

## AN ABSTRACT OF THE THESIS OF

Rachel D. Koroloff for the degree of Master of Arts in History of Science  
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Title: The Beginnings of a Russian Natural History: The Life and Work of Stepan Petrovich Krasheninnikov (1711 – 1755)

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Stepan Petrovich Krasheninnikov (1711 – 1755) was a successful early Russian naturalist whose professional and social destinies were linked to eighteenth-century Russia's nascent but growing naturalist tradition. During his own time Krasheninnikov bridged the gap that existed in Russia between a distinctly European scientific practice and a tradition of Russian military expansion. He, like many of his contemporaries, was engaged in a process of accommodation between European scientific practices and Russian social and political traditions. This study attempts to address the general theme of the relation between science and culture through the life and work of Krasheninnikov. It argues that the adoption of scientific practices (in the guise of natural history) in eighteenth-century Russia was characterized not by a unidirectional importation of scientific practice nor by the westernization of the practitioners, but by a diffuse and sometimes idiosyncratic process of appropriation as Russian men of science sought to integrate European scientific practice into preexisting Russian historical, social, and political structures.

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The Beginnings of a Russian Natural History: The Life and Work of Stepan  
Petrovich Krasheninnikov (1711 – 1755)

by  
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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

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Rachel D. Koroloff, Author

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INTRODUCTION

Stepan Petrovich Krasheninnikov (1711 – 1755) was a successful early Russian naturalist whose professional and social destinies were linked to eighteenth-century Russia's nascent but growing naturalist tradition. Krasheninnikov's life and scientific career illuminate the strongly interrelated, even interdependent, characters of natural history, expedition, and conquest in the eighteenth century. His life bridged culturally and historically diverse traditions stemming from Russia and Europe; traditions that had been in uneasy coexistence in Moscow and St. Petersburg since the turn of the century. By the beginning of the eighteenth century, Russia already had a long and well-established tradition of military expansion, in which conquest and exploration were linked. The introduction of the European scientific practices, of natural history, geography, astronomy, and ethnography to Russia's tradition of military expansion fostered the growth of the familiar eighteenth-century hybrid practice of scientific expedition into Russia's borderlands. The practice of scientific expedition called for a new nexus where the culturally-influenced traditions of state-sponsored science and expansion came to accommodate one another.

The career of Stepan Petrovich Krasheninnikov hinged on both of these traditions. During his own time Krasheninnikov bridged the gap that existed



between two sets of practices that were still integrating into one another. A treatment of Krasheninnikov's career and the uses to which he put his skill at natural history, likewise bridges certain distinct sets of literature in the historiography of eighteenth-century Russia. The introduction of European scientific practice to Russia is usually discussed in the historical literature under the rubric of the 'westernization' implying that certain European traditions replaced and made obsolete Russian traditions that came before. I argue here that aside from the importation of scientific practice, eighteenth-century Russians were engaged in a process of accommodation between European scientific practices and Russian social and political traditions. Krasheninnikov's practice of natural history might just as easily fall under the less well-known rubric of the russification of European traditions in science.<sup>1</sup> I use this term to indicate the various intellectual tools (assumptions, experiences, interests, and methods) that Russian practitioners have inherited from their Russian cultural milieu and employed in their scientific practice. Falling just short of a Russian national style, the russification of eighteenth-century European science demonstrates the plasticity of early scientific practice and underscores the important role of location (cultural or otherwise) in science.

The literature that focuses specifically on the early history of Russian science is somewhat less extensive. Often the issue of early Russian science forms

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<sup>1</sup> Ludmilla Schulze has used the term "russification" more narrowly in her work to mean the demographic shift within the Academy away from an entirely European make up to a primarily Russian one. "The Russification of the St. Petersburg Academy of Sciences and Arts in the Eighteenth Century" *British Journal for the History of Science* 18 (1985): 305 - 335.

only a brief part of larger narratives more concerned with eighteenth-century Russian history in general. These histories, because of their breadth often fail to stress, or even note, the importance of the scientific expeditions to early Russian science. They too rely on the key concept of westernization and the metaphor of importation to describe and analyze eighteenth-century Russian science. They do find in the eighteenth-century Russian scientific expeditions a source of cultural commixture but see, rather, an instance of double colonization: the European colonization of Russian scientific practice and Russian territorial expansion.

If the scientific conquest of Siberia and other Russian borderlands do not command the attention of historians of eighteenth-century Russia in general, they are treated only marginally better by historians of Siberia. Those histories of the Russian empire that choose to focus on conquest and the fur trade often fail to appreciate fully the rich scientific traditions established by these expeditions.<sup>2</sup>

This study seeks to address this gap in the literature by addressing the general theme of the relation between science and culture on two different levels. First it tries to show how science, in the form of natural history, and empire were related in eighteenth-century Russia by exploring how Krashennnikov's work was used in the interest of Russian empire and to what extent it was recognized as scientific. Secondly it tries to show, on a more circumscribed level, the process of

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<sup>2</sup> There is a great deal of literature available on the relationship between scientific practice, colonial expansion, and professional advancement in other national contexts. See: Michael Osborne, *Nature, the Exotic, and the Science of French Colonialism* (Bloomington: Indiana University Press, 1994); Lewis Pyenson, "Cultural Imperialism and Exact Sciences: German Expansion Overseas 1900 – 1930," *History of Science* 20 (1983): 1 – 43; Paolo Palladino and Michael Worboys, "Science and Imperialism," *Isis* 84 (1993): 91 – 102.

the integration of scientific practice and scientific hierarchy to eighteenth-century elite Russian culture. Ultimately this study will attempt to show that the adoption of scientific practice in eighteenth-century Russia was a dynamic process requiring a difficult period of accommodation. This process was characterized not by a unidirectional importation of scientific practice, but by a diffuse and sometimes idiosyncratic practice of appropriation. Western scientific practice was appropriated by the early Russian scientific practitioners as a means to political and personal power within the rapidly expanding Russian state. Ultimately, the scientific practice that resulted from this appropriation hinged on Russia's own unique historical and cultural situation.

I have organized this work into two basic parts. The first half, consisting of the first three chapters, seeks primarily to examine the dominant historiography of eighteenth-century Russia and the history of Russian science. The last three chapters which make up the second half deal closely with Krasheninnikov's life, his written work, his career, and his academic reception in Europe.

Chapter one, entitled "Historiography" places Krasheninnikov's story and this essay within the context of the wider literature on eighteenth-century Russia and Siberia. It seeks to demonstrate how Krasheninnikov's story consistently falls in between the different historiographical traditions concerning eighteenth-century Russia. This chapter breaks these different literatures into two major camps, which I have titled "Peter the Great and 'Westernization'" and "Siberia and the Fur Trade." I have made this seemingly arbitrary distinction because within each tradition references often are made among the works cited but rarely

between them. For instance, there is little evidence to suggest that those authors dealing with Peter the Great and Westernization are especially concerned with the work being done by others on the history of Siberia. Historians of Siberia and Russian expansion must, of necessity, consider the political, economic, and social changes occurring in western Russia, but much of their work remains subsidiary to the larger cannon characterized by studies of Peter the Great. Historians of science tend to fall into the former rather than the latter category, having focused primarily on the establishment of the Academy of Sciences and Russia's early scientific relations with the West. They have not successfully formed a coherent view of Russia's eighteenth-century scientific expeditions and the growth of a tradition in Natural History. A treatment that is equally interested and well-versed in Russian social and political changes, local Siberian studies and practices, and the history of Natural History has not yet been written. This work is inspired by that aim but falls far short of achieving it. The work of the various historians of science who have chosen to write on the eighteenth century, therefore, will be treated throughout the historiography on an individual basis.

