong in the Russian empire and this can be partly explained by the closeness of this community. As will be seen later in the course of the thesis, the majority of pharmacy shop's workers came outside of the Russian empire from German principalities. Therefore, zero interest in official university courses could be explained through the unwillingness of people to lose this connection with their masters and compatriots. Probably, they understood that education in pharmacy would instantly give them a working place, while the pharmaceutical department of the Academy not always could provide them with a job.

The next step of pharmaceutical education's institutionalization was more successful. It happened when Imperial Medical and Surgical Academy was appointed for supervision of exams for pharmaceutical industry workers. Until the establishment of this Academy, all exams were administered, firstly, by the Medical Chancellery, since 1763 by the Medical College, and at the end of the eighteenth century by the third department of the Ministry of the Interior Affairs. Despite the fact that the Academy was founded in 1798, in reality it started to work only a few

[114] Lopatina N., Pashanova O., Krivosheev S., "Evoliutsiia vysshego farmatsevticheskogo obrazovaniia v Rossii" [The evolution of higher pharmaceutical education in Russia] In *Vestnik VGU*, Vol. 1 (2018) P. 81.

years later. Only ten years later, in 1811, a decree was issued that granted the exclusive right to the Academy and other higher educational institutions to examine applicants for various pharmaceutical ranks. However, institutions had to work in a cooperation with local administration. In St. Petersburg, as before, this issue was addressed by Fizikat, but now together with the Medical and Surgical Academy and the University.[115] Summarizing all of the above, we can conclude that the Academy began to work in full only in 1810, when there was a need for certification of students of this institution. In general, this special kind of education led to a situation in which the pharmaceutical industry for a long time remained in the hands of "Germans".[116] This situation did not change dramatically even at the end of the nineteenth century. It was indicated in the later archival document "About free pharmacies," written in 1893[117] where pharmacists identified their nationalities and the vast majority of them were either German or German with prefixes of Livland or Kurland.

This ethnic monopoly was so strong and omnipresent, that it found its reflection in Russian literature. For example, Vladimir Sollogub – the Russian writer – published in 1841 a novel "Aptekarsha".[118] Here the author describes primarily the life of a pharmacist and his wife in some county town. The most important thing in this work is description of the German student and then pharmacist's life Frants Ivanovich. "He thought about the device of material welfare. He had already completed the course, passed the exam for the title of pharmacist, and, after a long pondering, decided to go nach Russland [to Russia (German)] to make money."[119] Author also desrcibes the German origin of the Frants Ivanovich not only describing his education and life and

[115] C.s.h.a. of St. Petersburg, C. 185, I. 1, F 418. "About permission to the Fizikat to examine on pharmaceutical ranks only together with the Medical-Surgical Academy and the University."
[116] Here I use the term "Germans" for people who wrote official documents in German-language and, apparently, spoke in it, people who were Prussian, Saxonian, Hamburg subjects, and, finally, Russian subjects who were born outside the Russian empire on the former territories of the Holy Roman empire.
[117] C.s.h.a. of St. Petersburg, C. 255, I. 1, F. 2231. [About free pharmacies.]
[118] There is no direct translation of the word Aptekarsha from Russian to English. It means pharmacist-woman but not in terms of profession but as a wife of a pharmacist.
[119] "On dumal ob ustroistve veshchestvennogo blagosostoianiia. On uzhe konchil kurs, vyderzhal ekzamen na zvanie farmatsevta i, po dolgom soobrazhenii, reshilsia ekhat' nach Russland [V Rossiiu (nem.)] nazhivat' den'gi." Sollogub, Vladimir "Aptekarsha" // Lib.ru URL: http://az.lib.ru/s/sollogub_w_a/text_0050.shtml (accessed: 04.11.2019).

education by German professor. Every time he mentions the signboard, Sollogub highlights that it was written both in Russian and German "on a dilapidated pediment, was a black board with the inscription nailed: "Pharmacy, Apotheke."[120]

Another composition that makes a pharmacist one of the characters is short novel "In Pharmacy" by famous Russian writer – Chekhov. It was published in 1885, much later than Sollogub's novel. If in Sollogub's work the pharmacist was rather a minor character, in Chekhov's work provisor was a second main character. The author highlights that pharmacy personnel "write in Latin, they speak German."[121] However, the most interesting part is the plot of the novel itself. Chekhov narrates about a teacher who was seriously sick and came to the pharmacy to buy prescribed remedy. Unfortunately, he did not have enough money (6 kopeek) to pay for it. Provisor refused to give remedy to the man, the sick person had gone to home and died there. The significant point in this novel is not only the demonstration of the German pharmacy worker but also the connection of pharmacists towards money and prices in pharmacies.

