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EXPLAINING AND MANAGING EPIDEMICS IN IMPERIAL CONTEXTS: RUSSIAN RESPONSES TO PLAGUE IN THE KAZAKH STEPPE IN THE LATE 19TH AND EARLY 20TH CENTURIES[2]

A series of plague outbreaks that occurred in the Kazakh steppe between 1899 and 1910s, with several thousand people dead, made the region a focus of medical, state and public attention of the period. The epidemics initiated a wide-scale research on the ways of life and conditions of living of the local population, resulting in the largest amount of texts ever written on the Kazakh steppe. The region turned into an arena of cutting-edge medical research performed by the leading bacteriologists of Russia, whose findings played an important role in the development of plague epidemiology worldwide.

This paper concentrates on both the scope of the measures undertaken by Russian medical administration to control the disease, and the range of explanatory theories produced by the doctors in their attempts to identify the cause of the recurrent epidemic and provide the means of its eradication.

JEL Classification: Z

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Introduction

Since 1961, when Asa Briggs famously called for further research into the history of epidemics, that in his view was not a mere "exercise in medical epidemiology" but "an important ... chapter in social history",[4] the history of epidemic diseases has received a considerable amount of attention. Scholars employed epidemics to analyse the functioning of societies in the times of social crises that epidemics presented. As studies in their history have shown, epidemics reveal points of tension between different groups in the afflicted community, uncovering and intensifying social problems; they test the efficiency of statecraft in handling the catastrophe and expose various modes of cultural othering, designed to explain the causes of disaster.[5]

In imperial contexts the social tensions were intensified by unequal relations of power and profound cultural differences between the European administration and indigenous people. The population of imperial territories reacted not only against the epidemics but also against the accompanying sanitary policies of culturally alien European authorities. The history of epidemics in these regions illuminates the workings of the imperial state by demonstrating the extent and limits of its power, uncovering the role of the indigenous agency and indicating the degree to which imperial policies could be modified at the local level.[6]

In regard to the history of the Russian empire this rich and important subject for historical analysis is still largely neglected. While the history of the epidemics in core Russia has been explored in a number of works,[7] the epidemics at the borders of the empire have not yet proved to be as attractive to historians of Russia.[8] On the other hand, historians of medicine, writing on epidemics, often ignore the Russian empire and the Kazakh steppe in particular. The impact of the Third plague pandemic, which forms the context of this paper, on social life and thought has been discussed in many works, covering different regions of the world, from Hong Kong and Bombay to San Francisco and Honolulu, but not the Russian empire, as if plague was never an issue in the

[4] Asa Briggs, "Cholera and Society in the Nineteenth Century", *Past and Present* 19 (1961): 76.

[5] Terence Ranger and Paul Slack, *Epidemics and Ideas: Essays on the Historical Perception of Pestilence* (Cambridge: Cambridge University Press, 1992); Briggs, "Cholera and Society"; Charles E. Rosenberg, *Explaining Epidemics and Other Studies in the History of Medicine* (Cambridge: Cambridge University Press, 1992).

[6] Biswamoy Pati and Mark Harrison, *The Social History of Health and Medicine in Colonial India*, (London: Routledge, 2008), 3-4.

[7] Roderick McGrew, *Russia and the Cholera, 1823-1832*, (Madison: University of Wisconsin Press, 1965); John T. Alexander, *Bubonic Plague in Early Modern Russia: Public Health and Urban Disaster* (Oxford: Oxford University Press, 2003); Nancy Frieden, «The Russian Cholera Epidemic, 1892-93, and Medical Professionalization», *Journal of Social History* 10 (1977), no. 4: 538-559; Andreas Renner, "A Misery Beyond Description? Plague As Metaphor in Moscow, 1770-1772", *Medizin, Gesellschaft, und Geschichte: Jahrbuch des Instituts fuer Geschichte der Medizin der Robert Bosch Stiftung (*2004), no. 23: 43-66; Konstantin Bogdanov, *Vrachi, patsienty, chitateli: patograficheskie teksty russkoi kul'tury XVIII-XIX vekov* (Moskva: OGI, 2005); Charlotte E. Henze, *Disease, health care and government in late Imperial Russia: life and death on the Volga; 1823 – 1914* (London: Routledge, 2011).