The following two chapters focus more closely on the growing specialist literatures concerned with the history of expansion and empire, and the development of natural history as a scientific discipline. The first half of chapter two entitled "Expeditions" concentrates on Russia's history of military conquest in Siberia. Krasheninnikov's life and work played a key role in the distinctly Russian tradition of overland military expedition into and conquest of Siberia. The second half of this chapter tries to situate the Second Kamchatka Expedition

within this history by remarking on the fundamental conceptual change necessitated by the introduction of scientific practice and natural history to the process of conquest. After discussing the development and impact of eighteenth-century scientific contingents to these expeditions, this chapter concludes by exploring how Russia's territorial expansion throughout the seventeenth and eighteenth centuries both can and cannot be considered 'colonial.'

I suggest in this work, perhaps not originally, that the introduction of scientific practice changed and was changed by its commingling with the established Russian tradition of conquest. Chapter three seeks to illuminate further this dynamic relationship by evaluating the Second Kamchatka Expedition within Russia's natural history tradition.

Krasheninnikov's allegiance to his Russian state, which manifested itself in a number of ways, was entirely compatible with his commitment to his work on natural history. While Krasheninnikov's practice of natural history 'westernized' him to a certain extent, it also allowed him a new means by which he could serve and aggrandize his Russian state. For Krasheninnikov, the scientific practice of natural history was not a way to escape his Russian identity, but rather a way to more fully underscore, realize, and develop it.

The second half of this thesis explores Krasheninnikov's life in greater detail, focusing on his education, his writings, and the reception of his capstone work among the European scientific reading public. Chapter four, entitled "Early Years," describes Krasheninnikov's early education in Moscow as well his experiences in St. Petersburg with the Academy of Sciences before leaving in

1733 on the Second Kamchatka Expedition. In part this chapter seeks to demonstrate how the various reforms of Peter the Great assumed material structure as well as how they served and shaped subsequent generations of Russian and foreign scholars. On a narrative level, this chapter effectively serves to introduce Stepan Petrovich Krasheninnikov to the reader. It describes his early educational influences and establishes those particular talents of his that won him a position on the Second Kamchatka Expedition.

Chapter five concerns Krasheninnikov's writings, including those which were published over two hundred years after his death. Central to this chapter is a discussion of Krasheninnikov's most important publication, the *Opisanie zemli Kamchatki* (1755). It traces Krasheninnikov's intellectual and professional development, underscoring his increasingly assured scientific writing style and his growing political importance within the Academy. This chapter concludes by suggesting that Krasheninnikov was actively involved in the development of a Russian literary language, a preoccupation of many of his educated Russian contemporaries. Krasheninnikov was able to incorporate his knowledge of Latin and his experience with scientific reporting to be among the first to develop a scientific literary style in the Russian language. Evident in Krasheninnikov's language are his deeply scientific and patriotic aims, ameliorated by his ability not simply to accommodate but to fuse the two.

Chapter six follows the reception of Krasheninnikov's *Opisanie* in Europe through several translations. Though Krasheninnikov never seemed overly concerned with the opinion of his European counter parts (he never traveled

outside of Russia and Siberia; he published his only major scientific work in Russian; and he did not carry on extensive correspondence with any European naturalists), his reception in Europe nevertheless helps the historian to gauge both the scientific merit of his work and the more demonstrably 'Russian' elements therein. It also helps to place Krasheninnikov's work and eighteenth-century Russian science in a broader context, reinforcing the notion that Russia's attitude toward its image in the eyes of other European states was deeply ambivalent.

On a most basic level this study is concerned with the purported western nature of enlightenment era science. Studies that stress the importation of science into Russia implicitly reinforce the idea of the fundamentally western nature of scientific practice and the idea of Russia as a non-western place. In more ways than one these studies have been conducted from a western view point and thus fail to explore or even recognize the degree interchange and the practices of accommodation that existed between eighteenth century science and its Russian practitioners.

## CHAPTER ONE

### HISTORIOGRAPHY

The literature on eighteenth-century Russia is extensive yet dated. Many of the interpretations offered by twentieth-century historians of eighteenth-century Russia are themselves variations of interpretations laid down in the nineteenth-century. As one Russian historian has written, most eighteenth-century Russian studies have been in a state of “relative historiographic calm for several decades, and little published in the last decade has done much to ruffle that calm.”<sup>1</sup> These studies and interpretations remain relevant if unchallenged in their dominance. The hegemony of certain core ideas in the historiography of eighteenth-century Russia that helps to define the different literatures also serves to keep them apart. Studies that cross over from one cannon to another within the discipline of Russian history have only recently become more common.

The classic nineteenth-century Russian historians V. O. Kliuchevsky (1841 – 1911) and others established the discipline of Russian history on a firm foundation. English, French, and German language studies of eighteenth-century Russian social and political history flourished during the 1960s and 70s. They borrowed heavily from their Russian predecessors but decreased in number considerably as the century wore on. Those who currently write about the political and social state of eighteenth-century Russia focus mainly on reassessing the reigns of such prominent monarchs as Peter I (1672 – 1725) and Catherine II

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<sup>1</sup> Paul Bushkovitch, “The Monarch and the State in 18<sup>th</sup>-Century Russia,” *Kritika: Explorations in Russian and Eurasian History* 4 (2003): 931.



(1729 – 1796). Nineteenth-century studies like Kliuchevsky's have established a century of influence in Russian history, offering long-lived insight on eighteenth-century Russian social structure. Even they, however, would benefit from dialogue with the interpretations and methodologies developing in other canons and disciplines.

The stress on interdisciplinarity and cross-canon dialogue is still young. Most historians of the early development of Russian science, like eighteenth-century Russian historians in general, have kept their focus firmly on western Russia's political changes. Historians who choose to write about eighteenth-century Russian science rarely include a thorough examination of Russia's scientific expeditions in their studies. They rightly point out Russia's imperial aims but rarely consider its colonial projects in Siberia, the Caucasus and the Far East. These historians only mention Siberia as a borderland and cast the scientific expeditions as one more example of the academic and political muscle flexing of the newly established Academy of Sciences in St. Petersburg.

Early modern Russian historians, as well as historians of Russian science, neglect to recognize that these expeditions created a unique opportunity for Russians to gain training and experience in a number of prominent and important scientific disciplines, including astronomy, cartography, and natural history. In examining the extant literature, it will become apparent that while the component elements to this story of early Russian scientific development through expedition and natural history are well-established (westernization, the conquest of Siberia,

the establishment of the Academy of Sciences) there remains a genuine need for synthesis and reinterpretation.

