

The Gulf of Finland as an Unknown Waterscape that Needs to Be Tamed Perceptions, Imaginaries and Knowledge in Imperial St. Petersburg

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Abstract The paper summarizes the study of St. Petersburg as a centre of multifaceted control and management of the adjacent lagoonscape through the perspective of knowledge as a social construct. We argue that the dwellers of the Russian capital knew their surrounding environment in a variety of ways. We can distinguish knowledge based on perception, imagination, and observation, and these three societal mechanisms of dealing with the nature of the Neva inlet, the most eastern part of the Gulf of Finland, shaped the ways of development of St. Petersburg as the centre of complicated network interactions that eventually created the St. Petersburg maritime empire.

Keywords St. Petersburg. The Baltic Sea. Neva Bay. Environmental knowledge. Littoral society.

Summary 1 Introduction. – 2 Perception, Imagination, and Observation: Knowing the Unknown. – 3 Conclusion.



Peer review

Submitted 2023-04-27
Accepted 2023-06-06
Published 2023-06-30

Open access

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Citation Kraikovski, A.; Lajus, J. (2023). "The Gulf of Finland as an Unknown Waterscape that Needs to Be Tamed. Perceptions, Imaginaries and Knowledge in Imperial St. Petersburg". *Lagoonscapes. The Venice Journal of Environmental Humanities*, 3(1), [1-12] 117-128.

DOI 10.30687/LGSP/2785-2709/2023/01/009

1 Introduction

St. Petersburg appeared as a floating or amphibious city to a large extent shaped by water. The short but powerful Neva bringing fresh water from the great Lake Ladoga to the most eastern part of the Baltic Sea, was maybe the most powerful non-human actor in its history. The Gulf of Finland performed an important role, too. Being 420 km long, 70-130 km wide, only 39 m deep on average - up to a maximum of 121 m - and with mostly plain shores, the Gulf of Finland is definitely not the most pleasant marine waterscape in the world. Numerous islands and shoals have always made navigation very dangerous in this long and narrow body of water. However, the control over this water body was crucially important for the development of St. Petersburg as the metropolitan centre of the European power.

Yet, the discourse of a 'maritime empire' as a dynamic zone of network interactions, linked to a certain marine or oceanic area and conducted from the dominating port city, which differs from territorial states and can be overlapped by other empires, opens the way for an active reconsideration of the history of maritime projects undertaken by early modern and modern powers of Central and Eastern Europe, that are not part of global maritime history (Strootman 2019). In addition to 'maritime empires' on a global scale, the notion of maritime regional-scale networked spaces could be productive for historical analysis. We fully solidarised with the statement that water history is always world history (Tvedt, Jakobsson 2006). In the case of St. Petersburg, which was founded as a fortified port in 1703 during the Great Northern War with Sweden, and became a dominant centre of the Eastern Baltic between the eighteenth and the nineteenth century, such an approach might serve as an efficient instrument to introduce the marine environment as a powerful non-human actor, and therefore leaving aside for a while the more traditional political, military and transportation perspectives of Russian maritime history.

Alexander Pushkin, the most known poet of the Imperial period, provided an influential image of the creation of St. Petersburg on the Neva River as a fulfilment of "what Nature did command" (Lednicki 1955, 4). In a previous paper, we argue that nature in this statement meant landscape and geopolitical location, not 'environment' (Kraikovski, Lajus 2010). Therefore, the urban environment is a result of technological transformation of nature in order to create a city of this swampy river banks and adapt it to terrible floods, making eventually socio-economic everyday life safe and comfortable (Kraikovski, Lajus 2017). These numerous links between human and non-human worlds quite predictably involve the natural objects of the sea, which becomes a partner for human society. Some aspects between human and non-human interactions in the history of St. Petersburg are relatively well-studied, this is true predominantly for the infra-

structural and technological control of the Neva River and harvesting of the fish population of the Gulf of Finland (Lajus, Kraikovski, Lajus 2013; Lajus et al. 2015). We base our approach on the understanding of knowledge as an instrument of multifaceted control over certain geographic areas. In our understanding of human-nature relations we are following the strong statement by Sverker Sörlin and Paul Warde who discern between nature and environment, emphasizing that:

Nature needs no human, but there is an environment only where humans live and where humans have entered into a self-conscious relationship with their surroundings. (Sörlin, Warde 2009, 2-3)

The environment is always produced by the combination of economic, technological, and cognitive practices, and this process is defined as “environing” (Wormbs, Sörlin 2018).

We consider the problem of knowledge as a key instrument of envioning of the surrounding waterscapes (Maughan, Kraikovski, Lajus 2018). We understand here knowledge as a social construct, shaped by complicated collective imaginaries and governed by influential groups of actors. From this perspective, it is a result of the interaction of three societal mechanisms. At first, it is what we may label as perception, which is a result of the direct contact with the lagoon-scape of the Neva inlet in everyday life. This aspect of knowledge is defined by how the people of St. Petersburg as well as the visitors of the city and its vicinities saw, heard, and felt the lagoon. The second aspect of knowledge is imagination, based on how people imagined and described the lagoon. Finally, the third one is the observation that with time could get the features of scientific or engineering research.

These three societal mechanisms shaped both tangible and intangible aspects of dealing with Neva Bay throughout the entire history of St. Petersburg. Environing the Gulf started with fortifying the town of Kronstadt, newly built in a highly strategic position on the island of Kotlin, at the exit of the Neva inlet. The authorities took care of the construction of naval forts, placing lighthouses on the highest points of the coast and nearby islands (Kraikovski, Lajus 2019, 5). Kronstadt was the centre of this waterscape, in the second half of the eighteenth century it was even more often named the Gulf of Kronstadt. Construction of fortifications in Neva Bay initiated the bottom surveys which can be considered one of the first marine geotechnical works in Russia (Ryabchuk et al. 2017, 194). By the middle of the nineteenth century, a large amount of geotechnical data concerning the Neva Bay bottom had been compiled. In addition to the construction of forts and the building of St. Petersburg port, the most intensive transformation of the bottom of the bay was related to the excavation of a ship channel. As St. Petersburg harbour is located in the easternmost part of the Bay, which has very shallow wa-

ters, the dredging of ship channels has been crucially important for navigation. The Marine Channel was finally constructed as the main fairway to St. Petersburg in 1885. All these arrangements shaped the societal experience of dealing with the gulf at all levels.

2 Perception, Imagination, and Observation: Knowing the Unknown

The dwellers of St. Petersburg knew and understood the sea in many ways. They interacted with this water area quite actively through all sorts of water mobility, which was central to the transportation connectivity and logistics of the Baltic metropolis in the eighteenth and nineteenth century. Because of the specific waterscape, formed by the large river delta, and the morphology of the city, that from the very beginning, developed on all sides of the river and its tributaries, the dwellers experienced water travellers even if they were not professionally linked to navigation (Kraikovski 2018; 2022a). It is well-known that the dwellers of St. Petersburg perceived the Neva River and the Gulf as the central space of the city, opened for active interaction all year round, and perhaps as ice surface was not less important than as a water stream (Kraikovski 2022b). However, the deep inclusion of Neva Bay into the routine life of the local dwellers made them not very good informers about the specificity of this water area, they probably did not perceive it as a separate part of nature deserving some special consideration. Therefore, we know from the observations of the newcomers how the 'lagoonscape' was perceived from the outside, especially foreigners who visited St. Petersburg and perceived it as an important part of their experience.