Probably, Boris Zarkhin was to a certain extent right when he wrote that "private pharmacists cared little about the benefits of the population, but only sought to enrich themselves, deceived and robbed the people."[122] There was an edict issued in 1803 that notified pharmacists about the prohibition of selling remedies above established *taksa* (tariff or price).[123] The document postulated that free pharmacies should be revised monthly for violations and people who were found guilty should be put on a trial. Nevertheless, not everyone followed the rules and some pharmacists got areprimand and fined because they charged people more that it was established by the authorities. The state carefully observed the market of remedies and punished those who sold goods on prices above established ones. There was quite extensive and detailed document

[120] "…na polurazvalivshemsia frontone, pribita chernaia doska s nadpis'iu: «Apteka, Apotheke»".
Ibid.
[121] "Pishut po-latyni, govoriat po-nemetski"
V apteke (Chekhov) // Vikiteka URL:
https://ru.wikisource.org/wiki/%D0%92_%D0%B0%D0%BF%D1%82%D0%B5%D0%BA%D0%B5_(%D0%A7%D0%B5%D1%85%D0%BE%D0%B2) (accessed: 04.11.2019).
[122] Zarkhin, Opt.cit. P. 48.
[123] C.s.h.a. of St. Petersburg, C. 185, I. 1, F. 71 "O zapreshchenii partikuliarnym aptekam prodavat' lekarstva vyshe taksy" [Prohibition of particular pharmacies from selling drugs above tariffs]

where was described this situation when pharmacist Grodnitskii was convicted of overpricing medicines. The file stated that "the substance *Sal Cathartium* according to the *taksa* costs 12 kopeikas and together with bottle and wrapper it costs 34 kop. While the shop of Grodnitskii released it for 45 kop."[124] The owner of the pharmacy and *provisor* were fined 10 rubles and this precedent was circulated among other pharmacists as a warning to everyone who was selling remedies. However, it seems that this problem was rather an exception than a rule because there are very few archival documents concerning this issue.

To conclude, we can say that the situation in the 1800-1820s was unique in its own way. These years can be called a transitional period between the traditional workshop-type of pharmaceutical education, and the new type of education which started to be incorporated in the system of higher educational institutions and which required appropriate accreditation. During this period, there was a shift towards the professionalization of medical knowledge in the Russian Empire, or, to be more precise, in St. Petersburg. For now, it is hard to say how soon this shift became visible in the capital, other cities and rural areas. Since many pharmacy owners in St. Petersburg were middle-aged, their education was a traditional apprentice training - the same as it was in Europe in the eighteenth century. That is why all pharmacists indicated the name of the city and the name of the pharmacist in whose pharmacy they were trained in the documents of the CSHA. For example, pharmacist Ivan Grodnitsky writes that he studied in Smolensk at a free pharmacy for 5 years, [125] Johann Pinnov indicates that he studied «in Memel for 7 years under the supervision of Apotheker Blümel»[126] and many other pharmacists, gesells, students enter the name of the pharmacist and the number of years which they spent studying. The situation developed this way: the owners of all apothecary shops in St. Petersburg at the beginning of the nineteenth century

[124] C.s.h.a. of St. Petersburg. C. 185. I.1. F.562. "Ob otpuske lekarstv po tsene vyshe ustanovlennoi taksy v apteke Grodnitskogo, o nalozhenii shtrafa v 10 rublei na soderzhatelia apteki i provizora Maune za eto narushenie i o soobshchenii o tom vsem soderzhateliam vol'nykh aptek" [On the dispensing of medicines at a price higher than the established rate at the Grodnitsky pharmacy, on the imposition of a fine of 10 rubles on the pharmacy owner and pharmacist Maune for this violation, and on reporting all the owners of free pharmacies]
[125] It was stated in German "in Memel siben Jahr beim Apotheker Blümel." C.s.h.a. of St. Petersburg, C. 185, I. 1, F. 143. P. 6.
[126] Ibid. P. 33.

were trained according to an “old format” education, while the pharmaceutical education was gradually institutionalized in the Russian Empire. This clash and interweaving of different traditions and formats within the pharmaceutical industry is part of a special context of the nineteenth century.

