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River of Empire: Geopolitics, Irrigation, and the Amu Darya in the Late XIXth Century¹

Ekaterina PRAVILOVA

Abstract

The Russian military conquest of Central Asia extended the Empire's border far to the south, but the military conquest did not immediately settle the problem of authority. To secure the supremacy of Russian power in Asia, the government elaborated a sophisticated strategy of economic integration and symbolic appropriation of the region. Both tasks suggested the development of an irrigational network, since water in arid Turkestan was the main track to power and prosperity. This paper analyzes imperial projects for the conquest of nature, including the utopian plans to reverse the Amu Darya river from the Aral Sea to the Caspian, authored by Grand Duke Nikolaj Konstantinovich Romanov and General A. I. Glukhovskoj. These projects reveal the peculiarity of Russian imperial policy in Central Asia and the Russian conceptualization of the relationship between civilizers and civilized. None of these undertakings, initiated by private activists, were realized before the early twentieth century, when the government finally decided to tackle the centralized and technically advanced program of irrigation. The earlier utopian projects fell into oblivion until the 1920s, when Soviet engineers resumed Grand Duke Nikolaj Konstantinovich and General Glukhovskoj's plans.

Keywords : Central Asia, Russian Colonial Policy, Utopian Projects of Rivers's Reversion, Traditional and Modern Techniques of Irrigation, Amu Darya, Aral Sea, Local Administration in Turkestan, Geographical Exploration, Engineers.

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¹ This paper was adapted from Pravilova, 2006. I would like to thank the editors of this volume who have read and commented on this paper. I am also very grateful to Anne O'Donnell, Peter Holquist, Robert Crews and Willard Sunderland for their valuable comments and advice.

Résumé

La conquête militaire russe de l'Asie centrale a fait avancer la frontière impériale loin au sud, mais n'a pas immédiatement réglé le problème de l'autorité. Pour fixer la suprématie de la puissance russe en Asie, le gouvernement a dû élaborer une stratégie sophistiquée d'intégration économique et d'appropriation symbolique de la région. Ces deux objectifs ont suggéré le développement du réseau d'irrigation, puisque dans le Turkestan aride l'eau constitue la voie principale vers le pouvoir et la prospérité. Cet article analyse certains des projets impériaux pour la conquête de la nature, y compris les plans utopiques prévoyant le détournement du fleuve Amou Darya de la mer d'Aral en direction de la Caspienne, qui ont été élaborés par le Grand Duc Nikolaj Konstantinovich Romanov et le général A. I. Glukhovskoj. Ces projets reflètent la particularité de la politique impériale russe en Asie centrale et la conceptualisation russe du rapport entre les « porteurs de la civilisation » et les « civilisés ». Aucune de ces entreprises, lancées par des acteurs privés, n'a été réalisée avant le début du ^{xx}e siècle quand le gouvernement s'est finalement décidé à adopter un programme centralisé et techniquement avancé d'irrigation. Tombés un moment dans l'oubli, les premiers projets utopiques du Grand Duc et de Glukhovskoj ont été réanimés dans les années 1920 par les ingénieurs soviétiques.

Mots-clefs : Asie centrale, politique coloniale russe, projets utopiques de détournement des fleuves, techniques traditionnelles et modernes de l'irrigation, Amou Darya, mer d'Aral, administration locale du Turkestan, exploration géographique, ingénieurs.

Power over water and, in a more general sense, mastery of nature, are excellent metaphors for the imperial ideal of nineteenth-century colonial empires. Transport canals, luxurious desert oases, and enormous plantations blooming out of infertile lands speak for themselves. They demonstrate the civilizing energy and superiority of the West over the East. "Hydraulic Imperialism" as a part of "ecological imperialism" is not only a characteristic of this stage of technological progress, but also a model for a social and political order that arose, first and foremost, in the colonies of Britain and France.²

Indeed, the history of India and Egypt during the period of British rule can be written as the history of irrigation. The development of irrigation was closely tied up with change in social relations, the collision of various ideologies and conceptions of the relationship between the colonizer and the colonized, as

² See Headrick, 1988, pp. 171-208. For "ecological imperialism" see Grove, 1995. On irrigation as the basis for social and political engineering in the American West, the paraphrase of which served as the basis for the introduction of this article, see Worster, 1985.

well as the formation of new concepts of property and legal regulations of water usage. It was also linked to the creation of administrative organs, and the development of technology. Furthermore, “irrigation” or “hydraulic” imperialism is an important part of the history of British society, itself linked to the development of the discourse of Orientalism and the formation of “imperial” sciences such as botany, biology, ethnography, and medicine.

The tradition of looking at the history of empires only through the prism of relations which are tightly enclosed in the narrow field of social, national, economic, or political conflicts has already practically outlived itself. The environment is a full-fledged participant in these relationships, and the most important factor in the formation of colonial settlers’ identities and those of people living in imperial peripheries. It was not only the colonizers with their civilizing impulse to change nature, but also the surrounding landscape and climate, together with particular cultural factors (traditions and customs of the local population, etc.), which formed that specific type of people who lived far from imperial capitals. It was not a coincidence that ecological projects appeared first in colonies and borderlands: untouched by Western technology, nature appeared to call colonial settlers to apply their knowledge and effort, and the confidence in their own superiority over the local population added to their assuredness in the success of their undertakings. In addition, these dreams of future change promised significant profit. “Canalmania” in British colonies in the 1850s and 1860s³ and “cotton fever” in Russian Turkestan in the 1880s are particular cultural phenomena which deserve attention not only from an ecological or sociological point of view, but also from the viewpoint of historical anthropology or even psychology. Although the failures and, to a greater extent, successes of British irrigation imperialism have been rather thoroughly investigated by historians, the ecological manifestations of Russian imperial politics are still waiting their turn.

This article is an attempt to look at a single episode in the history of transforming nature. This episode, itself part of a greater series of ideas and conceptions about altering nature, centers on the geopolitical and irrigation plans connected to the projects of turning the Amu Darya river from the Aral Sea to the Caspian Sea. I will readily admit that the history of the development of ideas in Russian society and, in particular, of scholars, politicians and military officials with regard to the Amu Darya deserves a monograph, beginning with

³ Headrick, 1988, pp. 181-182.

the eighteenth century and ending with the events of recent years. Nonetheless, the episode I have chosen, which spans the period of 1870-1890, is of particular interest and indicative of the above-mentioned phenomenon: the interrelationships of humanity and nature, local traditions as well as European and Russian science, politics, and ecology.

In this article I will also try to contextualize the Russian experience of “mastering nature” in the general setting of the nineteenth century’s ecological imperialism. Russia’s achievements were quite modest in comparison with the impressive endeavors of British and French irrigators. By the beginning of World War I, only a few kilometers of canals traversed the arid steppes of Turkestan. The first large canal was built in 1913 through the efforts of the Ministry of Agriculture, which launched the program of irrigation at the beginning of the twentieth century. And this was the first success after a series of failures: dry canals, submerged fields and malarial marshes. What caused these misfortunes? What explains Russia’s inability to use irrigation in its colonial policy? First of all, this inability results from government miscalculation and neglect. Devoted to a nationalistic utopian vision of Russian peasant colonization taking over Turkestan, the government rejected the offers of private investors. In addition, it overestimated its financial resources, which were not enough to pursue irrigation on a large scale. But economic and bureaucratic reasons alone do not fully explain Russia’s specificity. In this paper I will focus on the peculiarities of the Russian ideology of mastering nature, which also had a profound effect on the development of irrigation projects in Turkestan.

The Russian government, like its European counterparts, shared the view that the conquest of nature was an essential precondition for the success of colonial policy. It enabled the economic appropriation of new territories and facilitated the development of administration and the integration of local authorities into the colonial system. At the same time, the conquest of nature in the colonies was also significant in ideological terms because it demonstrated the superiority of the Empire and of European civilization over local knowledge and tradition. In this sense, colonies were the testing grounds for probing – and proving – the new techniques and achievements of European science. But Russia’s colonial policy differed from this general model. In the first place, Russian irrigators in Turkestan expressly denied the superiority of European knowledge and technologies, and preferred indigenous experience and traditions of irrigation to the advanced methods of European engineers. One of the reasons for this phenomenon was the government’s reluctance to initiate a

centralized program of irrigation, which then offered local agents – such as provincial authorities and some private enthusiasts (like the heroes of this essay) – the opportunity to build their own irrigational empires on the Central Asian steppes. These actors had an alternative concept of power based on “Oriental” rather than European models, and they appealed to the memory of Central Asian Khanates’ glorious past rather than to the modernist concept of European civilization. The story of one of the first irrigators of Central Asia – Grand Duke Nikolaj Konstantinovich Romanov – offers a remarkable example of both the privatization of the privilege to conquer nature, and the preference for an “Orientalist” concept of governance.

Despite the peculiarities of irrigational imperialism under the Tsars, Russia was not devoid of the ambitions and obsessions of its European counterparts. Russian imperialism, like European imperialism, displayed a particular zeal for “great projects.” The best known of these “great projects” – such as plans to reverse the course of rivers and transform entire watersheds – came to fruition during the Soviet period. But many of them had their beginnings long before 1917. This essay tells the pre-history of one of these “Great Projects” – a true forerunner of the Soviet era’s great utopias.