### **Peter the Great and ‘Westernization’**

Historians usually mark the birth of eighteenth-century Russian science with the reign of Peter the Great and the establishment of the St. Petersburg Academy of Sciences. They often detail the reforms enacted by Peter that allowed for the development of a scientific culture in Russia, including those that provided for the structure and composition of the Academy. They point to the impressive early work published by the foreign members of the Academy, most prominent among them, Leonhard Euler, as evidence of the successful, if ironically named, birth of Russian science. This literature stresses the westernizing aspect of the development of science in Russia and links Peter’s sweeping reforms with a rejection of Russia’s past and the embrace of a distinctly Western future.

Classic texts on the history of Russian science often note the alienation and sense of betrayal experienced by Russian elites associated with these changes and suggest that Russia was a country ill-equipped institutionally and culturally to accept the presence of western science in its Orthodox lands. These texts offer valuable information for any interpretation of the early history of science in Russia, but they are constrained by their limited historical perspective and their methodological orientations. They characterize early science in Russia as an exotic transplant, under siege in a harsh climate. According to this narrative, Russians themselves were merely imitators, aping western behavior to achieve a

modicum of European-style civility. Essential to this narrative is the idealization of Peter the Great as a powerful and pragmatic tsar, who worked tirelessly to enlighten his people even as he wielded a draconian hand to enforce his reforms.

The reign of Peter the Great (r.1682 – 1725) was a momentous time in Russian history.<sup>2</sup> During his reign, Peter enacted a series of hugely influential military, political, cultural, and social reforms aimed at bringing the Russian state closer to a western model. The primary goal of Peter's reforms was establish the Russian state as a powerful nation among its European neighbors. These reforms were in part institutional, focusing on reorganizing the military, building a Navy in the Baltic, and changing the structure of governmental departments. They were also social and cultural, seeking to change the dress, the behavior, and the minds of the Russian *boyar* elite.

In an attempt to divest the old nobility of their inherited nature of their power, Peter established a 'Table of Ranks' in 1722, rewarding young men from a range of social backgrounds for their personal academic or military merit. Peter never achieved a true meritocracy in this way, though it is hard to believe that he actually wanted one. According to James Cracraft, the new Table of Ranks conferred "hereditary noble status...automatically...on any man who reached the

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<sup>2</sup> For this discussion of the reign of Peter the Great, I have relied heavily on the following works: James Cracraft, "Science and Literature," in *The Petrine Revolution in Russian Culture* (Cambridge: Belknap Press, 2004), 193 - 255; idem., *The Revolution of Peter the Great* (Cambridge: Harvard University Press, 2003); Nicholas V. Riasanovsky, *A History of Russia* sixth edition (New York: Oxford University Press, 2000). However it must be noted that almost every source dealing with eighteenth-century Russia contains some analysis of the reign of Peter the Great.

rank of major or its equivalent in the navy and the civil and court services.”<sup>3</sup> The lowest class of Russian society, the class of serfs, remained tied to the land and was excluded from seeking an education or joining the military. Rather than equalizing the access to political power, Peter sought to control it by destabilizing traditional, inherited practices of power dispersal. The attempt at a limited meritocracy did signal Peter’s deep commitment to changing the structures of power in Russia by creating new avenues by which an individual could ascend ranks.

Peter’s concern with establishing Russia’s relative power vis-à-vis Europe mean that he took seriously the power of names. Peter was the first Russian Tsar to die an “Emperor.” Though Peter initially disliked the idea of replacing the time honored title of Tsar, recognizing the importance of its connection to the Byzantine Empire, he eventually assented in 1721 to being addressed formally as “Emperor.” He did so, as one recent Russian historian argues, not merely for his own aggrandizement, but “to ‘serve’ Russia’s growing foreign policy ambitions, which needed to derive their credibility not only from armaments but also from ideology.”<sup>4</sup>

Peter’s change of title was part of a larger movement to modernize Russia’s language with the introduction of new words. Many of these eighteenth-century introductions were of Western origin. Peter’s plan to commission the

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<sup>3</sup> Cracraft 2003, 35.

<sup>4</sup> Elena N. Marasino, “The Russian Monarchs’ Imperial Title (The Formation of Official Russian Imperial Doctrine in the Early Eighteenth Century),” trans. Liv Bliss, *Russian Studies in History* 45 (2006-7): 18.

translation of many European works into Russian meant that Russian equivalents to Western philosophical, literary, scientific, and technological terms had to be created. It quickly became evident that what were needed were not simply new words, but something just short of a new language. Old Church Slavonic was replaced by a hybrid between everyday Russian and fresh Western European cognates. The Russian language changed orthographically in response with the creation of a new, more simplified civil script.<sup>5</sup> The Russian language changed dramatically during this period, expanding its lexicon and systematizing its grammar in response to Russia's encounter with the alien ideas and practices of Western Europe.

This encounter with Western Europe has often been characterized as an embrace of European and as a rejection of Russian ways. Since his own day, Peter has been both celebrated and bemoaned as the first head of the Russian state who, for better or worse, made a decisive break with Russia's 'backward' past, firmly establishing Russia as an eighteenth-century, imperial European power. Defining Peter's Greatness vis-à-vis Europe and the West constitutes a standing tradition in the historical literature begun in the age of Peter himself. The full title of one European account published in 1716 runs "The State of Russia Under the Present

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<sup>5</sup> "As early as 1703 or so Peter realized that to advance the ambitious publishing program necessitated by his aggressive military, naval, and related educational projects he would have to establish a new alphabetic norm for printing in Russia." Eventually Peter would have "nine letters of the traditional Cyrillic alphabet...dropped and the rest more or less drastically simplified on the basis of contemporary European styles and everyday Moscow chancery script." James Cracraft, *The Revolution of Peter the Great* (Cambridge: Harvard University Press, 2003), 102.

Czar...in Relation to the several great and remarkable Things he has done, as to his Naval Preparations, the Regulating of his Army, the Reforming of his People, and the Improvement of his Country.”<sup>6</sup> Peter was not above hiring individuals to speak well of him and his empire in Europe. Among the number of men to recruited to buy western technology was Baron von Huyssen, who had the additional commission to “create in Europe the notion of Russia as a civilized state” by publishing laudatory pamphlets and articles in his own journal, *Europäische Fama*.<sup>7</sup> This campaign to establish Russia as a civilized nation among civilized nations helped to combat the already prevalent descriptors of Russia as both “rude” and “barbarous.”<sup>8</sup>

Of great importance to almost every narrative of the reign of Peter the Great are the related events of Peter’s European tour of 1697 – 1698 and the subsequent revolt of the royal musketeers, or, *streltsy*. Peter’s European tour, or “Grand Embassy,”<sup>9</sup> made him the first Russian monarch to visit the West for diplomatic reasons. Aside from meeting politically important people, Peter spent

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<sup>6</sup> John Perry, *The State of Russia Under the Present Czar* (Newtonville: Da Capo Press, 1968 [1716]) – a new impression of the original first edition.

<sup>7</sup> Marasino 2006-7, 12.

<sup>8</sup> Early modern foreign accounts of Russia are numerous and readily accessible. For a common, though highly abridged collection, see: Francesca Wilson, *Muscovy: Russia Through Foreign Eyes, 1553 – 1900* (New York: Praeger, 1970). Also of interest is: Lloyd E. Berry and Robert O. Crummeny, *Rude and Barbarous Kingdom: Russia in the Accounts of Sixteenth-Century English Voyagers* (Madison: University of Wisconsin Press, 1968). For an eighteenth-century colonial Spanish opinion of Russia, see: Jose Torrubia, *The Muscovites in California* (Rome: Generoso Salomoni, 1759; Fairfield, WA: Ye Galleon Press, 1996).