[8] Few major exceptions treating epidemics on the borders of the empire include the studies by Jeff Sahadeo (Jeff Sahadeo, "Epidemic and Empire: Ethnicity, Class, and "Civilization" in the 1892 Tashkent Cholera Riot". *Slavic Review* 64 (2005), no. 1: 117-139), Victor Taki (Victor Taki, "Between Politzeistaat and Cordon Sanitaire: Epidemics and Police Reform During the Russian Occupation of Moldavia and Wallachia, 1828–1834". *Ab Imperio* (2008), no. 4: 75-112) and Dmitry Mikhel (Dmitry Mikhel, «Fighting plague in southeast European Russia, 1917-25: a case study in early Soviet medicine», in *Soviet Medicine: Culture, Practice, and Science,* ed. Frances Lee Bernstein et al. (DeKalb: Northern Illinois University Press, 2010), 49-70.

country at that time.[9] In fact, in the years between 1899 and 1910 there were more than 130 outbreaks of plague in the Kazakh steppe, with several thousand people dead, which made the region the focus of medical, state and public attention. The epidemics initiated a wide-scale research on the ways of life and conditions of living of the local population, resulting in the largest amount of texts ever written on the Kazakh steppe.

In the late 19th – early 20th century the region turned into an arena of cutting-edge medical research performed by the leading bacteriologists of Russia, whose findings played an important role in the development of plague epidemiology worldwide. Discussion of the causes of the recurrent epidemics in the Kazakh steppe developed within the context of international public and medical debates on plague, following the main epidemiological ideas of the period; these often involved suggestions of connection between plague and the cultural or physical characteristics of local populations. Here in the steppe, however, such connections did not appear as straightforward, and the epidemiological theories, developed by Russian scientists, proved to be quite distinct.

This paper presents preliminary results of the analysis of the ways Russian medical administration dealt with the epidemics of plague in this region. It will focus on both the scope of measures undertaken to control the disease and the range of explanatory theories produced by the doctors in their attempts to identify the causes of plague and provide the means of its eradication.

The practices of anti-plague campaigns in the steppe

Plague ravaging the upper Volga and the western parts of the Kazakh steppe between the 1890s and 1910s was part of the Third plague pandemic that began in south China in 1894. From there the plague pandemic spread into every continent and took at least fifteen million lives before it waned in the 1950s.[10] Bubonic plague is a disease caused by the bacillus *Yersinia pestis*, transmitted to humans and animals by rodent fleas. When the bacteria reach the lymphatic system of a human, lymph nodes swell to form painful "buboes", from which the disease took its name. An infected person develops high fever with severe headache and mental disorientation; in the absence of treatment death ensues within four to six days after onset of symptoms. In the less frequent form of plague, known as septicaemic, the bacteria get directly into the blood stream, causing death of the patient within 24 hours. No less deadly form of plague, pneumonic, develops when the bacilli find a way into the lungs. Pneumonic plague is extremely contagious, being transmitted directly via

[9] See, e.g., Graham Twigg, *Bubonic Plague: A Much Misunderstood Disease* (Ascot: Derwent Press, 2013); Myron J. Echenberg, *Plague Ports: The Global Urban Impact of Bubonic Plague, 1894-1901* (New York: New York University Press, 2010).
[10] Echenberg, Plague Ports, XI.

sputum; it is particularly hard to diagnose as its symptoms, such as pain in the body, headache and fever, are non-specific, and can be easily taken for the manifestation of other diseases. Before the era of antibiotics, the case mortality in bubonic plague ranged from 60 to 90%; death from septicaemic and pneumonic forms occurred in 100% of cases.[11]

Bubonic plague was not infrequent in Russia before the Third pandemic; however, its visitations seemed to have ceased after the outbreaks of the 1830s and 1840s. A violent outbreak of plague, that occurred at a settlement of Vetlianka on the Volga river in 1878, took the local administration by surprise. Unprepared to recognise plague after a long period of its absence in Russia, doctors misdiagnosed it as typhus, pneumonia, or the mixture of both, as these diseases had similar clinical symptoms and were common during winter months. By the time the epidemic was officially acknowledged to be plague, most of Vetlianka's population had been already dead.[12]