The story connected with the turning of the Amu Darya from the Aral Sea to the Caspian Sea is based on the existence of a puzzling phenomenon – although in the present day, it is apparently well researched. In prehistoric times, the Amu Darya allegedly flowed not into the Aral Sea, but in a westerly direction. As it changed its course, the river left dead riverbeds behind. Moreover, to the east of the Caspian there exist trails of yet another dried-up current, the Uzboj, which in the eighteenth and nineteenth centuries was taken by many travelers to be the principal dry riverbed of the ancient Amu Darya. The spectacle of the dry Uzboj is fairly impressive. A deep looping waterless river with well defined banks stretches across the sands of the desert, “emptying” into the Caspian Sea. It looks like the river just recently abandoned its riverbed, which appears ready at a moment’s notice to receive once more the flow of water. In some places the riverbed is filled with groundwater and its immobility reveals that it is not a real river.⁴

Contrary to the widespread convictions of the eighteenth and nineteenth centuries, the Uzboj is not a riverbed of the Amu Darya, but a drain for the Sarykamysh lake waters, which lie to the west of the current river’s delta. It is possible that after the river changed its basic course (more than two thousand

⁴ Gerasimov, Kovda and Letunov (eds.), 1952.

years ago the Amu Darya turned to the east, throwing most of its volume of water to the Aral Sea), the drain of the western river water continued to exist. Before the fifteenth and sixteenth centuries, these tributaries of the Amu Darya filled the large Sarykamysh basin. During periods when there were large amounts of water, when the volume of water brought by the river exceeded the capacity of the lakes, a drain appeared in a westerly direction, the Uzboj. But in the fifteenth-sixteenth centuries this drain disappeared and the Amu Darya finally turned towards the Aral. The traces of the western riverbeds of the Amu Darya, leading to Sarykamysh (Kunya Darya or Daryalyk, Daudan and others) have been well preserved. With the help of artificial canals, these riverbeds were once more flooded by man. To the west of the Amu Darya, on the shores of the irrigation canals, the significant settlements of the medieval Khorezm appeared. Due to other geological factors and physical irrigation construction, the river went back and forth from renewing a partial flow in the direction of the Sarykamysh Lakes, to completely directing its water to the Aral. At the same time, the inhabited territory on the western bank of the Amu Darya was in constant flux. New populations would appear only to disappear again. The history of the river was closely intertwined with the history of the people who lived by it. When the water receded, it led to the death of entire cities. On the other side, new irrigation canals altered the river's route, while the man-made riverbeds closed due to the silting of canals and the emptying of cities as a result of military conquest.

Before the beginning of the eighteenth century, scientific and cartographic descriptions of the Amu Darya and the Aral were practically non-existent. However, local folklore in addition to literary works by ancient and medieval authors recorded the changes in the flow of the ancient Oxus.

For all intents and purposes, Europe did not know about the existence of the Aral Sea before this time. The "discovery" of the Aral Sea and the legendary ancient riverbeds, which seemed to connect the Amu Darya with the Caspian, occurred at a moment when the Russian Empire attained a new geopolitical status. The possible discovery a new water route was extremely alluring. Thus began a new epoch committed to turning the Amu Darya back toward the Caspian. In 1714, Peter the Great ordered the equipping of a Caspian expedition under the leadership of Prince Aleksandr Bekovich-Cherkaskij with the goal of studying the flow of the Amu Darya and determining the possibility of returning the river to its former riverbed. The Emperor's hope was buoyed by the Turkmen Khwāja Nepes (Nefes), who reported the possible existence of

gold in the Amu Darya. According to the Turkmen legend, the Khivan Khans turned the river to the Aral sea with the help of dams in order to hide the sources of gold and force the Turkmen tribes into submission. The restoration of the Amu Darya's flow offered a chance to subdue of the Khivans and Bukharans to Russian influence, the acquisition of gold riches, and the opening of a new water route from the Caspian through the Amu Darya to India.⁵ During the expedition, one group under the leadership of Khwāja Nepes went along the lower reaches of the Amu Darya and discovered traces of ancient settlements, dry canals, and the Uzboj's dry riverbed. On the map of their investigations, they located a place where the Amu Darya emptied into the Caspian, and Peter received a dispatch verifying the Turkmen legend.

In 1716 Bekovich-Cherkaskij set off on another expedition, but this time with military goals. He was to build a fortress in the region of the Amu Darya's old mouth and achieve the subjugation of the Khivan Khan. Indeed, the fortress of Krasnovodsk was built, but Bekovich's attempts to come to an agreement with the Khan ended tragically. In 1717, the Khivans attacked the unit and slaughtered most of its members.

Nonetheless, the idea of re-routing the Amu Darya was not abandoned: in 1718 yet another expedition under the leadership of Prince V. A. Urusov was sent with the same goal, along with a diplomatic mission to the Bukharans, headed by Florio Benevini, and a hydrographic expedition to investigate the Caspian Sea. After Peter's death, attempts to investigate the return of the Amu Darya to the Caspian were temporarily abandoned; the geological and hydrographical study of Central Asia continued with the efforts of specialists, but behind these investigations there were no defined strategic plans on the part of Russian state, although the question of shifting the river was repeatedly discussed in academic circles. Everything changed with the beginning of the war for the conquest of Central Asia and, in particular, its western part (the Trans-Caspian *oblast'* or region). Those who marched to Khiva in 1873, including engineers and hydrographers, encountered truly impressive landscapes: deserts with the remnants of ancient rivers, ancient irrigation systems, and ruined extinct settlements.

The myth that some evil force at nature's service had depopulated the richest oases received new confirmation. The new data produced by geological research and leveling, gave ancient geographers' accounts of the Oxus river

⁵ Samyev, Khodzhamuradov and Grinburg, 1982, p. 34.

emptying into the Caspian new significance. So, too, did the local legends about the former Khorezm, heard by travelers and soldiers, according to which, where the richest oases died as a result of the departure of the river. The conquest of the area appeared to make possible the restoration of a flourishing country, the return of the Amu Darya to its former riverbed, and the restoration of a water route from the Caspian to the Aral, and, later on, from Europe to India.

Research began with renewed vigor. In 1873, at the bequest of the Caucasian viceroy the Grand Duke Mikhail Nikolaevich (1832-1909), the *Urun-Dar'inskaja* expedition was formed under the leadership of the military engineer A. I. Glukhovskoj. The expedition investigated the old riverbeds of the Amu Darya, the Urun Darya (Kunya Darya or Daryalyk) and the Daudan. It came to the conclusion that the waters of the Amu Darya had recently been led away from these riverbeds with the help of dams built by the Khivans. Indeed, in 1857 the Khivan Khan dammed the canals built by the Turkmen, drying out one of the largest canal networks on the left bank, including the main canal, Lauzan. This resulted in the drying out of the western part of the delta, a decrease in fertile land, and a diminishing of agricultural activity.

This event was fairly typical in the century-old struggle for water. The use of canals with the assistance of dams often served as the main argument in political conflict. But its description, which had turned into a legend among local inhabitants, was interpreted in conjunction with what had been read in the works of the classical and medieval authors about ancient Oxus as well as in the local legends. As a result, an entirely new formula appeared: the river (and not the canals) changed its flow as a result of human activity and the struggle for water. Therefore, changing this flow again and flooding the old riverbeds seemed to be feasible. One of the first to examine the Amu Darya, Nikolaj Petrusevich, concluded the report of his 1877 expedition with the assertion that

“there are no obstacles to the releasing of water into the old riverbed Daryalyk from the current flow of the Amu Darya into the Sarykamysh Lakes, and all doubts that the water might not flow, must be given up. Only the Khivan Khan could resist the flooding of the old riverbed out of fear of disobedience of the Turkmen, who are restrained only by the fear of not receiving water, but at the current moment the fears of the Khan are hardly pertinent.”⁶

⁶ Petrusevich, 1878, p. 238.

Thus the thesis that the greatest river of Central Asia flowed in a different direction, thanks to the efforts of man, became one of the fundamental premises in imagining projects to manage water resources in Asia. Just at that moment, in 1878, this idea was confirmed: as a result of flooding, the Amu Darya broke the dams on the Kunya Darya and Lauzan and went on to the Sarykamysk Lakes. The Russian press and scientific community quickly reacted to this event as proof that the river could be returned to its former course.

Numerous expeditions hurtled toward Central Asia. It would hardly be an exaggeration to say that this topic became a “hit” in the pages of scientific journals in the 1880s and 1890s, particularly in the publications of the Russian Imperial Geographic Society and its divisions. Not all of these investigations were practical in nature and produced the plans to transform the landscape. But it is completely natural that many investigators could not resist the temptation of hare-brained scheming. Of the many ideas and projects devoted to re-routing the Central Asian rivers, deserve special note. The first was almost completely unknown to people of that time, although the personality of its author had an almost scandalous reputation. The second proposal, by contrast, was fairly actively discussed in the press and in the scientific community, and was lobbied for by individual departments. Despite all these differences, these projects had much in common: ambition, and a common conception of rule. Moreover, as strange as it may seem, both were partially brought to life several years after the deaths of their authors.