Conclusion

The case of the pharmaceutical community in St. Petersburg is an extremely complicated subject to study. Nevertheless, this topic could be a truly insightful example in many respects for historians of the Russian empire in general and researchers of the history of medicine in particular. This thesis is one of the first attempts to turn to the pharmaceutical community of the empire and to learn how the state interacted with this foreign group, in which way the government facilitated the institutionalization of pharmaceutical education and why the community remained a homogenous one presumably at least until the end of the nineteenth century.

First of all, it should be mentioned that the organization and structure of the pharmaceutical industry were itself foreign to the Muscovy and later to the Russian empire. Nomenclature in the ranking system and patterns of education was carried by immigrants from the Western countries predominantly from German principalities. Therefore, it can be said that the institution of apothecary shops was fully transferred from another state to the Russian realities. That is why communities in the nineteenth century Prussia, Saxony, other German principalities and Russia were quite similar and together distinct from other European states. For example, both of these countries had no pharmaceutical guilds (probably the Hungarian case is also relevant because many of German apothecaries settled there) in comparison to Italy and France. Despite the fact that medical community and the majority of physicians also were not native Russians their education was institutionalized in the Russian empire while attempts to introduce training for the title of a pharmacist, pharmacist or *gesell* at the university at least in the beginnings of the nineteenth century failed.

Moreover, only nomenclature was German but the professionals themselves originated from the German principalities especially people who acquired some rank higher than the title of a student. It also seems interesting that only one-third of all pharmacy holder in 1817 were Russian subjects whereas the rest twenty people hold a foreign subjecthood. This is not yet clear why only ten of them got Russian subjecthood because they were freed from paying certain taxes and fees,

unlike the foreigners. In itself, the community of pharmaceutical professionals was rather closed and not everyone could get into it. First of all, this was because the education of personnel in the eighteenth as well as at the beginning of the nineteenth century was a craft-workshop tradition. Students were trained directly in pharmacies and knowledge was transferred from master to apprentice. In particular, the homogeneity of the community of pharmacy holders in St. Petersburg can be explained precisely by the dominance of craft tradition as the only way of education for pharmacists. Moreover, considering the fact that many students of pharmacy holders started their own business and opened pharmacies in St. Petersburg, it can be assumed that some protection networks existed within the pharmaceutical society and helped representatives of a certain ethnic group to become an owner or employee of pharmacy shop.

The thesis also contributes to the discussion about consumers of remedies and social history of medicine from below. The research of pharmacy shops in the context of urban history and the city's space organization can shed light on people who bought medicines in the capital of the empire. Since there are no documents and other sources that tell about consumers of pharmacy shops apart from files regarding court cases about poisoning, the exploration of cityscape can reveal this aspect of the history of medicine. Probably the active usage of maps and other geographical data can help researchers to create and prove a hypothesis about customers of shops and create new narratives concerning social aspects of the history of medicine in general and pharmacy in particular. As for this thesis, the approach allowed to build a certain hypothesis: it demonstrates that pharmacy shops were concentrated mainly in the central parts of the cities where rather wealthy people and state's officials lived. Thus, it can be said that although the quantity of shops seems to be pretty decent in terms number of people per pharmacy not everyone had access to produced medicines because of its price and geographical locations of shops.

To sum up, there are many more levels of subject that could be explored. For example, the theory about customers of pharmacy shops can be tested, transfer of practices and knowledge from the Western countries and its interaction with the local lore, the emergence of a new

professional “class” in society that did not belong to the old hierarchies and did not fit there. In general, the community of pharmacists seems like an interesting indicator of changes in the society and modernization of professional communities in the Russian empire.