<sup>9</sup> Alexander Vucinich, *Science in Russian Culture: A History to 1860* (London: Peter Owen, 1965), 43.

much of his time visiting museums, collections, and shipyards. Peter's primary aim was to find and take home certain Western technologies, ship-building primary among them.

Peter's tour, however, was cut short by the serious political uprising of the *streltsy*. The revolt occurred partly in reaction to Peter's sympathetic relationship with the West. A number of foreigners had already reached positions of power in Peter's government before the young Tsar went on his tour. Peter's admiration of the West threatened older Russian political power structures and, in the eyes of the old guard, delegitimized Peter's claims to power as a Russian monarch. The revolt was quelled in its first days by a Scottish military man in Peter's service, General Patrick Gordon (1635 – 1699). If the revolt of the *streltsy* indicated anxiety on behalf of the older Russian elite over Peter's increasingly westernizing tendencies, its suppression by a capable and powerful foreigner only underscored the reality of their fears.

Though anxiety over Peter's (and Russia's) relationship with the West may have catalyzed the revolt, the *streltsy* had served a violent political function before in Peter's life, one that had very little to do with the specter of the West in Russia. Peter's rise to power fifteen years earlier had been marked by a revolt of the *streltsy* who acted successfully on behalf of Peter's half sister, Sophia, to install Peter's half-brother Ivan as co-Tsar. The *streltsy* had traditionally at the service of the particular court insider that they as a group favored. Their support made Sophia's bid for power through her brother, Ivan, possible and successful.

In the course of this earlier revolt, the young monarch apparently witnessed the murder of several people known to him, including his maternal uncle who had been his own and his widowed mother's protector. Upon his return to Russia, therefore, Peter likely had few qualms trying, disbanding, and torturing a good number of the *streltsy*. The suppression of the *streltsy* allowed Peter to uproot a deeply entrenched source of military and therefore political power within the Russian court. Their disappearance cleared the field for other political power structures that Peter found more congenial to his reign.

The suppression also gave Peter the opportunity to demonstrate to a broader audience his growing personal power over the Russian court. Peter executed over one thousand *strelsty*, many of whom were tortured before an audience of foreign dignitaries. "To this exhibition of avenging justice of the Tsar's Majesty," writes Johann Georg Korb, an Austrian in Peter's court, "[were] invited all the ambassadors of foreign sovereigns...to assert anew on his return that sovereign prerogative of life and death which the rebels had disputed with him."<sup>10</sup>

The revolt and subsequent suppression of the *streltsy* comprised only one event in a series of reactions to Russia's changing relationship with the West. According to one prominent historian, the revolt of the *streltsy* "confirmed in [Peter] his determination to make a clean break with the old forms of Muscovite life." The revolt itself prompted the first in a long line of public acts of

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<sup>10</sup> Johann Georg Korb, *Diary of an Austrian Secretary of Legation at the Court of Czar Peter the Great in Imperial Russia: A Source Book, 1700 – 1917*, ed. Basil Dmytryshyn, 1 – 13 (New York: Holt, Rinehart and Winston, 1967), 8.



punishment, aimed at rooting out detractors of his reforms.<sup>11</sup> As he publicly flogged and executed the *streltsy*, Peter was celebrated by contemporary foreign authors for bringing Russia out of its dark, Asiatic and barbaric past into its enlightened, European future.<sup>12</sup>

Immediately after the suppression of the revolt, Peter began to impose his famous series of both practical and symbolic decrees aimed at westernizing his subjects. He made western style clothing mandatory at court and held balls and soirées in the western style, bringing women forth from their traditional confinement to the *terem*.<sup>13</sup> Most famously, perhaps, Peter legislated the shaving of beards and imposed a fine upon anyone who chose to maintain their traditionally Russian facial hair.<sup>14</sup> The old aristocratic elite, the *boyars*, who were among some of Peter's primary political targets, were deeply offended, culturally and religiously, by Peter's decrees. In their view, Peter's decrees were not only

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<sup>11</sup> Marc Raeff, *Imperial Russia 1682 – 1825: The Coming of Age of Modern Russia* (New York: Knopf, 1971), 5.

<sup>12</sup> John Perry, *The State of Russia* (1968); Friedrich Christian Weber, *The Present State of Russia* (London: W. Taylor, 1723); John Mottley, *A History of the Life of Peter the First, Emperor of Russia* (London, 1739). Perhaps one of the best known contemporary paeans to Peter in the English language was Aaron Hill's poem, *The Northern-Star: a poem: sacred to the name and memory, of the immortal Czar of Russia* which had reached its third edition by 1725. Unfortunately this text has been unavailable for consultation in this work.

<sup>13</sup> The term *terem* refers to the separate living quarters designated for women in elite Muscovite households.

<sup>14</sup> For Peter's policy on beards, see: Lindsay Hughes, "'A Beard is an Unnecessary Burden': Peter I's Laws on Shaving and their Roots in Early Russia," in *Russian Society and Culture and the Long Eighteenth Century. Essays in Honour of Anthony G. Cross* eds. Roger Bartlett and Lindsey Hughes, 21 – 34 (Munster: Lit Verlag, 2004).

baffling and upsetting, but they ran counter to traditional Orthodox conceptions of proper behavior (the seclusion of elite women) and piety (wearing a beard).

But Peter's relationship to the West was more than symbol and spectacle. By the end of his reign, Peter had brought scores of European artisans and military men to Russia. They helped reform the army, build the navy, and spread western technical expertise throughout the country. He established new institutions of secondary learning and for those already in existence he arranged for the revision of their curricula along more secular lines. In 1724 he established the St. Petersburg Academy of Sciences even while there were no Russians qualified as yet to join. For almost the first decade of its running, the St. Petersburg Academy of Sciences was largely a foreign institution on Russian soil.

The establishment of the Academy of Sciences and the introduction of scientific practice to Russia is historically and conceptually linked to Peter the Great's series of cultural and political reforms. While different historians stress different elements of the story, they all ascribe to the same essential hierarchy between those elements. For the most part their views privilege western Russia over eastern and urban Russian centers like St. Petersburg over further flung Russian borderlands. They argue that Peter's reforms marked a rejection of Russia's Muscovite past in favor of a European future. They suggest, moreover, that this embrace was problematic. Not until the nineteenth century did proper scientific practice emerge among the Russians.

This particular view of the development of a scientific culture in Russian history is important for a number of reasons. First and foremost, these classic

interpretations are thorough, historically sensitive, and insightful. They have proven foundational to the discipline for a reason. Western Russian urban centers like Moscow and St. Petersburg witnessed a great deal more political and economic change than did Russia's eastern or southern borderlands. These changes, moreover, proved highly influential to the rest of the country. Secondly, these interpretations are also important because they remain relatively unchallenged in the literature. The dearth of interest in eighteenth-century Russian history has solidified and reinforced the arguments of the classic Russian historians and historians of Russian science from the 1960s, 70s, and 80s forming a well-articulated status quo in eighteenth-century Russian historiography.