This long delay in the official recognition of the epidemic as plague was not solely a result of doctors' failed attempts in its diagnosis. As no European country suffered from plague in the 1870s, the epidemic immediately placed the Russian empire into a category of backward and definitely "Asian" states with presumably low hygienic and living standards, such as Persia or the Ottoman empire, that were never entirely free from plague. The international inspections of the site of the outbreak, that followed, as well as the quarantines imposed on Russian goods by several European countries, signified the extent of Russia's inability to control the disease that had long been absent in the West.[13] This shameful experience, however, stimulated changes in Russian epidemiological thought and practice and facilitated the development of bacteriology in Russia a few years later.

During the 1880s this new science was becoming increasingly popular in Russia. The number of bacteriological stations and laboratories grew exponentially as the need for the development of bacteriology was being recognized by wealthy landowners and agricultural societies (mainly interested in the research on anthrax vaccine), by various public organisations, and eventually, the state.[14] Although the state interest in bacteriology and its rather awkward sponsorship of its progress was one of the reasons bacteriology was viewed with much suspicion within the Russian medical community, the state funding fostered what John Hutchinson called "the bacteriological revolution" in Russia.[15] In 1890 the Imperial Institute of Experimental Medicine was

[11] Twigg, Bubonic Plague, 18-19.
[12] For the most detailed account of the Vetlianka epidemic see: Grigorii N. Minkh, *Chuma v Rossii: Vetlianskaia epidemiia 1878-79 gg*. (Kiev: Tip. P. Barskogo, 1898).
[13] Hans Heilbronner, «The Russian Plague of 1878–79», *Slavic Review* 21 (1962), no. 1: 89–112; Maria Pirogovskaya, «Vetlianskaia chuma 1878-1879 gg.: Sanitarnyi Diskurs, Sanitarnye Praktiki i (Re)formirovanie Chuvstvitel'nosti», *Antropologicheskii Forum* (2012), no.17: 198-229.
[14] E. A. Hachten, "Nauka v Mestnom Kontekste: Interesy, Identichnosti i Znanie v Postroenii Rossiiskoi Bakteriologii", *Voprosy Istorii Estestvoznaniia i Tekhniki* (2001), no. 3: 37-62; John F. Hutchinson, "Tsarist Russia and the Bacteriological Revolution", *Journal of the History of Medicine and Allied Sciences* 40 (1985): 420-439.
[15] Hutchinson, "Tsarist Russia", 420.

founded in Saint-Petersburg, which employed the high-ranking, world-famous bacteriologists and other scientists, such as Sergey Vinogradskii or Ivan Pavlov. In 1899 the bacteriological laboratory of the Institute, the so-called Plague Fort, was opened on an island in Kronstadt, with another prominent bacteriologist, Vasilii Isaev, appointed as its director.

When the Third pandemic reached a busy Chinese port Hong Kong in 1894 and then exploded in Bombay in 1896, the Russian government created the "Special Commission on Measures of Struggle with Plague" to prevent the spread of epidemic in the Russian empire. The Anti-plague commission was given unprecedented powers and significant amount of money; its medical efficiency, however, was largely restricted by its composition of ministers and other bureaucrats, rather than of medical experts. The Commission funded numerous expeditions of Russian bacteriologists to the leading research laboratories of the world, from India to the United States, in which they worked together with the leading experts on plague of the period. Yet soon both scientists and the officials had to turn their attention to the epidemics at home. In 1898, twenty years after Vetlianka, plague had appeared again and remained a recurrent problem in the empire for several decades.

It was the part of Astrakhan province, the former Bukei (or Inner) horde, largely inhabited by the nomadic Kazakhs, and also the neighbouring Kazakh steppe in Ural'sk province, which became the main hotbeds of infection; plague outbreaks occurred here nearly every year. By the time of the epidemic the Inner horde was served by two doctors and several feldshers.[16] In Ural'sk province the situation was slightly better – it was served by twelve doctors and eleven feldshers, and twelve more doctors of the Ural Cossack host could also be called upon when an epidemic broke out.[17] Still, the modest number of doctors and their location - they lived in towns, receiving patients in ambulances - meant that in a situation of emergency, such as a sudden outbreak of a disease, it took a long time for a doctor to arrive at the site of the incident.