The Neva Bay with its absolutely fresh water was often considered as a continuation of the river, not a real sea. For instance, the diary of Elisabeth Justice, an observant English woman, who lived in the Russian capital in the 1730s, provided a detailed account of entrance into the Neva mouth from the sea in the early August of 1734. Being locked in Kronstadt with the strong east wind, she and her travel mates tried to reach St. Petersburg on the roaring boat. Yet, she reported:

Before we got a League, our Sailors all said, it was impossible for them to get her up; and the Captain himself thought the same: So we return'd to the Ship, and took the Lady, who sailed, into the Boat, for she had no Courage enough to attempt going to Petersburg in it: But we were now only to cross the River to a Place called Peterhoff. (Justice 1746, 11-12)

Noticeably, Justice described the area to the East of Kronstadt as a river, apparently excluding this part of the Gulf of Finland from the marine basin. This water area was not a place for the big ship, and the travellers had to use a small vessel with rowers. She highlighted the power of the Neva, which completely dominated the area, and described the experience of dealing with this part of the Gulf from the perspective of the force of the stream. The same perception often had the fishers who used here the same fishing gear as on large rivers and lakes. The most known were seasonal fishers who came from the inner Russian lake area in the upper Volga region with gigantic nets that they stretched across many small tributaries at the mouth of the Neva River taking an enormous amount of migrating fish, including valuable salmon. For instance, in 1889 observers described extremely large nets up to 600-800 m in length that belonged to seasonal fishermen (Zotov 1889).

Popular nineteenth-century French writers Alexandre Dumas père and Théophile Gautier provided more details in their descriptions of St. Petersburg. Both of them have visited the Russian capital in 1858 and published very detailed and informative descriptions of their trips. To a great extent, those books can be considered as a sort of competition, one of the most known in the history of literature related to Russia. These observations are quite untypical for foreign observers, who normally overlook the Gulf in their memoirs about the trips to St. Petersburg. These two travellers, on the opposite, carefully fixed the signs of approaching the city, and therefore, through these texts, we can see the influence of St. Petersburg on the waterscape of the Gulf of Finland.

Both authors came to St. Petersburg from Germany utilizing similar transportation and infrastructure. Alexandre Dumas reported in his book that in late June, i.e. in the season of the white nights on the Baltic Sea, he went on board the steamship *Vladimir*, “the best vessel available on the line between Stettin [nowadays Szczecin in Poland] and St. Petersburg” (Dumas 1993, 147). Théophile Gautier departed in early October from Lübeck onboard the steamship *Neva* that left the pier “precisely on time” (Gautier 1988, 17).

Both writers had some experience in travelling, but this was their first visit to Russia. Therefore, they observed the Baltic Sea eagerly and attentively looking for signs of approaching St. Petersburg. Their observations include the descriptions of heterogeneous elements of infrastructures that were constructed in different historical periods but eventually became basic for the unified vision of the Gulf. Alexandre Dumas provided a relatively detailed description of the entrance into the Gulf of Finland in the evening, about 9 pm, leaving Sweden by the left and passing the island of Ösel (nowadays Saaremaa, Estonia), which he considered to be “already Russia” (Dumas 1993, 162). Later that night he observed Reval (the old name of the city of Tallinn) and

noted that here there was the end of sea as such, and moreover, he argued, the observer could feel the influence of the Neva River throughout the entire Gulf of Finland. Finally very early the next morning, at 5 am, the writer observed the Russian Navy under the command of the Grand Duke Konstantin Nikolaevich (Dumas 1993, 162-8). It is worth noting here, that the name of this member of Romanov dynasty looks quite symbolic in the context of the development of the imperial infrastructure on the banks of the Gulf of Finland. Being the General Admiral of the Russian Navy in the middle of the nineteenth century, the Grand Duke invested a lot of effort into the reconstruction of the existing military premises as well as the construction of the new ones (Kipp 1970). For Théophile Gautier the approach to the Russian capital looked less pleasant. The stormy sea in October was not very friendly, and the writer only could recognize the entrance into the Gulf by the lighthouses he could see in the distance. The coasts and islands seemed to be uninhabited. However, the author was still able to recognize the approach of St. Petersburg by looking the steamship that passed by moving “westwards from Kronstadt” (Gautier 1988, 20-1).