Most contemporary historians of eighteenth-century Russia freely admit to owing an intellectual debt to the great nineteenth century Russian historian, V. O. Kliuchevsky, whose interpretations of Russian history and explanations of Russian culture, as noted earlier, influence the field to this day. His work on seventeenth-century Russia, a good translation of which exists in English, has become standard for any interpretation of the Petrine era. Kliuchevsky was among the first to emphasize the claim that seventeenth-century Russia never experienced the cultural, economic, and political achievements of a Renaissance, as Europe had.

While the state had been spending its time and money on defense, other political actors such as the court, the government and the privileged classes did little or nothing for the general political, cultural, and scientific enlightenment of the

people.<sup>15</sup> In Kliuchevsky's colorful, if speculative, summation a moderately well-educated Russian taking stock of his country at the end of the seventeenth century would have been abashed at the savage provinciality of his country's court and the shameful state of its peasants. "The Western influence gained ground," Kliuchevsky explains "as we recognized our material and spiritual poverty, brought out more and more clearly by wars, diplomatic relations, and commercial transactions with other countries. Comparison with the resources of the Western European states made us aware of our own backwardness."<sup>16</sup>

Without the cultural foundation of a sixteenth-century Renaissance, seventeenth- and eighteenth-century Russia was ill-prepared to compete with or meaningfully relate to Western Europe. By imposing a Western style of periodization onto Russian history, historians since Kliuchevsky have implicitly ceded to the idea of Russia's backwardness. Likewise, the historiography of eighteenth-century Russian science has continued to champion Western influences over Russian ones, arguing that Russia became a Western style empire in the eighteenth-century. These histories obscure the more distinctly Russian elements of the story in just the way Kliuchevsky's hypothetical seventeenth-century Russian observer would have done.

Similarly, the roots of certain nineteenth-century political debates were found in eighteenth-century studies. For instance, one fairly predictable result of Muscovite Russia's introduction to the world of eighteenth-century Europe was a

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<sup>15</sup> V. O. Kliuchevsky, *A Course in Russian History: The Seventeenth Century* (Chicago: Quadrangle Books, 1968), 277.

<sup>16</sup> Kliuchevsky 1968, 278.

considerable amount of resistance among the elite. Russian members of the Academy, the court, and the clergy engaged in a series of long and quite contentious internal debates over the nature of Russia's future. Those sympathetic with Peter's reforms felt the future of Russia lay in the country's increasing ability to become more European, while those who opposed Peter's reforms saw the process of westernization as a betrayal of Russian culture. They sought, instead, to return to and maintain traditionally Russian, namely Orthodox, ways. These two basic camps came later to be identified with the nineteenth-century political positions of the Westernizers and the Slavophiles. Those appellations, however, did not have the same meaning in the first half of the eighteenth century as they did in the nineteenth. These terms have come, however, to exert an inordinately strong influence on historians of Russian science, who readily seek to demonstrate a genetic relationship between the nineteenth-century debates of the actual Westernizers and Slavophiles with the eighteenth-century debates about the relative uses and potential harm of Peter's westernizing reforms.

Finally, the nineteenth century the stigma of imitation came to be attached to Russia's eighteenth-century scientific and cultural accomplishments. This stigma found full articulation in such publications as the nineteenth-century travel journals of the Marquis de Custine.<sup>17</sup> This perceived stigma of the imitative and almost hollow, certainly alien, nature of Russia's cultural enlightenment underlies

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<sup>17</sup> Astolphe marquis de Custine, *Empire of the Czar: a journey through eternal Russia* (New York: Anchor Books, 1990). Originally published as *Russie en 1839* (Paris, 1843).

many nineteenth- and twentieth-century interpretations of eighteenth-century Russian history.

One such historian, Marc Raeff, offers a particularly insightful interpretation of the social changes inspired by the establishment of the St. Petersburg Academy of Sciences. He has argued that the establishment of the Academy of Sciences had fundamentally radical social implications.<sup>18</sup> In Raeff's view, the most important element in Peter's reforms was the changing relationship between the Tsar and his subjects. Raeff has suggested that Peter's academic reforms created new avenues by which the young Russian elite could pledge their service to the Russian state without an onerous, life-time commitment to the military. Mandatory state service had long been a point of contention between the elite and the Tsar, and Peter sought ways to diversify the manner of this service, and in doing so, to change the elite themselves as they rendered it. Military service was still essential to the successful defense and advancement of the Russian state and to this end a new navy, regiments of personal guards to the Tsar, and the extensive reorganization of the existing military came about. But the creation of *prikazes* or state departments, the reorganization of legal courts and law codes, the establishment of schools and the attention paid to developing new

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<sup>18</sup> Marc Raeff, *Origins of the Russian Intelligentsia: The Eighteenth-Century Nobility* (New York: Harcourt Brace Jovanovich, 1966); Idem., *Imperial Russia, 1682 – 1825: The Coming of Age of Modern Russia* (New York: Knopf, 1971); idem., "The Enlightenment in Russia and Russian Thought in the Enlightenment," in *The Eighteenth Century in Russia*, ed. J. G. Garrard, 25 – 47 (Oxford: Clarendon Press, 1973).

curricula, allowed for some the most capable sons of Russia's elite to render their service to the Tsar in non-military ways.

Alexander Vucinich, an American historian of science, who was roughly professionally contemporary with Raeff, writes of Peter's reforms in a similar fashion. Vucinich focuses on the conflict these reforms inspired, suggesting that Peter's westernizing impulses sparked a fundamental rupture with Russia's orthodox past. In the conflict between those who were for westernization and those who were against it, Vucinich argues that one can see "the failure of the ethos of Russian Byzantinism to meet the demands and challenges of the new era. The crisis of the old ideology stemmed from its unbending opposition to any changes in the time-honored and tradition-sanctified mores and to alien ideas emanating from the cultural centers of Europe." Russia's distinctly orthodox past refused to admit western ideas, and "when, for all its virtuosity, it failed in its attempt to keep Russia free of Western ideas, it met its downfall."<sup>19</sup> As Russia had experienced no Renaissance and no scientific revolution of its own, Vucinich argues, the importation of science into Russia was a deeply troubling phenomenon. Nonetheless, he concludes, the 'Russian masses' still had "a great intellectual potential for scientific thinking."<sup>20</sup> Practical and empirical knowledge were not necessarily anathema to Russian culture, but because they had not been systematically practiced or applied to natural phenomena, their role within scientific inquiry was at first difficult for the Russians to grasp.

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<sup>19</sup> Vucinich 1965, 14 – 15.

<sup>20</sup> Ibid., 35.

Marc Raeff and Alexander Vucinich's writings can be taken as representative of both the disciplines of Russian history and the history of Russians science. To be sure, there are other historians who attempt in their work to take eighteenth-century Russian studies out of the relatively conservative track of stressing westernization and modernization, but they are more recent and will be discussed below. The work of Raeff and Vucinich clearly show a shared historical question that has led to the predominance of a conservative streak in eighteenth-century Russian studies. They share the certain system of hierarchies among their terms of investigation that has been described above. Much like their great Russian predecessor, V. O. Kliuchevsky, they privilege the centers of St. Petersburg and Moscow over the peripheries, European science over Russian traditions, and the importance of nineteenth-century concerns over those specifically of the eighteenth-century.