The medical response was rather similar in each of these sites: a local doctor would come to a suspect region and make conclusion on the nature of disease, based on clinical observation and interviews with the survivors. Then the local administration would isolate the area, provide the necessary supplies and take the unaffected people into separate houses. A large brigade of bacteriologists, doctors, officials and medical assistants would arrive from the nearest cities and from St Petersburg. Bacteriologists conducted a series of tests on people and performed autopsies to

[16] F.N. Remezov, V.F. Rukavishnikov, V.A. Storozhenko, "Vnutrenniaya (Bukeevskaya) Kirgizskaya Orda i ee Sanitarnoe Sostoyanie" in *Trudy Obshchestva russkikh vrachey v Moskve*. Vypusk 2 (Moskva, 1900): 79. The number of doctors was increased to seven later on, which was still very insufficient. See: Ioakim V. Strakhovich et al., *Sbornik Rabot po Chume. Vypusk 2. Chuma Astrakhanskogo kraia: ee istoriya, epidemiologiya i obzor pravitel'stvennykh meropriyatii. Mediko-sanitarnoe opisanie Kirgizskikh stepei Vnutrennei Bukeevskoi Ordy i pogranichnykh mestnostei. (*St Petersburg: Tipografiya Morskogo Ministerstva, 1907), 11, 169.

[17] *Pamiatnaia knizhka i adres-kalendar' Ural'skoi oblasti na 1900 god* (Ural'sk: Ural'skii oblastnoy statisticheskii komitet, 1900), 127 – 128.

identify the pathogen. All people in an infected area were vaccinated by Haffkine lymph or given anti-plague serum, of which records were kept. People who had been in contact with plague victims, were washed with soap and carbolic solution, then, wrapped in sheets, taken to a clean dwelling, in which they were given new clothes, while their old clothing was burnt. Suspect patients were taken into a separate group of houses, and ill people accommodated in another group of houses with special women quarters. The dead bodies were wrapped in sheets, soaked in a disinfectant, covered with lime and buried in a specially allocated place. Old clothes, possessions and dwellings in which people died of plague were evaluated by a special commission, which in the case of an outbreak among the nomads included their representatives. After that, the property was burnt for disinfection purposes and the compensation was given to the owners from the state funds.[18]

Scholars studying the similar anti-epidemic campaigns of the European medical administration throughout their empires commonly view such practices as house-to house medical checks, subsequent washing and inoculations as "a perfect example of the most repressive and objectifying of colonial medical procedures. Colonial subjects here are being codified and numbered, deprived of their clothing and of any individual choice… they were treated as inanimate objects… their identities, views and feelings were entirely irrelevant".[19] However tempting it might be to apply this kind of reasoning to the anti-plague campaigns in the steppe, in which the same sanitary practices were employed as elsewhere in the world at that time, it is rather hard to see these practices as particularly repressive and colonial. The medical procedures performed on the indigenous population were not different from those used on the local Cossacks, Russian villagers, who lived in the region, and all the medical staff involved. Such direct intervention that can indeed be seen as an "assault on the body", is part and parcel of Western/biomedical practice, which is essentially objectifying and alienating.[20]

In fact, Russian medical administration would often take into account the sensibilities of the nomadic population of the steppe, for whom the strict anti-epidemic measures might have seemed exceedingly harsh. Most of the doctors' and other administrators' reports on anti-plague campaigns show a certain amount of concern over the feelings of Kazakhs. They praise the careful and tactful attitude of their medical colleagues to the patients, to whom every sanitary measure was being explained. Inoculations were not compulsory; wherever possible, women were examined by female medical assistants, and it was decided to wrap the corpses of plague victims in sheets, according to