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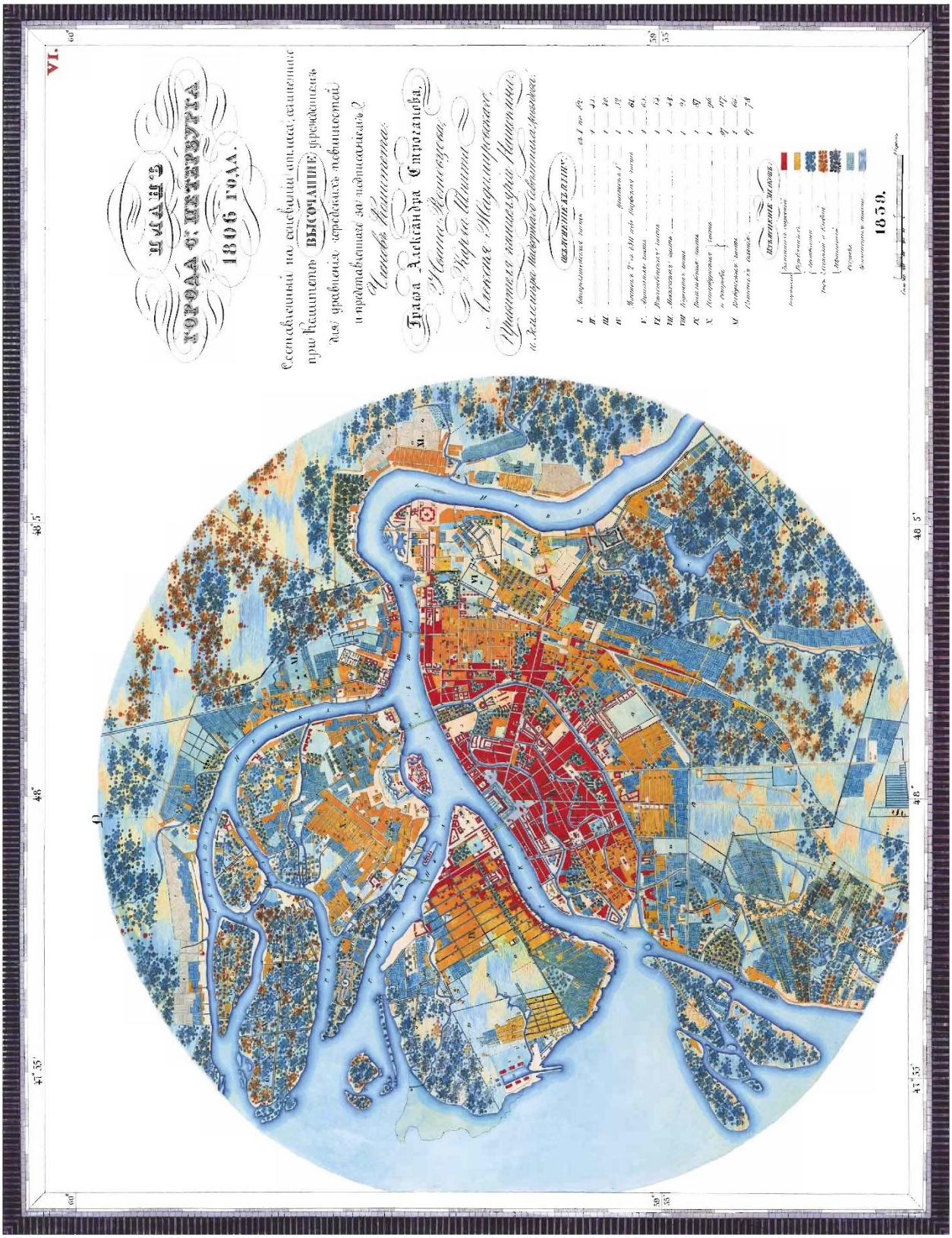
Appendices