Therefore, both observers, being very different and even antagonistic in their literary styles and worldviews, described the Gulf of Finland as a waterscape shaped by the coastal infrastructure and vessels with the same point of origin, namely St. Petersburg. One could feel the presence of this enormous centre even from afar, more or less immediately after entering the Gulf, if one was thoughtful enough to see the things beyond the water and wind. For both observers, Kronstadt served as the final point of their trip through the Baltic. For them this was actually part of St. Petersburg.

Yet, noticeably, both authors provided almost no details of perception of the further journey from Kronstadt to St. Petersburg, a short but crucially important water route, which shaped the entire life of the St. Petersburg lagoonscape. Instead, they tried to incorporate it into certain images of St. Petersburg as a powerful metropolis, and this observation demonstrates the relevance of imagination as a mechanism of knowledge formation and dissemination. This way of understanding the lagoon was important for Russians. Language came first with the necessity of describing the new environment and human activities related to it. The birth of modern Russian literature, in fact, coincided with the first attempts to describe the maritime experience, and the Neva inlet provided an imaginary seascape for this work. Indeed, Vasilii Trediakovskii wrote the first poetical description of the trip onboard the seagoing vessel probably in 1725 and five years later included this verse in the first novel published in Russian: “A Voyage to the Island of Love”. This ‘song’ contains no direct mention of the Gulf of Finland, but by default relates to the area of Kronstadt as a departure point for the vessel with the Russian traveller directed to Europe onboard (Trediakovskii 1963, 94-5).

Eventually, the Neva inlet received clearly a determined place in the local culture. The figure of Peter the Great quite predictably dominated in these imaginaries for both locals and newcomers. Dumas gave a good example of that. He conceptualized the military infrastructure based on Kronstadt through the powerful image of Peter the Great as Adamastor guarding the Neva River delta (Dumas 1993, 169-74). The image is very deep and expressive, connecting the story of St. Petersburg and the Gulf of Finland to the antique mythology and to the history of the Age of Discovery, when this giant, according to the poem by Camoes, prevented the Europeans from invading into the non-European world of Black Africa (Monteiro 2015, 120-31).

Imagination eventually underpinned the first attempts to include St. Petersburg in the more general context of European water metropolises linked to the adjacent lagoonscapes. The case of comparative vision of St. Petersburg and Venice is a perfect model of this kind. In 1728 the St. Petersburg Gazette *Sankt-Peterburgskie Vedomosti* published a report on the traditional Venetian ceremony of the Dodges' betrothal to the Adriatic Sea, with additional explanation of its historical background and symbolic meaning of it (*Sankt-Petersburgskie vedomosti* 1728). Later Mikhail Lomonosov used this image in his conceptualisation of an intimate connection between the Russian Empress Elisabeth and the Gulf of Finland, which was portrayed as "happy like a Groom on his wedding day" (Kraikovski, Lajus 2019). Therefore, imagination worked to draw parallels between the two lagoonscapes rather early.

Venice, however, was not the only possible parallel offered by the cultural imagination. Due to the hardship to go through all the artificial constructions, the strait near Kronstadt even got an unofficial name of the 'Russian Dardanelles'. Also, in the first quarter of the nineteenth century, the locals often used to ironically and disparagingly call the part of the bay east of Kotlin island the 'Marquis Puddle' (*Markizova luzha*), because the sailors of the Baltic fleet were unsatisfied with the policy of the Naval Minister Jean Baptiste marquis de Traversay, who limited the navigational training of the Russian Baltic fleet to this area between 1811-28. In a word, the dynamic cultural life of the dynamic cultural city life offered many ways to conceptualize and describe the adjacent lagooncape.