The Most August Irrigator

Among those who were forced to throw themselves into the study of Asian rivers and deserts by the breach of the Amu Darya was a member of the royal family, the Grand Duke Nikolaj Konstantinovich Romanov (1850-1918; the son of Grand Duke Konstantin Nikolaevich and the nephew of Alexander II). Little is known about his life and activity except it was a dissolute life: he stole diamonds from his mother Aleksandra Iosifovna, was declared insane, and sent to Central Asia.⁷ Sometimes because of psychological imbalance,⁸ sometimes as a result of his disfavor, the Grand Duke in exile would constantly disturb the

⁷ See his biography, written in apologetic tones by one of the members of the former imperial family: Grecheskij, 2002.

⁸ According to the doctors, the Prince suffered from “diseased moral dissipation” (the official diagnosis), which was characterized by “excess of sexual activity,” “occasional inclinations towards alcoholic over-indulgence,” “predisposition towards affectation,” “a passion for unnecessary expenditure of money,” and an “extreme development of pride.” One of the main manifestations of the disease was “the complete refusal

local administration and the royal family, occasionally with subversive declarations,⁹ sometimes with arbitrariness, drunkenness, and unseemly associations. Thus in Turkestan the Duke was under the watch of the local administration, police, and doctors.¹⁰

As a result of the theft and consequent disfavor, Nikolaj Konstantinovich also achieved celebrity of a different sort: that of an unrelenting schemer and irrigator. The first irrigating canals in the Hungry [*Golodnaja*] steppe (Iskander-aryk, the canal of Nicholas I) were built at his initiative and with his funds. But the most beloved idea of the Grand Duke was the restoration of the “old course” of the Amu Darya into the Caspian.

According to the words of the Duke, the idea of changing the Amu Darya was first introduced to him by the famous orientalist Vasilij Grigor’ev (1816-1881).¹¹ Grigor’ev himself in 1864 gave a presentation on the flow of the river to the Caspian at the Russian Imperial Geographical Society. In 1872, the Grand Duke Konstantin Nikolaevich charged Grigor’ev with the task of accompanying his exiled son Nikolaj Konstantinovich in his journeys to Central Asia and acquainting him with the land. Grigor’ev told the Duke of the dry Lauzan riverbed and the Bent dam, which prevented the Amu Darya from flowing off into the Uzboj. The breaking of the Amu Darya into the Sarykamysh Lakes in 1878 conclusively strengthened the Duke’s decision to occupy himself with the study of the river. Already in November of 1878 Nikolaj Konstantinovich approached the Turkestan Governor-General Konstantin P. von Kaufman (1818-1882) with a proposal to destroy the remaining dams and to release the water into the Caspian. Kaufman advised him not to be so hasty. Nikolaj’s evidence that the Amu Darya was somehow held back from

to recognize the circumstances typical for his station, and an enthusiasm for works on the irrigation of the land and the investment of all funds received by him into the introduction of canals with the construction of Russian settlements to follow” (Medicinskie nabljudenija nad sostojaniem zdorov’ja EIV V. K. Nikolaem Konstantinovichem. Doktor V. V. Chekhov. Predstavleno A. B. Vrevskomu v mae 1897 [Medical observation of the health of Grand Prince Nikolaj Konstantinovich. Submitted to Governor-General A. B. Vrevskij by doctor V. V. Chekhov. May, 1897]: GARF, f. 617, op. 1, d. 1, ll. 25-30). Later, the diagnosis was confirmed: “The psychological imbalance in the form of a degenerate psychosis failing of moral sentiment” (Doctors’ conclusion. August 1900. Doctors V. Ja. Rozenbach, V. N. Khardin: GARF, f. 617, op. 1, d. 1, ll. 436-436 ob).

⁹ The Grand Prince was suspected in “dangerous connections” with a certain “Polish Party,” “dark people” and “fugitive (criminals) from Siberia.” See, for example, Tashkent’s merchant Alexander Gromov’s denunciation in his letter to P. S. Vannovskij, a Minister of War: GARF, f. 664, op. 1, d. 43. ll. 12ob.-13.

¹⁰ See, for example, reports about his behavior and copies of all letters from 1898-1908: GARF, f. 617, op. 1, d. 1-8.

¹¹ [Nikolaj Konstantinovich, Vel. Kn.], *Staryj tok*, pp. 2-3.

its natural course only by handmade dams built by the Khivans for the restraining of the Turkmen seemed unconvincing to Kaufman.

“It is difficult to allow for such greed for water on the part of the Khivans, to the point that they made these dams so that the water flowed not into the Caspian, but to the Aral. After all, there are more than twelve of these dams. There must be more important reasons than simple caprice or fantasy. It is more admissible to think that the majority of these dams protect the Khivan oasis from the flooding of the river Amu.”¹²

To the Duke’s argument that the Khan himself had apparently announced his readiness to break the dams Bent and Shamurat, the Governor-General responded with a warning:

“The Khivan Khan will do everything he is ordered to, but it is understood that the entire burden of responsibility for possible harm or destitution that might follow falls on the one who issues the orders.”¹³

Obviously, Kaufman sought to prevent the Duke, who was not in good standing, from interfering in a most important state undertaking. The possibility of re-directing the river had yet to be proven, and that was the task for an already organized expedition under the leadership of the General Staff.

Nonetheless, the refusal of support did not stop Nikolaj. In 1879 in Samara, he organized a Society for the study of Central Asian communications, which stated its goals choosing the direction the Turkestan railroad, and studying the turning of the Amu Darya to the Uzboj. In March of 1879, the Grand Duke Nikolaj Konstantinovich published a brochure under the title “Amu and Uzboj” (the book came out without any indication of the name of the author¹⁴). Relying on the testimony of sources, such as the works of ancient and medieval authors, it tried to disprove the aforementioned riddles of the natural reasons for the turning of the Amu Darya. More than anything else, the Duke trusted the local legends of the flourishing Khorezm kingdom, which stood on the former Amu Darya. All the cited rumors and legends, except one, said that the river repeatedly altered its direction “exclusively according to the will of man.”¹⁵ Although the past of the river remained unclear, the possibility and necessity of

¹² RGVIA, f. 400, op. 1, d. 579, l. 227.

¹³ *Ibidem*.

¹⁴ Few months later the Chief Administration of Press [*Glavnoe Upravlenie po delam pečati*] forbade any publication of the Grand Prince’s writings. See Moscow Committee on Censorship’s petition to the Ministry of Court asking for permission to publish Nikolaj’s manuscript: GARF, f. 664, op. 1, d. 39.

¹⁵ [Nikolaj Konstantinovich, Vel. Kn.], 1879, p. 25.

the change was not called into doubt; it was only required to carry out further exploration. A special expedition was organized for the society.

The expedition's path started from the very beginning of the Amu Darya (the joining of the rivers Balkh and Piandzh) and ended at the lower reaches of the river, the places where it had been proposed to release the waters of the Amu Darya into the Caspian by the Bent dam. In the summer of 1879, a group under the leadership of Nikolaj Konstantinovich made it to the upper reaches of the Amu Darya and went down to the Bukharan fortress of Kelif.

“When we mounted the tall tower in Kelif, wrote the Duke later, our head guide, the Turkmen Geldygog, pointing at the left side of the river valley said that not far from the Afghan village Aladat there was the head of the old riverbed of the Amu Darya which had been cut off by a dam and covered with silt, which the natives call ‘Shor’. Surprised and gladdened by the words of the Turkmen, I said in jest that if I had been destined to inform my great grandfather, Peter, about this ‘Shor’ one hundred and fifty years ago, as the Turkmen Nefes once told him of the Daryalyk, then the Tsar, of course, would have given him [Geldygog] a sable coat and a gold caftan. ‘I’m not Khwāja Nefes, I am Geldygog,’ he proudly replied, ‘and I certainly would not have led the Tsar to a mistake, the Tsar’s envoy would not have been killed along with the Russian troops among the treacherous Khivans. If one were to break the dam Bank (Bent) and open the Lauzan and Daryalyk, the water will fall for a long time into the Sarykamysh Lakes, and from Kelif along the Shor it would directly flow into the Krasnovodskij gulf of the Russian [Caspian] sea.”¹⁶

The Duke was sure he had discovered a southern riverbed of the Amu Darya, which was still unknown to Russian explorers, one that was more suitable for turning back the river. Afterwards, this riverbed was once more “discovered” and received the name of the *Kelifskij* or *Chardzhujskij* Uzboj (Kelif Uzboj or Chardzhoj Uzboj). In reality, the Kelif Uzboj has no relation to the Amu Darya. It is an old riverbed of Afghan rivers, which was occasionally filled with their runoff in times of excess water.

The Duke was unable to see the Kelifian riverbed with his own eyes: traces of this riverbed from the current course did not exist, and the Bukharans categorically refused to allow him to get closer to the Shor.

“In general, the Tajiks and Uzbeks are very distrustful of my queries, and try to find out from our Cossacks and translators why the Russians are asking about the Shor, if they are thinking of turning the Darya there, if it is true that steamships are

¹⁶ [Nikolaj Konstantinovich, Vel. Kn.], *Povorot Amudar'i v Uzboj*, l. 236.

sailing from the Volga to Khiva; and they assured me that all the rumors about the Shor are only fairytales, made up by nannies for the amusement of children.”¹⁷

If one is to believe the Duke's notes, two members of the expedition nevertheless successfully managed to look at the Uzboj and testified to the existence of the remnants of an ancient river. These were the “Indian Prince” Ramchandr-Baladzhi-Pejtua and the Afghan Mirdali-Khan (nothing is known as these two characters). As far as no further exploration was carried out, the main source of the information about the Kelif Uzboj were legends and fairytales.¹⁸

Despite the attractiveness of the idea of the revival of the Kelif Uzboj (the path from Kelif to the Caspian was much shorter than leading the Amu Darya through the Sarykamysk Lakes), it was impossible to concretize at that moment. But Nikolaj Konstantinovich attributed an enormous significance to the discovery of the Kelif Uzboj, all the stories he had collected strengthened his belief that in ancient times the Amu Darya was forced to change its flow as a result of man-made dams. In light of these discoveries the Duke's determination to realize the project of releasing the Amu Darya through the northern riverbeds grew stronger and stronger.