[18] TsGA RK, f. 25, op. 1, d. 3996, l. 33 – 49; Strakhovich et al., *Sbornik rabot po chume*, 55, 90-91; A.F. Pal'mov, «Moya komandirovka na chumu v Ural'skuyu oblast' v posledniuyu epidemiyu», *Russkii vrach* (1912), no.7: 242.
[19] Megan Vaughan, *Curing Their Ills: Colonial Power and African Illness* (Stanford, California: Stanford University Press, 1991), 52. See also: David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India*. (Berkeley: University of California Press, 2002).
[20] Vaughan, *Curing Their Ills*, 52.

the Muslim burial customs (although the sheets had to be soaked in a disinfectant).[21] In the Inner horde, the administration was also looking to the Muslim clergy for their assistance in the anti-plague struggle. The mullahs were supposed to help in the sanitary education of the nomads: it was suggested that they should spread information about epidemic diseases among the population, emphasizing the symptoms of the deadliest ones.[22]

It is hard to say whether such emphasis on Kazakhs' sensibilities, which is very prominent in the medical texts, fully reflects the actual practice, but it clearly shows both the idealistic medical ethos characteristic of Russian doctors of the period, and the concern of the administration for the prevention of any unrest in the steppe. Such policies of the Russian officials could have been informed by the experience of recent cholera riots in southern Russian gubernias and Tashkent, which demonstrated that bluntly enforced sanitary measures could provoke a violent response of the local population. The doctors' regular references to the feelings of Kazakhs and the expressions of sympathy for them can be interpreted as a manifestation of the wider rhetoric of intelligentsia at the time with the emphasis on their mission to "serve the people", particularly noticeable in the language of the zemstvo doctors. It is rather noteworthy that in the writings of doctors working in the steppe, the Kazakhs were often compared favourably with Russian peasants. Nearly every medical expert sent to the steppe during these anti-plague campaigns praised the Kazakhs' attitude to sanitary measures as much more sensible than that of Russian villagers. There was no active resistance to the anti-plague campaigns, the nomads permitted medical checks and vaccination, although people tried to conceal their property aimed for burning and had to be persuaded to allow it. Doctors often described Kazakhs as extremely cooperative, very reliable as quarantine guards, trustful, friendly and "good-natured".[23]

Interpreting plague: theories of the origins of the epidemics

Although plague often retreated in the wake of the epidemiological measures taken on the spot, it did not disappear completely. Several outbreaks occurred nearly every year in various localities throughout the Inner horde and the western part of the Kazakh steppe, so the problem remained unresolved.

[21] Strakhovich et al., *Sbornik rabot po chume*, 90; Kravchenko and Vigura. *Vyderzhki iz otchetov voyskovogo vracha Kravchenko i doktora meditsiny Vigura o khode epidemii chumy v poselkakh Yamanlhalinskom, Saraychikovskom i Sarachinskom Ural'skoi oblasti v dekabre 1904 g.* (Ural'sk, b.g.)

[22] *Trudy s'ezda uchastnikov protivochumnykh meropriiatii v Astrakhanskoi gubernii i Ural'skoi oblasti v g. Astrakhani 2 – 8 aprelia 1910 g* (Astrakhan', 1910), 171, 427, 432.

[23] Strakhovich et al., *Sbornik rabot po chume*, 32, 97; Pal'mov, «Moya komandirovka na chumu», 239; S.I. Gol'dberg, *Iz vospominanii o komandirovke v Kirgizskuiu ordu* (St. Petersburg, 1900), 11, 15.

Trying to explain the causes of the outbreaks, Russian scientists initially turned to the two most common hypotheses at the time: the importation of plague via trade routes from Persia and via pilgrims returning home from the holy sites. The latter hypothesis concerned not only Muslim pilgrims to the Arab peninsula but also Buddhist pilgrims to Mongolia as there was some evidence that the Kalmyks from the Astrakhan province were present at the Buddhist holy sites in that region.[24] When in 1898 a famous Russian bacteriologist Daniil Zabolotnyi proved that plague was endemic in Mongolia, this version had been given new grounds.[25]