Raeff's and Vucinich's treatments of the role played by expeditions in Russian history are also fairly representative. Raeff, like most eighteenth-century Russian historians discusses the conquest of Siberia in connection with the seventeenth- and eighteenth-century Russian empire, but he notes that the territory was "valued mainly as a source of furs," with its "greatest asset ...[being] its contact with China."<sup>21</sup> Russia's Far-Eastern boundaries remained "practically unchanged" from about 1682 to 1825, allowing Raeff to begin his

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<sup>21</sup> Raeff 1971, 63.



discussion not with the seventeenth- or even the eighteenth-century, but with nineteenth-century Siberian land policy.<sup>22</sup>

Vucinich too gives an account of the scientific expeditions that stresses the traditional narrative of Peter as the reforming Tsar. He writes that it was Peter's "pragmatic attitude toward science as a powerful means of achieving a more bountiful and rational exploitation of the country's natural resources" that drove the Tsar's efforts to launch a series of geographical expeditions towards the end of his reign.<sup>23</sup> Throughout his analysis Vucinich's focus remains on the practical, political, and economic goals of scientific expedition. Peter specifically "chose geography to be the mirror of Russia's scientific achievements" because "the empirical substance of the field of geography was most likely to attract the attention of the growing ranks of Western scholars interested in assembling raw data on exotic and little-known countries and peoples."<sup>24</sup> The expeditions themselves not only produced a vast quantity of botanical, zoological, and ethnographic specimens and observations, they allowed for the publication of a number of maps and thus for the exercise of the then budding practice of Russian cartography. It was only "*incidentally*" that they "afforded young Russian naturalists a splendid opportunity for apprenticeship in scholarly pursuits."<sup>25</sup> Due to the breadth of Vucinich's work, he is only able to give passing mention of the eighteenth-century scientific expeditions, noting without investigating the

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<sup>22</sup> Ibid., 43.

<sup>23</sup> Vucinich 1965, 59.

<sup>24</sup> Ibid., 60.

<sup>25</sup> Ibid., 100 (emphasis my own).

connection between the development of Russian science and the early geographical expeditions.

What historians like Raeff and Vucinich have inherited from their professional predecessors is a historical focus on the intellectual changes occurring among the western Russian and foreign elite, stressing the active role of importation and imitation in the Russian scientific and cultural development. They tell a story of intellectual and cultural crisis both caused by and assuaged by the introduction of western modes of scientific practice into Russian culture. Their orientation is unremittingly westwards and their evaluation of early Russian science is based on the standards of scientific practice then current in the West.

Of course, these are the wrong historical questions to be asking, and they continue to stifle the historical interpretation of Russia's eighteenth-century cultural and scientific development. Russian historians, however, have made more progress overcoming this classical interpretation than historians of science have. They, more so than the historians of science, are concerned with thick description of eighteenth-century Russia, with understanding the unique constellation of social, cultural, and historical trends that affected eighteenth-century Russian life.

Characteristic of a mid-twentieth-century approach to the history of Russian science is the work of David Hooson. His description of the development of geography within the Academy from its inception to the early twentieth century is informative but shies away from social and cultural analysis. Hoosen focuses on geographical science from the nineteenth century onwards, omitting the

eighteenth-century work of French cartographers in Russia.<sup>26</sup> For Hoosen science in Russia only became Russian in the nineteenth-century. The eighteenth-century was period of “science by decree,”<sup>27</sup> that is, of foreign domination from which later Russian practitioners had to emerge before they could nationalize their scientific practice.

In this, one sees the strong influence of historian of science, Alexander Vucinich. Traditions in the history of Russian science started in America by Vucinich, have been carried on by authors such as Valentine Boss, Alfred J. Rieber, and others. Boss, for instance, was one of the first to closely examine the St. Petersburg Academy of Sciences as an important site for the Newtonian-Cartesian debates then raging in academies across Europe.<sup>28</sup> The debate over the relative merits of a Newtonian and a Cartesian physics was, Boss argues, something that threatened to damage the young Academy, forcing the fragile Academy to learn quickly how to police scientific discourse and teach the value of ‘polite’ disagreement.

Alfred J. Rieber, on the other hand, has focused more closely on the exchange between the developing scientific community and the Russian state. He argues that Peter sought to establish a technocracy in Russia in the hopes of

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<sup>26</sup> David Hoosen, “The Development of Geography in Pre-Soviet Russia,” *Annals of the Association of American Geographers* 58 (1968): 250 – 272.

<sup>27</sup> “Peter the Great: Science by Decree” is the title of chapter two in Vucinich 1965.

<sup>28</sup> Valentin Boss, *Newton and Russia. The Early Influence, 1698 – 1796* (Cambridge: Harvard University Press, 1972).

affecting broad social transformation.<sup>29</sup> In Rieber's retelling, his attempt at civilizing the elite ultimately failed under the heavy resistance of the elite themselves who lacked the European cultural values of a sense of discipline and an allegiance to the state. Rieber's argument that Peter and his successors could not, despite their best efforts, effect a cultural change by forcing technological advancement recognizes the agency of the eighteenth-century Russian elite, yet fundamentally treats them as a body acted upon, notable only for their reaction to Peter's reforms.

Recently western historians have sought alternative metaphors with which to frame the discussion of Russia's eighteenth-century transformation, but more often than not, these terms do not significantly alter the tenor of the literature. Michael Gordin has written quite persuasively of the 'importation' of science from the West into Russia, exploring the facets of Peter's intentions to use the St. Petersburg Academy in a larger "civilizing mission."<sup>30</sup> This analysis remains steeped in the western tradition of the history of Russian science, exploring the aims and goals of the state in enforcing scientific practice. It is invaluable as a source analyzing the more subtle social and behavior effects of the establishment of an Academy in St. Petersburg, but falls short of actually investigating how Russians themselves assimilated these new expectations of civilized behavior.

Ludmilla Schulze shifts the focus somewhat in her work on the Academy of Sciences at the end of the eighteenth century, focusing on the process by which

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<sup>29</sup> Alfred J. Rieber, "Politics and Technology in Eighteenth-Century Russia," *Science in Context* 8 (1995): 341 – 368.

<sup>30</sup> Michael Gordin, "The Importation of Being Earnest," *Isis* 91 (2000): 1 – 31.

Russian practitioners came to dominate the St. Petersburg Academy.<sup>31</sup> She introduces in this work the term ‘russification’ in her exploration of these academic demographic changes, thereby giving a name to the fundamentally different focus she has tried to insert in the historiography of Russian science.

Even an overview as brief as this one cannot help but point out that some of Russia’s best historians (and some of the history of science’s best Russianists) have attempted to explain and characterize the stunning intellectual and scientific growth of eighteenth-century Russia. However, most of those historians focus almost exclusively on the narrow (if politically powerful) strip of western Russia encompassing Moscow and St. Petersburg. They show in detail the process by which Russia became a European imperial power, without closely analyzing how particular Russians assimilated or took advantage of these changes. Likewise, few of these historical analyses manage to take into account or seek to discuss some of the most impressive and certainly some of the earliest attempts to practice scientific endeavor in Russia by Russians, namely, the eighteenth-century academic, geographical expeditions into Siberia and the Caucasus.