In October of 1879, the members of the expedition left Petro-Aleksandrovsk on boats down the Amu Darya. The Grand Duke was with the Khivan Khudaj Bergen in one boat. He told the Duke that the Bent dam, which had been built by the Khivan Khan, blocked the Amu Darya. The dam prevented the river

¹⁷ *Ibidem*, I. 238.

¹⁸ The Prince cites two folktales interpreting the appearance and disappearance of the Kelifian course. Their texts were also published in an anonymous report on his expedition in the notes of the Russian Imperial Geographical Society. “The tale of Khazret-Ali”: When the Arabs, according to the will of Mohammed, brought Islam to the idol worshippers of the East with fire and sword, the Khorezminians refused Islam. Then the Lion of God Khazret Ali on his holy steed Dul-Dul raced across the Amu Darya, appeared in the fortress of Kelif, and taking the magical sword Zul Fukar, which was hanging from his saddle, yelled “Allahu Akbar” [God is great] and struck the mountains three times, and threw the cut off cliffs across the river. The Darya, blocked by the stone dam, surged to the west. The Khorezminians, deprived of water, accepted the teachings of the Prophet and begged for the return of the river. Moved by their entreaties, Khazret Ali removed the debris of the cliffs with his hands and the Amu Darya once more flowed to the north, towards Khorezm. “The tale of the Khorezminian Princess”: The Persian Tsar Feridan fell in love with a Khorezminian Princess, but the beauty did not want to live in his harem. So, in order to avenge himself upon the Khorezminians, the Tsar ordered the digging of a canal on the left bank of the Amu Darya opposite Kelif, and, having blocked the river with a dam, turned the water towards the west. All of Khorezm Shakh's subjects asked their princess to save them from drought. Pitying them, she went to Kelif and told the Tsar that she was willing to be his wife, if he would destroy the dam. The Tsar quickly granted her wish, but the cunning princess went into hiding. She rode day and night on quick fillies far along the Darya away from Kelif up to Urgench and arrived home at the same time that the water had reached the walls of the Khorezmian capital. See RGIA, f. 537, op. I, d. 1197, ll. 234-235. See also a “fairy tale in verse” “Sweet Princess” [*Sladkaja Carevna*] which was allegedly told by inhabitants of Begovad village in the Hunger Steppe “in the year 7401 after the creation of the world”: GARF, f. 664, op. I, d. 26.

from flowing into the dry Lauzan and Daryalyk (Kunya Darya) riverbeds. In such a way, the Khan held the Turkmen who lived on the former Amu Darya in obedience. All one had to do was remove the dams and the water would flow along the Lauzan and Daryalyk towards the Sarykamysh Lakes from which, according to the Turkmen, there were two courses to the Caspian Sea.¹⁹

The Grand Duke's expedition plan probably included exploration and leveling (among the expedition's personnel there were two engineers, a botanist, a zoologist, and the famous geologist Ivan Mushketov [1850-1902]).²⁰ But in the Duke's notes, the manuscript copy of which is kept in the Russian National Library, these explorations were not mentioned. Nothing is known at all about the expedition's scientific results.

Confident of the ease of the undertaking, the Duke rushed to come to an agreement with the Khivan Khan about the shifting of the river.²¹ In the beginning of November there was a meeting between the disgraced member of the imperial family and the ruler of Khiva. Nikolaj brought the Khan a portrait of Peter the Great, the work of Jean-Marc Nattier, done in 1717. The present was significant; this was the precise year of Bekovich-Cherkaskij's expedition. In return, the Khan announced his readiness to fulfill the Grand Duke's will and open the dams under the condition that the tribute paid by the Khan would be reduced. This demand was founded in the possibility that, once the river was turned, the Turkmen would again go west and "stop obeying me and paying taxes."²² Moreover, should the water flow into the Sarykamysh Lakes and beyond, the Khan demanded the recognition of these reservoirs for Khiva. In addition to the letter that contained these conditions, the Duke received "an old book, which was written at an unknown date and by an unknown author" which described the ancient flow of the Amu Darya along the old course.

As a demonstration of his readiness to fulfill "the will of the White Tsar," the Khan actually started to make breaks in the Bent and Shamrat dams as early as the end of October. After the destruction of the Bent, the water did flow in the direction of the Sarykamysh Lakes. However, the breaking of the Shamrat, which had no significance for the turning of the river, resulted in great loss for

¹⁹ [Nikolaj Konstantinovich, Vel. Kn.], *Povorot Amudar' i v Uzboj*, l. 9.

²⁰ See Mushketov, 1960, vol. 3, p. 242.

²¹ Besides his unauthorized (by Russian authorities) correspondence with Khivan Khan, Nikolaj also unsuccessfully tried to get support from Bukharan Emir in his endeavors. See his letters to Bukharan Emir (August 4, and September 16, 1879) in GARF, f. 664, op. 1, d. 18.

²² [Nikolaj Konstantinovich, Vel. Kn.], *Povorot Amudar' i v Uzboj*, l. 17ob.

the local inhabitants, who were left without water. But this did not cool the Duke's enthusiasm. On November 24, he telegraphed the Russian Geographical Society that in the early spring of 1880 the Khivans promised to break three more dams, to deepen and widen the Lauzan and other riverbeds and "to release the water into the Uzboj by the most direct path, along which boats went to Kunya-Urgench twenty five years ago."²³

The Duke was not allowed to continue his work in the spring of 1880. The local administration did not look upon his activity with favor. Kaufman complained to the Minister of War Dmitrij Miljutin that despite the ban, Nikolaj began to provoke "unallowable agitation" in the press, claiming that "the Turkmen promised to provide free of charge laborers for clearing and for the release of water into the Sarykamysh."²⁴ For his part, Nikolaj had already complained to his mother about the fact that future "excursions along the dry riverbeds" were to be refused to him. Nonetheless, the Duke did not abandon his attempts to get permission to realize his dream:

"The water of the Syr [Syr Darya] and the Amu [Amu Darya], currently falling into the Aral in vain [...] could instead be directed down the old courses, irrigate the waterless steppes, settle the nomad Kirghiz and Russian settlers and create in Turkestan a Cossack army."²⁵

The arrival of the new Turkestan Governor-General Mikhail Chernjaev in 1882 restored the Duke's hopes: Chernjaev sent to St. Petersburg the request to allow Nikolaj to work. In case of success the Duke promised that

"by May of this year the water of the Amu will go into the Lauzan and the Khivan Khan will be able to bow down and offer the White Tsar the Amu Darya, directed towards its abandoned bed."²⁶

It is completely possible that Chernjaev truly planned to involve Nikolaj in the work on the Amu Darya,²⁷ but the following change of the Governor-General in 1884 (Chernjaev was replaced by N. O. von Rozenbakh [1828-1901]) delayed the realization of this plan for several more years.

The Duke was only able to return to work on the Amu Darya in 1890 (during this period, he did not waste time, busying himself with the construction of

²³ *Izvestija IRGO*, 1879, vol. 15, n° 4, p. 289.

²⁴ RGIA, f. 400, op. 1, d. 579, l. 573.

²⁵ RGIA, f. 435, op. 1, d. 15, l. 10.

²⁶ RGIA, f. 435, op. 1, d. 15, l. 33.

²⁷ "This spring Chernjaev has planned to turn the Amu Darya and has invited me to participate in this matter," wrote the Prince to his mother on the 11th of February 1884: RGIA, f. 435, op. 1, d. 15, l. 54.

irrigation canals in the Hungry Steppe). In 1889, the Duke finally received permission from the Ministry of the Interior to set off to Khiva to explore the possibility of turning the Amu Darya. As an experiment, the Bent and Tash-Bugut dams were destroyed near the head of the Lauzan and the stream of water surged towards the Sarykamysk. The Duke rejoiced: “the old flow” had been restored.²⁸

Despite the initial success, the Turkestan and St. Petersburg administrations did not welcome the Duke’s experiment. By autumn it was clear that the Khivans’ fears – they had warned Nikolaj of the danger of erosion and similar effects from the release of water – were not groundless. As the water level rose, part of it flowed out of the canals and flooded 3,000 *desjatins* (more than 3,000 hectares) of the local population’s arable land, for which the Duke had to pay 4,000 rubles in compensation.²⁹ In accordance with General A. I. Glukhovskij’s recommendation, which had warned of the dangers of even more significant breaks and floods during the spring thaw, the Governor-General A. B. Vrevskij ordered the dams to be restored. Any future work on the Amu Darya by the Duke, of course, was not allowed.