However, soon it turned out that the largest outbreaks of plague in these imperial borderlands occurred in the most isolated settlements. In 1898 a small village of Anzob in Central Asia became a scene of a violent explosion of pneumonic plague: 234 out of its 387 inhabitants died of the disease. The village, located at 7000 feet above the sea among rugged cliffs, was extremely difficult to reach and remained virtually inaccessible for several months during a year. Several other places, this time in the Inner horde of the Astrakhan' province, equally remote and isolated (one of the villages was located on an island in the Caspian Sea), became the scene of new plague outbreaks in the early 1900s, which presented a further puzzle for the scientists.[26]

To locate the source of the infection and possible ways of its transportation, a large expedition, composed of 32 medical brigades, was sent to the Inner horde in 1901. The expedition was headed by an eminent bacteriologist Vasylii Isaev, who worked with Koch and Pfeiffer during the Hamburg cholera epidemic of 1892 and, together with Pfeiffer, discovered the bacteriological manifestations of the cholera vibrio.[27]

The territory under inspection was divided into 32 sections, each served by a separate sanitary group, who performed house-to-house medical checks and interviewed local people. Records were being made on every person in a household. At the next stage different sanitary groups crossed the area from north to south, west to east and vice versa simultaneously in a comb-like manner to ensure the accuracy of the collected data. Everyday inspections of the new areas of the steppe provided the doctors with rich material for observations not only on medical matters, but also on the Kazakhs themselves, their lifeways, beliefs and perspectives of their integration into the empire.

It is worth noting that doctors' scientific expertise was increasingly being sought by the state in the nineteenth century with the expansion of the empire, whose people and natural resources had to be described and categorised. The need of the state for a systematic and comprehensive body of knowledge about the empire was manifested through the launch of several campaigns of the 1820s

[24] Gol'dberg, *Iz vospominanii o komandirovke v Kirgizskuiu ordu,* 16.
[25] Strakhovich et al., *Sbornik rabot po chume*, Part III, 9.
[26] Strakhovich et al., *Sbornik rabot po chume*, Part III, 6.
[27] Hutchinson, «Tsarist Russia», 427.

and 1850s to produce military-statistical and medico-topographical descriptions of all the parts of European and Asiatic Russia.[28] But the 1901 expedition to the Inner horde was unprecedented in its sheer scale. This enterprise, that lasted five months, resulted in an extensive report on geography, topography, ethnography, economics and public health of the region, that was published in 1907 and presented an attempt to create an exhaustive archive of knowledge of this vast area.

The value of the medical descriptions lay not only in the authority of doctors as the long-time observers of the nomads' life. It was the status of medical knowledge as "objective", strictly scientific, based on meticulous study of empirical facts, that added weight to their testimonies, which were increasingly sought after by the state. Describing the situation in the region, doctors challenged existing opinions and were quite confident to dismiss the information about the local population, provided by earlier scientists and observers as merely speculative. Their attempts to prove the superiority of their own professional methods over those of other scholars and observers show a certain competition for the monopoly on the production of scientific knowledge, which was not limited to medical questions. It demonstrates the growing aspirations of doctors to possess the unique "expert knowledge" not only of diseases and malfunction of the body but, by extension, of a given society.[29]

The principal author of this extensive volume on plague in the Inner horde and neighbouring areas of the Astrakhan' province, Ioakim Strakhovich, together with Isaev, dismissed the common hypotheses of the possible sources of infection (importation via trade routes or pilgrims) as lacking any sufficient evidence. Drawing on the data collected during the expedition, they pointed out that plague was not present neither in the major trade centres, such as Astrakhan or Orenburg, nor in any settlements along the trade routes. No signs of the epidemic existed among Buddhist Kalmyks, who were supposed to be bringing plague from their travels to Mongolia. Finally, plague could not be transmitted by the Muslim pilgrims coming home from the Arab peninsula, as several isolated outbreaks occurred in the Russian population while the Muslim Kazakhs' settlements remained intact.[30]

Isaev concluded that although plague initially must have been brought to the region from without (possibly from Persia) via trade routes and other contacts, after several decades it had become endemic, changing its forms and virulence according to certain biological cycles. Such

[28] RGVIA, f. 879, op. 2, d. 633, d.1012. On medico-topographical descriptions in Russia see: Anna Afanasyeva, "'Osvobodit'... ot Shaitanov i Sharlatanov': Diskursy i Praktiki Rossiiskoi Meditsiny v Kazakhskoi Stepi v XIX veke", *Ab Imperio* 4 (2008), 119-120; Elena Vishlenkova and Zarina Gatina, ««Izlozhit' Predmet Stsientificheski»: Russkie Vrachi i ikh Polevye Issledovaniya (pervaya polovina XIX veka)», *Rossiiskaya Istoriya* (2015), no. 3: 154-169.