Eventually, the educated community of St. Petersburg worked to create a picture of the Neva inlet as a natural object using the available instruments of observation and research. Like other experiences of 'knowing' the water area, this part of 'environing' was based on the accumulation of knowledge about the bay, related to water mobility - depth measurement, mapping, and studies of geology and sediments of the bay. Fedor Soymonov included some data on the eastern part of the Gulf of Finland in his well-known pilot instructions of the 1730s (Kraikovski 2022a). The geographic department of the newly

established St. Petersburg Academy of Sciences began its work with the exploration of the water surface of the space around Kronstadt (Kopelevich 1977, 155-6). The first charts of Neva Bay were printed in 1742. The most complete was a hydrographical survey, finished by 1859; its result was the basis for the majority of the maps and bathymetric charts issued between 1860 and 1911 (Ryabchuk et al. 2017, 194). Sea depth measurements from the Neva mouth to Kronshtadt were organized on almost a yearly basis.

The threat of floods became quite early a trigger for the Neva inlet research, as well. As early as the 1730s the St. Petersburg Academy of Sciences considered the problem of sea floods as one of the most important for the general development of natural knowledge (Kopelevich 1977, 176). Yet, for St. Petersburg this knowledge was far from pure theories. However, the first scientific research on the nature and peculiarities of the Neva floods was published by the Academician Kraft only in 1777 in French, and almost 20 years later it was translated and published in Russian (Kraft 1795, 109). The catastrophic flood of 1824 gave a new start to both theoretical consideration on the nature of St. Petersburg' main natural risk, and practical designs to secure the city.. The project of a protection dam across the Gulf of Finland that had to prevent destructive floods seems to be a rather special case. Captain Charles Colville Frankland, an informed British observer in the 1830s described his stay in St. Petersburg in 1830 and 1831, e.g. 6 years after the famous flood of 1824, the highest one in the history of the city. The impression of this enormous tragedy was still strong and the inquisitive Englishman approached General Pierre Dominique Bazaine in order to see his project of the protection dam. In the evening of April 5 (Old Style) 1831 he got this opportunity, and the author provided useful explanations recorded in Frankland's diary. These notes tell a lot on the vision and understanding of the Gulf in that time.

The general began his notes with the statement that the city of St. Petersburg without a dam was "perfectly at the mercy of the Baltic Sea" (Frankland 1832, 109-10). However, he argued that the dam would provide numerous advantages for the maritime, commercial, and everyday life of the city. Indeed, the city would get protection from the marine water invasion causing floods. The Neva and the area inside the dam would become 4 ft. deeper, opening new opportunities for shipping. This would result in the inflow of freshwater into the canals, the development of a shipbuilding area on the western edge of the Vasilievskii Island - the biggest one in the Neva delta -, better conditions for the launching of the Imperial men of war, and better protection from the possible aggressors from the sea. Therefore, 5000 workers for five years could completely transform the Neva delta at an expense of 20 million rubles (Frankland 1832, 109-10). Just to compare - the railroad between Moscow and St. Petersburg in the 1840s required eight and a half years, about

50 to 60 thousand workers and almost 67 million rubles (Kraskovskiy, Uzdin 1994, 58).

This report revealed many important details on the perception of the environment of the Gulf of Finland that existed among the St. Petersburg technological experts at that time. General Bazaine, according to the document, considered the plan he prepared as a purely technical project, and the nature was portrayed as an object of transformation conducted by the well-prepared engineer. He apparently did not take into consideration the inevitable problems that the city and the settlements in the coastal zones would face if the normal level of water would raise to more than a meter. This level of understanding of interconnections between the environment and technology was at that time the thing of the future. We might consider that he had seen the city as an artificial place that could be transformed according to technical needs. The big technological projects that included the completion of artificial fairways for the seagoing ships as well as the construction of the dam in order to protect the city from the destructive floods, were completed in the late nineteenth and twentieth century.