However, it was not the failure of the Duke’s experiment that displeased the government. Much more important was the fact that the Duke, sent to the edge of the Empire, had dared to steal the symbolic “civilizing” capital of Russian authority. He had touched upon the most valuable resource, water. Irrigation, not conquest, was the shortest path to power. Nikolaj Konstantinovich was convinced that spreading the sovereign power of the Emperor over a subjugated population and declaring the submission of the local peoples was only half the battle. Turkestan’s system of governance was to be enriched with the local ideology of domination, which had built up over the centuries, in part under the influence of Islam, but to an even greater degree as a result of the practices of governance.

The significance of irrigation activity for the creation of authority was fairly well adapted by the local administrators. Almost all of Turkestan’s Governor-Generals began their policies in the area with the construction of canals. Already in 1869, leveling in the northeastern part of the Hungry Steppe was begun according to Kaufman’s orders. The project of irrigating with the waters

²⁸ See the published report of the expedition: [Nikolaj Konstantinovich, Vel. Kn.], *Staryj tok*.

²⁹ The Turkestan Governor-General to the Minister of War, October 28, 1890: RGVA, f. 400, op. 1, d. 4112, l. 15-16.

of the Syr Darya covered an area of 150,000 hectares. It was fairly typical that the budgets did not include payment for the labor force, a fact that is worthy of attention. Apparently, the Governor-General counted on using the ancient tradition of enlisting the local population to fulfill their labor obligations in the canals.³⁰ In 1879 it was decided that work on the Kaufman Canal should be suspended, as it was “disastrous for the population.”³¹ At that time, only 13 km of the canal had been dug.

One more remarkable fact characterizes the local rulers’ irrigation activity: the Turkestan Governor-Generals preferred not to introduce new canals, and instead restore ancient irrigation systems using indigenous methods of irrigation. The neglect of Western technologies of irrigations and advanced engineering techniques is noteworthy. In 1883, Kaufman’s replacement Chernjaev turned his attention to the Perovskij district, where the dry Yangi Darya (Yany Darya) riverbed, the left arm of the Syr Darya, appeared to have once irrigated the deepest reaches of the Kizylkum. According to A. A. Matisen’s testimony, the works were entrusted to “the *local expert*, the Kirghiz Asanov”. “The riverbed of the Yangi Darya was at one time full of water, and water flowed down it, gradually decreasing in quantity for an entire two years, but during this nearly 30,000 hectares of land was flooded”. As a result, an entire network of lakes appeared, surrounded by impassable swamps and bogs, and the valuable land had to be drained, not irrigated.³²

In both Tashkent and St. Petersburg, Russian authorities clearly understood that the irrigation of land was the most important task. But they did not rush to make use of this resource. Against the background of the failures of state irrigation, the Grand Duke’s more or less successful irrigation projects in the Hungry Steppe (in 1883-1885 the Grand Duke built the first operational canal on the right bank of the Chirchik river – the Iskander canal, 54 km in length, 4,140 hectares of irrigated land; it was purchased in 1886 by the State treasury) seemed almost a victory. Hence, right before the eyes of the Turkestan governors, the Grand Duke openly made use of the inherent connection between the idea of mastery over the people and over nature. The writings that the Duke left behind (hardly by accident), as well as the anonymously published accounts of

³⁰ In 1891 the Grand Prince Nikolaj Konstantinovich suggested to restoration of an “old law” prescribing “every native” to work at least 12 days a year on irrigational construction. See his letter to the Minister of state domain M. N. Ostrovskij: RGIA, f. 426, op. 1, d. 35, l. 16.

³¹ Matisen, 1909, p. 277.

³² *Ibidem*, p. 278.

his expeditions, abound with citations from ancient stories and legends. One of them, according to Nikolaj Konstantinovich, was told to him by K. P. von Kaufman himself: “there was a time when a cat ran from Ferghana to Khorezm leaping from roof to roof, while a nightingale flitted from branch to branch”. Quoting from this legend in his account about the 1890 expedition, the Duke added the following commentary:

“Such grace was thinkable only under the autocratic reign of the Khans of Khorezm and thus the order and wealth of that time can only be renewed by the highest Russian power in the East. From the times of the Mongol invasions, the Khorezm Steppe had become scantily populated and waterless. The wild wars of Gengis Khan wiped out the peaceful farmer-inhabitants, the canals dried out, and all that was left were wells among the sand and saline soils. On the ruins of great Khorezm appeared the small holdings of Khans, who began to occupy themselves with quarrels and skirmishes until the time when finally the people of Central Asia would lay down their arms before the banners of Emperor Alexander II.”³³

The Russians then appeared to be the potential successors of Khorezm rulers. The rehabilitation of Khorezm through the renewal of the Amu Darya’s old current seemed to the Duke a matter of honor; with added importance since Peter the Great himself had touched upon it. One of the best illustrations of the Duke’s ideas is provided by the poems that he ordered to be written. The composition of a certain Nikolaj Grjaznov, presented in 1884, is entitled “Reality and Hopes” (the quality of the verses leaves something to be desired, but the idea is quite clear.)

The poem, or to be more precise, the small narrative in verse, is divided into three parts. In this first, naturally, we hear of the golden age of Khorezm when the waters of the Amu Darya:

“Flowed uninterruptedly to the Caspian
Her cities flourished with trade
And for thousands of *versts* traveled ships,
The population was proud of its wealth.”

But the Khivans, as we know, “blocked up the water of the Oxus river,” and thus the “miraculous river” flowed instead into the “hated Aral”.

The second part was dedicated to Peter the Great and to Bekovich’s diplomatic mission. The third part tells of the present. The author laments the fact

³³ [Nikolaj Konstantinovich, Vel. Kn.], *Staryj tok*, p. 15.

that Peter the Great's idea remains forgotten and that "the great feat has never been accomplished."

The following stanza deserves special attention since it is perhaps the most appealing from the point of view of prosody:

"What is hindering us? Is the toil so arduous?
Or do we fear to find ourselves too far?
Or did our two-headed eagle scorch its wings
Under the midday sun of the East?"

Later on, the author celebrates the "people" (in the notes it is pointed out that the "people" here are the Ural Cossacks banished to Turkestan, with whom Nikolaj had become close), he praises the "disgraced descendent of Peter," and calls the addressee of his composition toward great achievement:

"Rise, you glorious hero of Asia,
You, giving arms to the Slavs for battle!
You! Who so courageously brought the legions to fight.
For you will be our prayers.
You alone can accomplish this work;
Toil with you would be joy to us,
And you alone could Russia reward
With the new wreath of immortality."³⁴

Naturally, the emperor's exiled nephew's ambitions could not but call forth anxiety. Several years later, Kaznakov, who was charged with guarding the Duke, characterized his irrigation activity as "playing the role of 'the small Tsar of the steppe' punishing and rewarding according to his own discretion. His character is that of the Khan from days of yore."³⁵

The doctors, observing the behavior of the august madman, stated that

"living in the steppe among the workers and settlers, the Grand Duke entered into close relations with them and acquired in their eyes a special halo, since he, his belonging to the imperial family and his large financial means notwithstanding, willingly submitted to the hardships of the life of the steppe and independently irrigated the land. In so doing he appeared in the eyes of the crowd to be a benefactor, he breathed life into the steppe, he hired workers, he paid them money, he built houses for them and gave them land. From this arose the nickname 'Tsar of the Hungry Steppe,' which flattered his pride. Finding himself in such exceptional

³⁴ Perepiska po delam Vel. Kn. Nikolaja Konstantinovicha [Correspondence concerning Nikolaj Konstantinovich] 1881-1892 inclusive: RGIA, f. 537, op. 1, d. 1197, ll. 154-156.

³⁵ Kaznakov to Fredericks, 1900: GARF, f. 617, op. 1, d. 1, ll. 424-425.

circumstances at a large distance from the central administration, he often became completely taken with his role, committed illegal transactions, went beyond the rights of the administration and of private citizens and sowed the soil for various conflicts.”³⁶

In the characterization given by Kaznakov and the doctors, there is a significant grain of truth: the Duke really did make use of his authority among the local population, ignoring the local administration and, in so doing he exploited the image of the Eastern ruler, “the Khan of days of yore.” On this score, one can judge from the Duke’s terminology – he most often used the local names (for example Daryalyk instead of Kunya Darya) – and from the frequent references to customs and *sharī‘a*.

Like Kaufman and Chernjaev, the Grand Duke used the idea of the continuity between the old traditions and the new power, trying to rehabilitate the “old” irrigation systems instead of producing new ones. A. A. Matisen reported, that in 1886,

“fascinated by the vague hints given in old manuscripts and legends about the apparently earlier existing irrigation of the Bukhara from the Syr Darya, the Grand Duke was taken with the idea of rehabilitating this legendary irrigation system by means of applying exclusively indigenous technical methods.”³⁷

In the words of Matisen, a “staff of indigenous people experienced in irrigation affairs”³⁸ were drawn into the building of the new canal from Syr Darya to Bukhara (hence the name, the Bukharan canal). As a result of immense technical defects, the Bukharan canal existed for only 3 to 4 days after water was allowed into it and then dried up.

However, the failure did not shake Nikolaj’s assuredness in the superiority of indigenous methods over European technology. He boasted more than once that he had built canals “without engineers, but with natives.”³⁹ And it was precisely to the indigenous irrigators (the Khivans) that the Grand Duke was preparing to entrust the clearing of the dam and the releasing of the Amu Darya into the Caspian.