[29] On the increasing value of doctors' opinions in Russian society at the turn of the 20th century see, e.g.: Daniel Beer, *Renovating Russia The Human Sciences and the Fate of Liberal Modernity, 1880-1930*. (Ithaca, NY: Cornell University Press, 2008).

[30] Strakhovich et al., *Sbornik rabot po chume*, 31. See also: N. Klodnitskii, *Ob endemicheskom kharaktere astrakhanskoi chumy*. Otdel'nyi ottisk iz zhurnala «Gigiena i sanitariya», no.11. (Sankt-Peterburg, 1910), 9.

conclusions sounded ground-breaking at the time: plague was believed to be endemic in India or China but not in the Astrakhan' province of the Russian empire.

Already during the Vetlianka epidemic of the 1878 – 1879 the British doctors, visiting the site, suggested the possibility of an independent origin of the plague in the region, which at that pre-bacteriological period meant that plague "miasmas" emanated from the unhealthy natural environment. This opinion was dismissed by the main Russian authority on the epidemic, professor Grigorii Minkh, who did not find any environmental or anthropic factors that would have caused the appearance of plague at the place, and argued in the favour of the earlier theories of plague importation from Persia or the Ottoman empire.[31]

It was only the expedition of 1901, led by Isaev, that provided solid grounds for the theory of plague endemicity in European Russia. Although no local sources of the infection had been found yet, the materials collected during the expedition proved that plague could not have been imported from the outside. These conclusions, made by Isaev and Strakhovich, initiated a major shift in the explanation and understanding of plague in European Russia.[32]

In spite of this change in focus from external importation to the local sources of infection, such reasoning did not establish the association of plague with the indigenous population, as it was the case in colonial Bombay or Hong Kong. As many scholars have shown, in various colonial locations the disease was seen as directly linked to the "backward" cultures and "unhygienic" practices of indigenous population, that had to be kept at a distance from the European quarters. The locals were perceived as "dangerous aliens" and "an integral feature of a hazardous environment"[33] even after germ theory had been established.

In the imagination of Russian doctors such connections between the indigenous people and plague were far from straightforward. While lack of hygiene and certain cultural habits were seen as fostering the spread of plague, the people themselves were not perceived as the hosts for pathogens; plague was not racialized. The general view of the nomads as culturally and economically backward, characteristic of the Russian public discourse of the time, was not very different from the assessments of Russian rural population. Already in 1897 doctors claimed that the spread of plague did not depend "on the wind, or change of the weather, or ethnic differences".[34] Later on, with the

[31] Minkh, *Chuma v Rossii*, 234.
[32] The report of the expedition was published in 1907, but the main results of this research became known to Russian medical community soon after the expedition: in their publications doctors mentioned the arguments made by Isaev already in 1902. See, e.g.: S.V. Konstansov, "Chumnaya epidemiya v kirgizskikh stepiakh Astrakhanskoi gubernii v dekabre 1900 i yanvare 1901 g.," *Vestnik obshchestvennoi gigieny, sudebnoi i prakticheskoi meditsiny, izdavaemyi Meditsinskim departamentom* 11 (1902): 1610.
[33] Nayan Shah, *Contagious Divides: Epidemics and Race in San Francisco's Chinatown*. (Berkeley: University of California Press, 2001), 157; Vaughan, *Curing Their Ills*, 52. See also: M. P Sutphen, "Not What, but Where: Bubonic Plague and the Reception of Germ Theories in Hong Kong and Calcutta, 1894-1897", *Journal of the History Medicine and Allied Sciences* 52 (1997), no. 1: 81-113.
[34] N.A. Khrzhonshchevskii, *Narodnoe chtenie o tom, chto takoe chuma i kak predokhraniat'sia ot etoi uzhasnoi bolezni*. (Kiev: Tipografiya P. Barskogo, 1897), 8; see also: TsGA RK, f. 25, op. 1, d. 3916, l. 35.