While Russian historians and historians of science analyze the same phenomena from a similar point of view, there exists another body of literature relating to the topic at hand, equally distinct from both. The literature on Russia’s conquest of Siberia is a niche of Russian history that, until recently, focused almost entirely on the structure and network of the fur trade, drawing

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<sup>31</sup> Ludmilla Schulze, “The Russification of the St. Petersburg Academy of Sciences and Arts in the Eighteenth Century,” *British Journal for the History of Science* 18 (1985): 305 – 335.

methodological tools from other national stories of expansion and conquest. The emergence of seventeenth- and eighteenth-century scientific expeditions have entered the narratives of English, American, Spanish, and French colonial expansion, yet remain unintegrated in the narrative of Russian expansion.

### **Siberia and the Fur Trade**

In comparison to the processes of westernization occurring in Russia's capital cities during the eighteenth century, Siberia during the same period appears to have followed a more distinctively Russian path. Poorly connected to the Russian capitals of St. Petersburg and Moscow, the history of Siberia often focuses on the story of conquest and the development of the fur trade.<sup>32</sup>

Raymond Fisher's classic text, *The Russian Fur Trade 1500-1700* covers the period just before the first scientific expeditions commenced, and works out "the details of its [the fur trade's] organization and the conduct of its place in the larger setting of Russia's economic development during the sixteenth and seventeenth centuries."<sup>33</sup> Fisher himself notes that his work adds detail to the influential earlier text by Robert J. Kerner, *The Urge to the Sea*, which attempts to examine the role of the environment (particularly, the placement and utility of

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<sup>32</sup> Until 1712, Moscow was the capital of Russia and the location of the court. After 1712, the court moved to the city of St. Petersburg, which had been founded by Peter the Great in 1703. The court moved back to Moscow in the 1720s and returned again to St. Petersburg in 1741.

<sup>33</sup> Raymond H. Fisher, *The Russian Fur Trade 1500 – 1700* (Berkeley: University of California Press, 1974), v.

river systems) in the conquest of Siberia.<sup>34</sup> Works such as these rightly stress the economic and political importance of seventeenth- and eighteenth-century expansion into Siberia. The fur trade played a prominent role in Russian history for centuries. Both medieval Novgorod and Kiev were known to have trapped (and trapped out) their surrounding regions. Untouched by the Mongol Horde, the city of Novgorod experienced enough peace and security through out the middle ages to effectively control trade routes along the upper Volga, while maintaining contacts with Asiatic markets.<sup>35</sup> “The role of the fur trade in Novgorod was the same as it had been in Kievan Russia,” writes Raymond Fisher, “furs constituted the most important single commodity of export.”<sup>36</sup> Even as Novgorod found itself eclipsed by the growing power of Moscow in the fourteenth century, the trade in furs did not significantly abate.

The opening of Siberia in the sixteenth century was significantly influenced by Russia’s long history of trapping and trading furs. By the sixteenth century the search for new areas in which to trap fur-bearing animals became essential to the continuing vibrancy of the trade. As the Russian state expanded, the growing demand for imported products created an increased search for products to export. Fur was foremost among Russia’s exports, bringing more money and refined products into the country than any other single product.

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<sup>34</sup> Robert J. Kerner, *The Urge to the Sea* (Berkeley: University of California Press, 1946).

<sup>35</sup> Fisher 1974, 3.

<sup>36</sup> Ibid., 4.

Little attention has been paid to Russia's eastward expansion as an inherently colonial process. This may be due, in part, because it does not fit the colonial mode of Western Europe. Russian expansion followed a model more expressly influenced by the previous Mongolian expansion westwards in the thirteenth century. Like the Mongols before them, the sixteenth and seventeenth century Russians exacted tribute from conquered native peoples, usually in the form of furs. This tribute, or *yasak*, "arrived in Moscow from the Turko-Mongol world." It was originally "one of the many taxes collected by the Golden Horde...[which] in Russian usage, became a generic levy imposed by the state specifically on the non-Christian peoples."<sup>37</sup> The Russians also continued the Mongolian practice of taking hostages of prominent members of local populations to assure the docility of the people. Focusing almost entirely on setting up and maintaining a thoroughly extractive economy, the earliest Russians in Siberia were not colonialists in the western fashion. They settled in parts of Siberia just long enough to collect tribute, and then moved on. Larger, more sedentary populations of Russians lived in *ostrogs*, or small, fortified encampments, which were far from self-sufficient.

However, with the growing political and economic importance of Russia's fur trade, western Russia began its own policy of 'westernization' in Siberia. The scientific expeditions of the early eighteenth century strongly influenced the growing conception of Siberia as a colonial Russian holding. This conception, in

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<sup>37</sup> Michael Khodarkovsky, *Russia's Steppe Frontier: The Making of a Colonial Empire, 1500 – 1800* (Bloomington: Indiana University Press, 2002), 61.



turn, was linked with a growing sense of empire and ‘Russianness’ in the eighteenth century.

Recently authors such as Willard Sunderland and Michael Khodarkovsky have examined the colonial process in Russia’s southern and south eastern Steppe. Khodarkovsky shows how starting in the sixteenth century Moscow’s political leaders became increasingly concerned with the fate of Russian captives taken by Steppe people. This concern “came from its newly crystallized self-consciousness as a Russian Orthodox state with a divine duty to save Orthodox Christians from infidel captivity.”<sup>38</sup> The long and often bloody process of subduing these people, who were quite literally heirs to the Golden Horde, identified itself with those selfsame conquerors. “The importance attributed by Moscow to the Golden Horde’s heritage,” Khodarkovsky points out, “was demonstrated resplendently when upon the conquest of Kazan in 1552, Astrakhan in 1554, and Siberia in 1580, the crowns of the respective khanates were transferred to the royal treasury in Moscow.”<sup>39</sup> Identifying itself as an empire meant Moscow had to subdue and in turn assimilate the only empire that had successfully ruled over the Russians and their territory.

### **Krasheninnikov the Bridge**

There exist, evidently, a diverse array of active modes of inquiry into eighteenth-century Russia. Various bodies of literature have addressed topics

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<sup>38</sup> Ibid., 22.

<sup>39</sup> Ibid., 45.

including the westernization of Russian culture, the development of scientific practice, the expansion into and eventual colonization of Siberia, and the increasingly imperial nature of Russia's elite. Synthetic treatments that touch upon all of the above aspects are rare. Those Russian historians who give detailed treatments of eighteenth-century Russian cultural changes do not often venture into an examination of the establishment of scientific practice in Russia, nor do they always include histories of Siberia and Russia's other borderlands in their works. These different literatures remain, to a certain extent, separate.

The story of Stepan Petrovich Krasheninnikov, his early education, his role in the Second Kamchatka Expedition, and later his role in the St. Petersburg Academy of Sciences serves to bridge these literatures. Similarly his life made use of, benefited from, and helped to integrate a number of different cultures then flourishing in Siberia and St. Petersburg. As a man of scientific training and ambition, Krasheninnikov's career helps to illuminate a developing pathway that led to positions of political prestige through academic and scientific training and practice. Spatially he bridged the western and eastern halves of the country by walking, literally, from one end to the other. Krasheninnikov's story falls within all the different historical categories outlined above. As a product of Peter's educational reforms, as a member of the Second Kamchatka Expedition, and eventually as a fully-fledged academician within the Academy of Sciences, Krasheninnikov was heir to the reforms of eighteenth-century western Russia. He knew, studied, and participated in the local cultural practices of Kamchatka and

other parts of Siberia and the Russian Far East, making him active and aware player in the subduing of the region and the expansion of Russian imperialism.