³⁶ *Zakljuchenie vrachej* [Doctors’ report]. August 1900, doctors V. Y. Rozenbach, V. N. Khardin: GARF, f. 617, op. 1, d. 1, ll. 436-436.

³⁷ Matisen, 1909, p. 278.

³⁸ *Ibidem*.

³⁹ See his letter to his “mom and dad”, Grand Prince Konstantin Nikolaevich and Grand Duchess Aleksandra Iosifovna, 1883: RGIA, f. 435, op. 1, d. 15, ll. 21-22.

“One can assume, wrote the Duke, that the shifting of the Amu in the Uzboj is an affair for men of science; but the Khivans, ignorant in all areas, are trained by both circumstance and centuries to deal quickly and easily with the waters of the Amu Darya, skillfully making use of the natural peculiarities of their river.”⁴⁰

After 1890, the Duke was not to return to his work on the Amu Darya, although he worked on several new projects for the shifting of the river. The prohibition of his works, as we know now, was caused both by the desire to extinguish the ambitions of the madman, as well as the need to minimize the potential damage of his activity. The doctors considered work necessary for the Duke – his mental state worsened with idleness. For this reason, the administration tried to provide the most “harmless” piece of desert for Nikolaj’s irrigation practices (here we can see a cynicism of a certain kind: the treasury purchased the Nicholas I Canal, built by the Duke in the Hungry Steppe which, structural mistakes notwithstanding, served as the basis for the construction of the first major Romanov state canal in 1913). The Amu Darya and the Trans-Caspian region were clearly not devoid of interest for the state. The Duke’s projects were not only irrigation initiatives. Indeed, they touched upon the most cherished of geopolitical dreams, namely, the joining of Europe and India.⁴¹ One could assume that the state itself had plans to realize such projects, and such a project did in fact exist and was well known to society in general, though it had been discarded by the state. The integration of Central Asia was connected not with the shifting of rivers, but with the development of railroads. This partially explains the failure of General A. I. Glukhovskoj’s initiatives, the author of an alternative project for joining the Amu Darya and the Caspian.

General A. I. Glukhovskoj and his “Indo – Amu Darya – Caspian waterway from the Indian Ocean through northern India, Afghanistan, Central Asia and Russia to the Black and Baltic Seas”

Discussions about the state-sponsored redirection of the Amu Darya and the Caspian date the well-known flooding of the river back to 1878. The initiative for organizing an expedition under the direction of A. I. Glukhovskoj came from the Russian Emperor’s Viceroy in Caucasus, Grand Duke Mikhail Nikolaevich. Proposing the creation of a special commission on the

⁴⁰ [Nikolaj Konstantinovich, Vel. Kn.], *Povorot Amudar’i v Uzboj*, 1. 62.

⁴¹ See his proposal of a “Great Indo-European Way” submitted in July 1889 and the draft of a railroad from Lisbon to Calcutta: RGIA, f. 426, op. 1, d. 35, ll. 5-6.

Amu Darya question, the Viceroy stated that the “feasibility of joining the Caspian with the Aral Sea by means of redirecting the waters of the Amu Darya river along the ancient current of the Oxus” had already been proven on a theoretical basis.

“The political significance and economic advantages presented by a continuous waterway leading out to the world market which is currently almost unreachable for the marketing of our products, are so obvious that they cannot give rise to any doubt.”⁴²

The work was initiated under the Ministry of Communication’s direction, through a special committee made up of representatives from the military, navy and financial departments as well as the Ministry of State Property and Military Regions. The committee turned out to be less optimistic in its appraisal of the prospects for shifting the river, since available data proved that the waters could be let from the Amu Darya into the Sarykamysh Lakes, but not into the Caspian itself. An expedition headed by General A. Glukhovskoj was sent out in 1880 with the purpose of elucidating the possibilities of various ways of shifting the river – either through or around the Sarykamysh Lakes.

Only one year into the expedition, Glukhovskoj sent a report to the War Ministry with an account of its results. Stating that the possibility of shifting the current of the Amu Darya was apparently already a decided question, Glukhovskoj proposed to discuss in full the future of the rivers of Central Asia.

The plan for the future use of aquatic resources was founded on the appraisal of the prospects for the development of navigation and agriculture. As it stood, neither the Amu Darya nor the Syr Darya would accommodate the transportation of large cargos: the Amu Darya was stormy and frequently changed fairways. The Syr Darya, moreover, serving as the main source of water for irrigation, had lost water over the years on account of population growth and the demands of irrigation. Because of these two uses of its waterways – for transportation and irrigation – the Syr Darya was set aside as a last resort. The Amu Darya would have to become the main aquatic transportation artery of Central Asia. In order to make both rivers contribute to the good of man – while fulfilling both functions – it was necessary, in Glukhovskoj’s opinion, to change their currents:

⁴² RGVIA, f. 400, op. 1, d. 579, ll. 1-1ob.

“not to send the fresh waters of the central Asian rivers toward the bitter-salty waters of the Aral sea, but to use these fresh waters (nature’s most precious gift in the East) for irrigation and navigation by directing them along their old riverbeds.”⁴³

It was first necessary to redirect the Syr Darya along its arm, the Yangi Darya, to the Amu Darya arm’s, the Kuvansh-Djerma. Then, in turn, Amu Darya would be redirected along the Uzboj into the Caspian Sea. Thus, the two rivers would be connected through their branches, and the Amu Darya would open a navigable path to the Caspian Sea.

This project promised not only the creation of a new transportation path but also the increase of irrigated farmland on the banks of revived riverbeds as well as the deltas and (...) of the bottom of the Aral Sea which, it stands to reason, would, in such a case, be doomed to disappear. Thus, it would be possible to acquire territory for agriculture more vast “than that which is occupied now by all the Khanates which will not only bring income to the state but will exert influence on the climate, increasing its humidity.”⁴⁴ In conclusion, Glukhovskoj petitioned for the creation of a commission to decide on further expeditions and for the discussion of the question “of whether or not the preservation of the Aral Sea – this dead reservoir of bitter-salty water – was necessary for the Empire.”⁴⁵

In contrast to the St. Petersburg civil servants from the Department of Communication who were fired up with ideas of building a new waterway, the local military command and administration were by no means favorably predisposed to getting to work quickly (matters were further aggravated by Glukhovskoj’s constant meddling in military affairs). The Turkestan military region’s district headquarters asked to halt work until more reliable information was received concerning the possibility of the Amu Darya reaching the Caspian and on the advisability of the creation of a transportation route. General Lieutenant G. A. Kolpakovskij (1819-1906) called for a consideration of all the dangers associated with the enterprise – above all the potential for drying out the Khivan Oasis. From the knowledge of hydrography of the time, moreover, there was no guarantee that the river would not simply evaporate before reaching the Caspian. Naturally, the question arose:

⁴³ Raport Glukhovskogo voennomu ministru o rabotakh Amu-dar’inskoj grupy v 1879-1880 gg. [An account of the work of the Amu Darya group in 1879 and 1880 by Glukhovskoj to the Military Ministry], May 10, 1881: RGVIA, f. 400, op. 1, d. 702, l. 45.

⁴⁴ RGVIA, f. 400, op. 1, d. 702, l. 46.

⁴⁵ RGVIA, f. 400, op. 1, d. 702, l. 46ob.

“is it worth wasting a ton of money and turning the Khivan Oasis into a desert simply in order to prove the possibility of the Amu Darya reaching the Caspian, even if it turns out to be in the form of a small stream of water.”⁴⁶

Regardless of the military and the administrators’ skepticism, Glukhovskoj’s expedition continued its work until the autumn of 1883 (Glukhovskoj himself continued his research until 1887). In 1885-1887 Glukhovskoj put forward a series of writings united by a central idea: the Amu Darya must become the basic “strategic line” connecting Russia with Asia (large-scale plans for the changing of the currents of the Yangi Darya and the Syr Darya were no longer in discussion). The general showed that the railroads that were being built in Turkestan did not satisfy Russia’s strategic and economic purposes. The railroads were vulnerable and expensive while waterways were almost universal and harmless. The joining of the Amu Darya and the Caspian, suggested in this context, would fully pay for itself, due to the major profit that would issue forth from the exploitation of this new pathway.⁴⁷

Glukhovskoj’s project consisted of two possible versions. The first would cost the treasury 27 million rubles; the second, 42 million. The difference in cost can be explained by the fact that, in the first case, Glukhovskoj proposed to use the old currents of the Amu Darya and to redirect the waters through the Sarykamysh Lakes into the Uzboj to the Caspian. The problem was that it would take 15 to 17 years to fill the deep lakes. For this reason, Glukhovskoj preferred the more expensive project, namely, building a route around the Sarykamysh Lakes.

In 1887, the expedition presented its account to the Ministry of Communication’s Department of Road and Water Communication’s technical committee. In Glukhovskoj’s words, the question of the feasibility of letting the waters

⁴⁶ The District headquarters of the Turkestan military region, General Lieutenant Kolpakovskij to the Military Ministry. Report. June 30, 1881: RGVIA, f. 400, op. 1, d. 702, ll. 140-141ob. A. N. Kuropatkin spoke out categorically against attempts to realize plans to redirect the current of the Amu Darya. From his point of view, the leveling of the Petrusevich showed once and for all that river-shifting is impossible as a result of the difference in levels of the Sarykamysh and the Caspian (although Petrusevich himself did not think so) and trying to find another way of shifting the river – going around the Sarykamysh through the old riverbed of the Daudan or through the recently opened so-called Chardzhujskij stream was pointless: RGVIA, f. 400, op. 1, d. 702, ll. 142-179.