1. The map of St. Petersburg in 1806.



2. Plan of St. Petersburg and its division on districts (1821)

I – the first Admiralty district

II – the second Admiralty district

III – the third Admiralty district

IV – the fourth Admiralty district

V – Liteyny district

VI – Moscow district

VII – Narvskaja district

VIII – Rozhdestvenskaja district

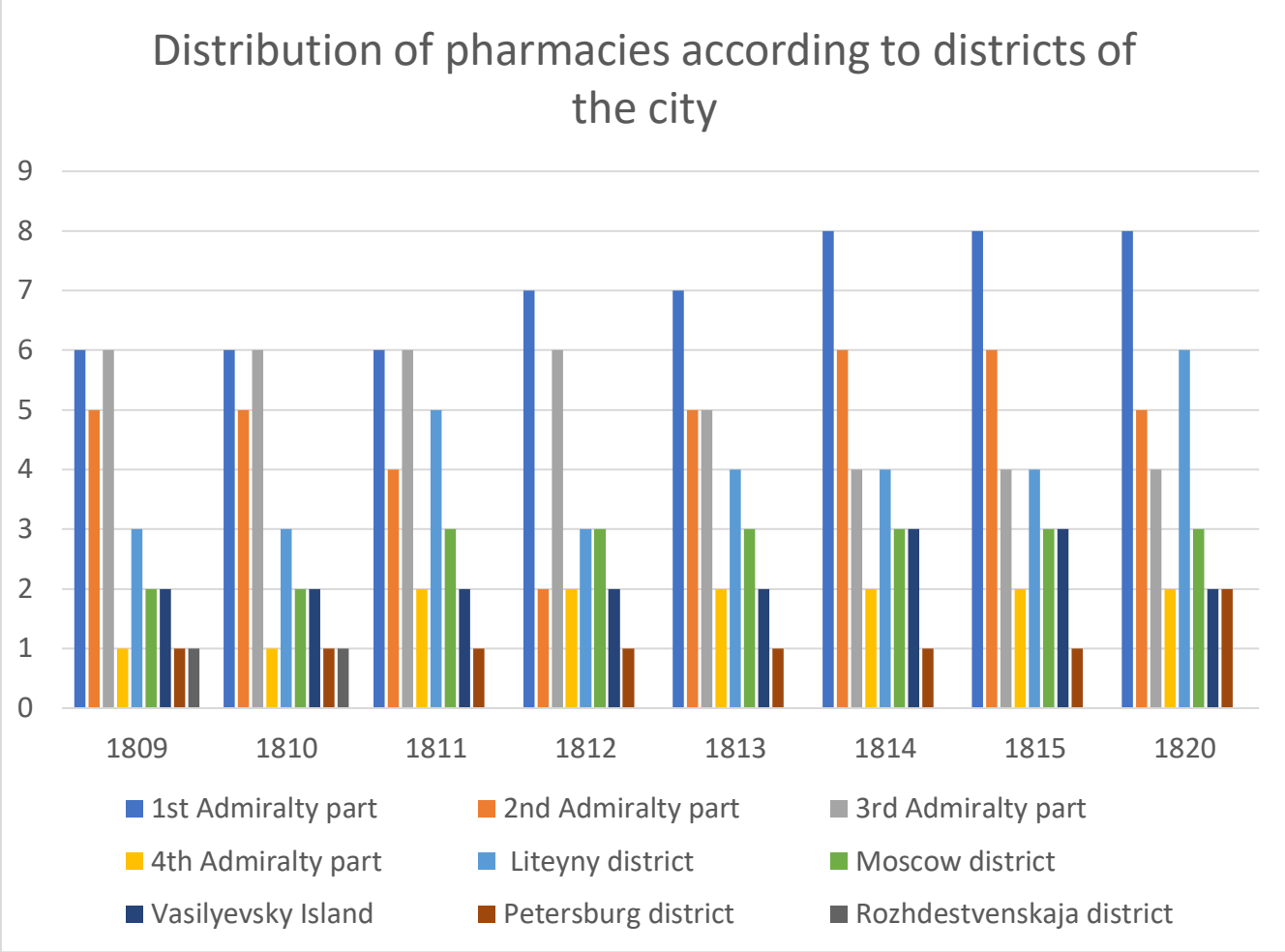
IX – Karetnaja district

X – Vasilyevsky Island

XI – Petersburg district

XII – Vyborgskaja district

3. The dynamic of pharmacy shop number in various districts of St. Petersburg from 1809 to 1820



For the table were used documents from Central State Historical Archive of St. Petersburg: Collection 185, Inventory 1, files 348, 378, 490, 533, 559, 568, 867.

4. Mortality Map in St. Petersburg by District at the End of the 19th Century