The biota of Neva Bay, especially migratory fish like salmon and smelt, being quite actively involved in the everyday life of the St. Petersburg dwellers through practices of harvesting and consumption (Kraikovski, Lajus 2017), became object of scientific research relatively late. Yet some observations are instrumental in drawing a link between the administrative efforts of the eighteenth century, directed towards the modernization of consumption habits in the capital, and the long-term development of knowledge about the lagoonscape of St. Petersburg.

Being active in the local market of imported fish and seafood delicacies, like herring, oysters, and lobsters, St. Petersburg dwellers influenced the ecological situation of the vast area far beyond the official possessions of the Romanovs. Furthermore, at a local level culinary authority led to attempts to transform the nature of the Eastern Baltic by introducing oysters to make the Gulf of Finland a real European sea, as it is supposed be to support the prestige of the maritime metropolitan area. The oysters were intended to be transplanted to the bay near Kronstadt. This project, which started in 1747 after the order of Empress Elisabeth, was completely unsuccessful, but the very problem of the possibility of breeding oysters in the waters of the Gulf became a trigger for further consideration (Kraikovski 2018b). The impossibility of breeding oysters in Neva Bay as well as in the Baltic Sea in general, due to its extremely low salinity, was explained by leading imperial zoologist Karl Ernst von Baer in 1862. By that time he already learned a lot about fish and fisheries of the area beginning since his expedition along the southern shores of the Gulf of Finland (Lajus, Ojaveer, Tammiksaar 2007).

Scientists have expressed an interest in the fishes and fisheries of the vicinities of St. Petersburg, including Neva Bay, since the second

half of the nineteenth century. Among them there were well-known biologists such as Karl Kessler, Nikolai Danilevsky and Oscar Grimm (Lajus, Kraikovski, Lajus 2013). The first comprehensive fisheries survey in the St. Petersburg region was carried out in 1876-77 by the St. Petersburg Statistical Committee (Kessler 1864, 203). The survey described some of the Gulf of Finland fisheries, including quite significant Baltic herring fisheries that took place further West from Neva Bay and predominantly in the wintertime. In some years herring could come to Neva Bay, but their fisheries were based predominantly on freshwater and migratory species. It is very interesting that in spite of the location of Neva Bay being very close to the city of St. Petersburg, even in the mid-nineteenth century it was perceived as a not fully known waterscape. For instance, Karl Kessler, who was a pupil of Baer and a leading Russian ichthyologist of his time, suggested that he might be very close to a revolutionary discovery in fish biology. He suggested that the European eel, whose spawning area, which we now know to be in the Sea of Caribbean, was a complete mystery at that time, might spawn in the reeds near Kronstadt. On this, Kessler referred to the “local ecological knowledge” (1864, 203), namely the observation of the local fishermen.

3 Conclusion

All the heterogeneous ways of knowing the Neva inlet as one of St. Petersburg’ lagoon are in fact united within two general contexts. First, we deal with the practices of ‘environing’ that form the core of everyday life of what Michael Pearson (2006) defined as a littoral society, that is a society leaving amphibious life. Second, we deal with the interaction between the state authorities and the local urban community in relation to the idea of St. Petersburg’ development as a metropolitan locale, a stronghold of the Russian maritimity and modernity. Indeed, all the aspects of perception, imagination, and observation had to provide or improve opportunities for mobility in the littoral zone, reach a new level of safety and comfort in the littoral zone (including the symbolic capital of considering the city as a ‘reflection’ of successful and famous places, perceived as positive examples for the future), or involve the biota of the littoral zone in the transforming societal system of consumption. The dynamic knowledge of the St. Petersburg lagoon in the eighteenth and nineteenth century, in every particular moment quite different but equally consistent and complicated, represents the rapidly changing approaches to the norms and parameters of interaction between the dwellers of the coastal zone and the nature of the lagoon as a powerful non-human actor.

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