⁴⁷ General Glukhovskoj’s note on the establishment of steam navigation on the Amu Darya. October 2, 1885: RGVIA, f. 183, op. 1, d. 23. See also: Memorandum on the investigation of the methods and means for setting up parts of the Amu Darya-Caspian waterway to the Sarykamysh Lakes, 1887: RGVIA, f. 183, op. 1, d. 70. The plans for building a waterway led Glukhovskoj to other ideas: the development of steam navigation, the reorganization of military governance (with the formation of the Amu Darya line, see RGVIA, f. 183, op. 1, d. 38) and the building of the Trans-Caspian region as a whole. See: Glukhovskoj, 1887.

of the Amu Darya into the Caspian had been decided “in the affirmative.”⁴⁸ In this context, the Grand Duke’s efforts in the Amu Darya region conflicted with the Department of Communication’s plans. Upon receiving news of the breaching of the dam in 1890, Glukhovskoj immediately reported on the urgent necessity of reconstructing the dam.⁴⁹ The Ministry of Communication requested that the Main Headquarters suppress all such attempts and establish boat-surveillance over the river. The minister meanwhile emphasized the

“extreme significance in all respects of the Amu Darya, for as a result of this significance the river *will enter into the jurisdiction of the ministry* in the very near future or shortly afterwards.”⁵⁰

One cannot say whether or not this was merely an unfortunate expression, but, in any case, the intentions of the Ministry to fully control the river had not revealed themselves at an earlier date. Thus, the Ministry tried to strengthen the idea of the use of the Amu Darya with the prospect of redirecting its current for transportation.

In contrast with the Ministry of Communication, the War Ministry was skeptical of plans to redirect the rivers. Fedorov, head of the Trans-Caspian region headquarters, categorically insisted that any attempts to direct the Amu Darya to the Sarykamysh Lakes and further to the Caspian would be not only pointless but dangerous. Fedorov equally condemned the Grand Duke’s projects as well as other options, supported by the Ministry of Communication, as grandiose and expensive. He warned, and aptly so, that up to the present time Russian irrigators had not succeeded in realizing any of their ambitious projects (indeed, by that time not one widely functioning state irrigation network had been built). Meanwhile a whole array of failures could already be attributed to engineers. Thus, to pursue a project of shifting a river, without even having learned to build irrigation canals, was nonsensical.⁵¹

The War Ministry was not the only adversary of the Amu Darya – Caspian waterway project. Glukhovskoj’s main opponents were the advocates of assimilating Central Asia by means of railroads. For several years after the Trans-Caspian railroad was completed in 1888, the number of supporters for river-shifting significantly decreased. The Amu Darya – Caspian waterway turned out to be simply unnecessary.

⁴⁸ RGVA, f. 183, op. 1, d. 69, l. 40.

⁴⁹ The Grand Prince and Glukhovskoj became rivals. Nikolaj Konstantinovich complained that the general tried to “trip him up” and accused him of wanting to waste 40 million in treasury funds on an empty endeavor: RGIA, f. 537, op. 1, d. 1197, l. 298 [Letter to P. E. Keppen, Novembre 9, 1890].

⁵⁰ RGVA, f. 400, op. 1, d. 1412, ll. 8-8ob.

⁵¹ RGVA, f. 400, op. 1, d. 1412, ll. 22-22ob.

In 1893, Glukhovskoj published his project,⁵² which earned the Gold medal at an exhibition in Chicago, but which was fiercely criticized and torn to pieces by Russian geographers and the press. Mushketov, who had earlier refused to participate in Glukhovskoj's expedition, commented with malice on his composition:

“the whole book presents a bright example of shocking delusion and utter lack of conscientiousness. [...] not a single question is explained without juggling the facts, and not a single conclusion is based even somewhat logically. [...] For such reports the head of the expedition, Mr. Glukhovskoj, should be prosecuted, and the book should be banned forever, for holding harmful and deceitful ideas.”⁵³

Yet another reason for the cooling of interest toward the projects of the second half of the 1880s and 1890s was to be found in the development of geological and biological research and advances in engineering. The plans of the Grand Duke and Glukhovskoj, for all the various fairytale fantasy of the former and the well-founded, and technologically sound project of the latter, had much in common. Both came from the idea that the change in the course of the river was caused by man.⁵⁴ The logic was simple: if man had turned the Amu Darya towards the Aral, then man could turn it back. But the findings of the scientists V. A. Obruchev (1863-1956), A. Konshin and others in the 1880s and 1890s did not even consider this argument seriously. The argument was about the origin of the Uzboj⁵⁵ and the natural reasons for its drying up (the rising of the earth, siltification etc.). The Communications Ministry's engineer P. Lessar, also one of the builders of the Trans-Caspian railroad and an opponent of Glukhovskoj's project, described the naïve enthusiasm of the first explorers,

⁵² The title in full: “Letting the waters of the Amu Darya river along their old current into the Caspian sea and the formation of a continuous Amu Darya-Caspian waterway from the Afghanistan borders up to Amu Darya, Caspian, Volga and Mariinskaja System to Petersburg and the Baltic sea.”

⁵³ The inscription on the last page of Glukhovskoj's book, written by Mushketov in 1896: Mushketov, 1960. vol. 3, p. 231.

⁵⁴ Glukhovskoj, in contrast with the Grand Prince, formulated three reasons, one of which related to natural phenomena: 1) The breaking of the peak Shaykh Djeyli, which decreased the amount of water falling into the Kunya Darya, 2) The building of dams with political intent into the system of the formal canal Bu and the current Lauzan, which hindered the formation of the new course of the Amu Darya towards Sarykamysh, 3) the building of dams in the currently old riverbeds and in the Daudan in light of the economic goals of facilitating irrigation of the localities nearby. See Glukhovskoj, 1893, pp. 45-46.

⁵⁵ The most important were the two versions about the sea and river origin of the Uzboj. A. Konshin alleged that the Uzboj was a channel between seas. V. Obruchev rejected his version, explaining that the Uzboj was not a self-sufficient river, but was actually a drain of the waters of the Sarykamysh Lakes, which had earlier been filled with water from the Amu Darya. Even more fantastic version existed, for example, the ancient connection of the pools of the Aral and the Caspian by the Amu Darya and the Syr Darya along with the Issyk Kul: Chajkovskij, 1884; Chajkovskij, 1908.

inspired by the breaching of the Amu Darya in 1878 and new possibilities, with a healthy dose of irony:

“To see or cross the ancient riverbed of the Oxus was almost a guarantee of celebrity. It is perfectly natural that in such conditions the rare traveler, having made it to this land, had neither composure nor objectivity, which are imperative for the collection of accurate findings. Every traveler strove to see the ancient riverbed and often saw it in some kind of cavity along their path [... To] this can be added another source of error. Who does not know the natives’ desire to please, which so often leads to despair? Not a single guide can resist temptation to compose a legend ... that would please a well-paying traveler? A depression of an elongate form quickly obtains the name Kunya Darya (old river). ‘*The old men say that, with this riverbed, the Oxus emptied out into the Caspian sea,*’ adds the guide, and the traveler, captivated by his imagination, even believes that he sees traces of former water currents.”⁵⁶

One of the first investigators’ mistakes was the belief in the possibility of man redirecting the current of a river. Indeed, wrote Lessar, the Khivans did close off specific canals to punish the tribes. But from this legends arose, which in turn explained the changing of the currents of the Amu Darya.

The idea of renewing the “old current” was tainted with archaism and Eastern wildness. Modern technologies of railroad building, sober calculation and scientific knowledge contrasted with this tendency.

“The high opinion that certain travelers have formed for themselves about the experience of Eastern peoples with hydraulics are mistaken; in this area their knowledge and strength is much lower than the strength and knowledge of Western peoples, but, of course, not one European or American engineer would take up the problem of changing the current of such a significant river as the Amu Darya.”⁵⁷

Lessar concluded that the enterprise of joining the Caspian and the Aral through the Amu Darya and the renewal of its old riverbeds was infeasible, even through specially developed canals.

The change in attitude toward irrigation is also evident in the state plans. Just as the first travelers and engineers’ irrigation plans took shape under the influence of observed landscapes (one can even say that their reception and interpretation were formed by the landscape) so the first Turkestan Governor-Generals’ conceptions of authority were formed by means of Asian formulas

⁵⁶ Lessar, 1891, p. 5.