recognition of the endemic character of plague and the zoonotic mechanism of its transmission, the doctors' attention was directed to the natural environment of the region and to the possible animal hosts of plague. In the texts written in the 1910s plague is shown as beginning outside the human dwellings, far in the steppe, from which it was being brought into villages by already infected travellers, whether Kazakh, Tatar, or Russian.[35]

The exact biological mechanism of plague was yet to be unraveled but certain steps had to be taken to minimise its expansion in the region. These included the advancement of the public health system in the steppe, with the creation of the chain of bacteriological stations to monitor the outbreaks, and a general improvement of the living conditions of the population. In the eyes of the doctors, all these measures were the direct responsibility of the state, who all too often failed to fulfill its obligations.[36] It is rather ironic that even the state-sponsored expedition, led by Isaev in 1901, generated massive critique of the state, and the doctors' harsh comments were printed on the glossy pages of the thick leather-bound gold-edged volume with the two-headed eagle on its cover.

Certain steps in the suggested direction were made in 1906: the number of doctors and feldshers in the Inner horde had been increased, as well as their salaries; a bacteriological station was opened in the main town, and plans were made to connect all medical observation stations by telegraph or even telephone. In the neighbouring Ural'sk province the epidemics also fostered the reformation of the system of medical help, with the rise in the number of medical personnel and their salaries, the establishment of a network of bacteriological stations and hospitals.[37] However incomplete these changes may have been, they laid the foundation for the later regular medical service in the region.

Plague outbreaks in the Kazakh steppe at the turn of the 20th century initiated the anti-epidemic campaigns of an unprecedented scale in the region. The degree of medical presence in the steppe far exceeded any previous record of medical involvement. The sheer scope of sanitary measures taken during the campaigns, as well as their content, reveals not only the state's anxieties over the possible spread of the epidemic, but also the advances in the extent of imperial power, which by the 1900s had succeeded in physically reaching the nomads at their homes.

The epidemics stimulated a wide-scale research on the nature and the origins of plague, which resulted in the emergence of a new paradigm in the understanding of disease. The immediate

[35] Klodnitskii, *Ob endemicheskom kharaktere astrakhanskoi chumy,* 14, 22; I.A. Deminskii, «Endemichna li astrakhanskaya chuma? Iz Astrakhanskoi bakteriologicheskoi laboratorii MVD». *Vestnik obshchestvennoi gigieny, sudebnoi i prakticheskoi meditsiny* (1912), September: 1332-1333.
[36] Strakhovich et al., *Sbornik rabot po chume*, Part I, 168.
[37] RGIA, f. 1288, op. 13, d. 38, l. 23 – 45, 414 - 430.

outcome of this research was the accumulation of the corpus of detailed knowledge about the region and its inhabitants. The focus of medical attention shifted from the borders of the empire, that had to be guarded, to its inner areas and the social problems of its population. The epidemics opened the issues of public health in the imperial borderlands for the discussion, which extended far beyond the circle of medical experts.

Abbreviations:

MVD – Ministerstvo Vnutrennikh Del (Ministry of the Interior)
RGIA – Rossiiskii Gosudarstvennyi Istoricheskii Arkhiv (Russian Historical State Archive)
RGVIA – Rossiiskii Gosudarstvennyi Voenno-Istoricheskii Arkhiv (Russian Military-Historical State Archive)
TsGA RK - Tsentral'nyi Gosudarstvennyi Arkhiv Respubliki Kazakhstan (Central State Archive of the Republic of Kazakhstan).

Archive Material Used:

RGIA: Fond 1288. Glavnoe Upravlenie Mestnogo Khoziaystva MVD. Opis' 13. Delo 38.
RGVIA: Fond 879. Meditsinskii Departament Voennogo Ministerstva. Opis' 2. Delo 633. Delo 1012.
TsGA RK: Fond 25. Turgayskoe Oblastnoe Pravlenie. Opis' 1. Delo 3916. Delo 3996.

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