⁵⁷ *Ibidem*, p. 31.

of power. Not only the Grand Duke, but also those who criticized the Duke for managing things independently, tried, in some way, to imitate the Khan's use of power. This is most clearly evident in the irrigation attempts of Kaufman and Chernjaev described above. At the end of the 1890s or even at the beginning of the 1900s, a sudden change occurred: St. Petersburg suddenly remembered its unutilized resource. The Central Administration of Agriculture, formed in 1904, created a special cotton-growing program, which provided for the construction of a state network of irrigation installations. The state at long last took the monopoly on irrigation into its hands, pushing aside both the local administration and private irrigators such as Nikolaj Konstantinovich. Moreover, the reception of the formula "power in water" remained quite flat and superficial. The usage of aquatic resources was treated not as a basis for social relations, which would penetrate the society from the bottom up, but rather as a legitimization of the concentration of power. This gave rise quite a bit later to the admission of the necessity to regiment water use in Central Asia (the law on water use was only passed in 1916) as well as to attempts to build a system of administration and social relationship on the local level according to the Russian model, on the basis of communal sharing of lands.⁵⁸

Returning to Glukhovskoj's project and to the reasons for its criticism, one can make yet another supposition, which requires an explanation from the point of view of cultural and social changes in society. A period of "skepticism" began at the end of the nineteenth century, and grandiose projects were clearly no longer in fashion. A few years later, however, this interest was newly awakened. In 1906 G. P. Sazonov proposed the follow-up project of irrigating the Trans-Caspian region with the waters of the Amu Darya. In 1908 the government considered the projects for irrigating the Murgabskij and Tedzhenskij oases with the waters of the Amu Darya (M. N. Ermolaev), which incidentally suggested taking water from the Amu Darya through the Kelif Uzboj. In 1908 and 1911, expeditions of the Moscow Stock Exchange Committee and G. P. Sazonov's expedition were at work in Karakum. The former concluded that irrigating a desert was unfeasible and pointless. The latter proposed a

⁵⁸ One must say that the changing of two concepts of irrigation: first, that founded on "local knowledge" (its manifestation, the rehabilitation of ancient canals, the emphasis on traditional methods of irrigation and maintaining traditional social relationships in the local community) and second, European, civilized, state-oriented, was characteristic not only for the experience of Russian colonizers. David Gilmartin described the clash of analogous concepts of irrigation and also (the "science of the empire", the ruling power founded on the knowledge of the local community and the utilization of this knowledge for the building of one's own social powerful system) and the arrival of "engineers" with ideas about the supremacy of science and technology (imperial science) in British India: Gilmartin, 1994, pp. 1127-1149.

project to build an immense Karakum canal. No one, however, was giving any thought to joining the Amu Darya and the Caspian by means of a transportation waterway. The central idea of these projects was to irrigate the lands with regard to developing the cotton industry.

From a political point of view, the acquisition of new irrigated lands was connected with the economic and political “revival of Russia” and the renewal of its role as a world leader.⁵⁹ Both goals, however, were to be attained not by realizing the geopolitical fantasies of joining India and Europe, but rather by means of economic aggression. Russia’s dependence on its cotton suppliers (above all, American) and its obvious backwardness among the ranks of other empires which had built immense irrigation systems over millions of hectares of land (the main objects of envy were British India and Egypt) served as the source of disappointment and a reason for initiating projects.

“Russia has all it needs to become the director of the economic life of the European people, to dominate with its products both industry and agriculture, wrote G. Sazonov. This enormous country possesses all that it needs to be the lord of its situation, but Russia is a slave, forced to kneel before intractable international capitalists, fully aware all the while of its immense power.”⁶⁰

The Grand Duke Nikolaj Konstantinovich and Glukhovskoj’s projects were branded as anti-modern and utopian and were forgotten for a while. The Duke’s fantasies were generally drowned in Lethe, but in the 1920s, Soviet irrigators returned to the ideas of renewing the Amu Darya’s old riverbed through the Kelif Uzboj or Kunya Darya. It was at this time that Glukhovskoj, who had also been considered something of a madman by his contemporaries, would be recognized as one of the foremost hydraulic engineers.

“Turning the Amu Darya toward the Caspian Sea: the age-old dream of the people”⁶¹

A new stage of development of plans and projects for using the water resources of the Amu Darya began in 1918. Discussions of various possibilities

⁵⁹ G. P. Sazonov’s project was supported by the well-known economist Migulin and was published last in a collection of works, under the title “The Revival of Russia” (in *Vozrozhdenie Rossii*, Kharkov, 1910). *À propos*, G.P. Sazonov insistently proposed another idea to Witte: joining of the Caspian with the Persian Gulf through the “Ponto-Caspian Canal” (From the proofs of Sazonov’s memoirs: RGIA, f. 1659, op. 1, d. 63, l. 86). I note here with gratitude that I. A. Khristoforov put me onto this source.

⁶⁰ [G.P. Sazonov], *Vozrozhdenie Rossii*, 1910, p. 465.

⁶¹ Korovin and Granitov, 1950, p. 7.

for construction of canals in the 1920s and 1930s and the subsequent preparation for the construction of the Great Turkmen and Karakum Canals deserve special investigation. But, in finishing a study of the fates of two schemes for redirecting the Amu Darya into the Caspian, I cannot refrain from discussing the fate of this idea, at the very least in general terms. The discussion of plans for irrigation in Turkestan began precisely where it had been disrupted by the war and the revolution: the prospect of building a southern canal (through the dry Kelif Uzboj) or a northern canal (through the old riverbed of the Kunya Darya). In 1925, engineer F. P. Morgunenko proposed the project of releasing the Amu Darya into the Kelif Uzboj. In April 1927, the so-called Bassaga-Kerkinskij canal was opened. Two years later the dry Kelif Uzboj was transformed into a 50-kilometer canal. In Karakum, the first bridge and oases appeared. The dream of the august mad Grand Duke Nikolaj Konstantinovich, who was shot in 1918, had come true. Several years later, the Kelif Uzboj and the canal built there were reworked to form part of the new Karakum canal.

A whole range of projects represented the northern version of the construction of a canal from the Amu Darya: V. V. Cinzerling (directing the waters along the Kunya Darya and the Daudan), I. A. Sharov (a new project for using the hypothetical Khivan stream on the south of the Kunya Darya), and G. K. Rizenkamp (the project of the Trans-Caspian canal⁶²). A. I. Glukhovskij's rehabilitated project came up in discussions concerning the construction of an irrigation network as a main source for leveling data, and for accurate information in the preparations of projects for building canals through the Karakum as well as throughout the 1930s until the onset of the war. In 1950, the USSR's Council of Ministers published a resolution on the construction of the Great Turkestan canal – Amu Darya – Krasnovodsk

“a length of 1,100 kilometers along a line from Takhja-Tash on the Amu Darya river around the Saryakamysh basin and further through the Karakum desert along the ancient riverbed of the Uzboj into the waterless regions of the Prikaspijskij (Near-Caspian) plains of Western Turkestan.”⁶³

⁶² The son of the Grand Prince from his marriage to N. A. Drejer, Aleksander Nikolaevich Iskander (1889-1957) accused G. K. Rizenkamp of using the Grand Prince's project. In 1918, this project was placed, along with all of Nikolaj's property, in the Museum of Central Asia. Apparently, the “fraud” was later uncovered, the prize for the project was confiscated, and the guilty party sent to the Soloveckij labor camps. Later, Rizenkamp resurfaced in Tashkent where he related the story to a certain V. Shirjaev. A. Iskander had obviously been mistaken: the Grand Prince could hardly have produced fully elaborated projects which could have been of interest to Rizenkamp, who later became an esteemed figure in Soviet irrigation (although the idea of the Trans-Caspian canal was altogether in keeping with Nikolaj's dreams). See Iskander, *Excerpts*.

⁶³ Abdalov (ed.), 1951, p. 3.

The construction of this canal was welcomed by the Soviet press as the realization of the “age-old dream of the Turkmen people”. Through dozens of brochures and articles, which created an agitational and ideological backdrop, the idea of the construction of the canal acquired a genealogy, from Peter I and the expedition of Bekovich-Cherkaskij to Glukhovskoj’s projects, and onward to the ideas and debates of the 1920s. The idea of renewing ancient currents, which was mentioned even in the resolution of the Council of Ministers, received once again its great significance – this time in the context of Stalin’s plan to remake nature. Legends of Ancient Khorezm where the cat leaped from roof to roof, while the nightingale flitted from branch to branch, of the Khivan Khans, and of the Turkmen they oppressed, became a part of a new mythology.

Translated from Russian by Timothy Portice

Abbreviations

GARF	Gosudarstvennyj arkhiv Rossijskoj federacii [The State Archive of the Russian Federation]
RGVIA	Rossijskij gosudartsvennyj voenno-istoricheskij arkhiv [Russian State Arkhive of War History]
RGIA	Rossijskij gosudarstvennyj istoricheskij arkhiv [Russian State Hist. Arch.]
<i>Izvestija IRGO</i>	<i>Izvestija Russkogo Imperatorskogo geograficheskogo obshchestva</i> [News of the Russian Imperial Geographical Society]
OR RNB	Rossijskaja nacional’naja biblioteka. Otdel rukopisej [Russian National Library. Manuscript Department]

Archives

The Bakhmetev Archive (New York), Aleksandr Nikolaevich Iskander Papers.

GARF	fond 617, Kaznakov. fond 664, Grand Duke Nikolaj Konstantinovich.
OR RNB	fond IV, Osnovnoe sobranie rukopisnoj knigi [Main collection of handwritten books].
RGIA	fond 426, Otdel zemelnykh uluchshenij Ministerstva gosudarstvennykh imushestv [Ministry of State Domain, Department of Land Amelioration]. fond 435, Opeka nad vel.kn. Nikolaem Konstantinovichem [Nikolaj Konstantinovich’s wardship]. fond 537, vel. kn. Konstantina Nikolaevicha [fond of Grand Duke Konstantin Nikolaevich].

fond 1659, G.P. Sazonov.

RGVIA fond 400, Glavnyj shtab Voennogo ministerstva [General headquarter of the Ministry of War].

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