## CHAPTER TWO

## EXPEDITIONS

Geographical expansion dates back in Russian history to the middle of the fifteenth century when the principality of Moscow began to expand territorially beyond its traditional bounds. The subsequent Russian expansion, from 1450 to 1900 was “remarkable” for “spectacular speed, its minimal cost (both human and material), and its durability.”<sup>1</sup> The growth of Moscow the century before marked a new era in Russian history, characterized by the consolidation of princely authority, the unification of traditional Slavic homelands, and the expansion of Muscovite territory well into the Ural Mountains. Russian geographical expedition in the eighteenth century, therefore, came from a long tradition of military expedition and political expansion. By the eighteenth century, however, the nature of Russian expansion changed with the introduction of scientific contingents to what had long been military exercises. The role science and natural history played in these evolving eighteenth-century expeditions sheds light on the development of science and natural history itself at the time. That they were able to incorporate the methods, goals, and values of early modern European scientific tradition is a testament to the syncretic nature of Russian expeditions themselves as well as to the diverse and often unexamined political advantages of the study of natural history.

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<sup>1</sup> Basil Dmytryshyn, “Russian Exploration to the Pacific, 1580 – 1700: A Historiographical Review,” *Sibirica* 1 (1990): 4 – 37.

Early modern practices of Russian expansion often engaged in violent confrontation with native peoples with the aim of founding a systematic network of military outposts. These outposts in turn fostered the rapid development of the iconic Russian fur trade. The structure of the fur trade, the demographics of the western Russian population, and the nature of Russia's eastern terrain, all combined to make Russian eastward expansion primarily a matter of subjugating new native peoples rather new lands. Native hunters were a practical necessity to Russia's fur trade, but their status as animists or Muslims was important to the Orthodox Russians' sense of purpose as they expanded. As one more recent historian has argued, "Russia had been imbued with its own sense of manifest destiny since the late fifteenth century, and its ideology of expansion was fundamentally shaped by its encounter with the various pagan and Muslim peoples in the south and east."<sup>2</sup> The traditional goals of subjugating and bringing into tributary relations the various native peoples remained firm in Russia's eighteenth-century expeditions. The addition of scientific practice changed the method as well as the outcome of these expeditions, but did not alter their fundamental aim.

### **Early Expeditionary and Expansionary Traditions**

The ascendancy of the republic of Novgorod in the eleventh century owed no small debt to the fur-trade network that had been established in the Ural

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<sup>2</sup> Michael Khodarkovsky, *Russia's Steppe Frontier: The Making of a Colonial Empire, 1500 – 1800* (Bloomington: Indiana University Press, 2002), 49.

Mountains. The rise of the principality of Moscow and its subsequent annexation of the Republic of Novgorod in the 1470s meant that Muscovy fell “heir to the Novgordian policy of commercial expansion to the northeast.”<sup>3</sup> Various Mongolian Khans had long kept the principality of Moscow in military subjection. By the end of the fifteenth century, however, Muscovy was finally able to defeat the by then decaying Mongolian empire. Throwing off the Mongol Yoke and destroying Novgorod as a political and economic center of importance, Moscow’s “gathering of Russia” (the political unification of traditionally Slavic homelands in the wake of the defeat of the Mongols) helped to establish for the future Russian empire a view of the east as region that was could be profited from but was not habitable. It became in the Russian imagination the homeland of the quintessential Mongolian invader, the raiding Muslim Kazak, and the shamanistic Samoyeds; the land, like the people, characterized by being dangerous, exotic, and alien.

There were many different kinds of people who occupied the territory directly adjacent to the Muscovite kingdom’s eastern frontier. The conquest of the Steppe differed from the conquest of Siberia as it differed from the conquest of the Far East.<sup>4</sup> The southern Steppe and Siberia had both been under the control of

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<sup>3</sup> James R. Gibson, *Feeding the Russian Fur Trade: Provisionment of the Okhotsk Seaboard and the Kamchatka Peninsula, 1639 - 1856* (Madison: University of Wisconsin Press, 1969), 4.

<sup>4</sup> The Steppe is the vast, semi-arid and grass-covered region that now comprises most of central Asia. The appearance and ecology of the Steppe resembles the high plains of the American Midwest. The term Siberia often connotes all the territory east of Russia’s Ural Mountains and north of the border with China. The Far East is sometimes considered a part of Siberia and sometimes an entity of its

various Mongolian Khanates from the end of the thirteenth the end of the fifteenth centuries. The newly unifying Muscovite state sought to establish itself in a dominant position with respect to all remnants of this once expansive empire. When Muscovy went beyond reclaiming and unifying traditionally Slavic homelands and began to acquire formerly Mongolian centers of power (including the southern Steppe region) the nature of the venture fundamentally changed. Historian of the Russian empire, Andreas Kappeler, has argued that “whereas it had been possible to justify ‘the gathering of the lands of Rus’ on historical, dynastic and religious grounds, the annexation of a sovereign state that had never belonged to Rus, and was a part of the Mongolian empire, the political system established by Genghis Kahn, and the Islamic community, went against all the traditional legal concepts.”<sup>5</sup>

This shift occurred in the seventeenth century, and coincided with an observable change in the attitude of the Tsar and the Russian state toward Siberia. Previously the Russian state had been content to let individual explorers, traders, and adventurers carve a path into the eastern wilderness with no more assistance than official governmental sanction. By the beginning of the eighteenth century the Tsar’s governmental apparatus became much more involved in the subduing and ruling of its new eastern territories. In so far as the Tsar was the source of all

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own. Generally it encompasses the peninsula of Kamchatka, Sakhalin Island, the Kurile Islands, and much of Russia’s Pacific coast line. These terms are not mutually exclusive and are, at times, used inconsistently in the literature. The best effort will be made here to avoid confusion.

<sup>5</sup> Andreas Kappeler, *The Russian Empire: A Multiethnic History*, trans. Alfred Clayton (Harlow: Longman, 2001), 21.

power in the Muscovite State, and later Russia, he had always been deeply interested in all developments on the eastern frontier. The Tsar's approval was essential to any large scale endeavor throughout the Russian lands. And yet, as historians Basil Dmytryshyn and E.A.P. Crownhardt-Vaughan argue, "the involvement of the government in the expansion process was not central." They point to cases like that of the Stroganov family, which are illustrative of the official attitude towards eastward expansion. As the affluent entrepreneurial Stroganov family was able to demonstrate the profitability of salt works in the Urals, the government joined in by lending Cossacks the funds to support the family's eastward push. The Tsar and the state "joined the enterprise only when it became obvious that the initial push by the Stroganov's Cossacks across the Urals was a resounding success."<sup>6</sup> Before the reign of Peter the Great the Russian state was only interested in expansion that clearly promised and had already demonstrated its practicability.

Increasing involvement, however, led to government demands for greater shares of the tribute furs collected. Eventually the state established an administrative apparatus to facilitate the collection of furs, the building of *ostrogs* (small military forts), and the sponsoring of expeditions. As the state expanded, *prikazes*, or governmental agencies were developed to deal with specific issues. "The expansion of the Muscovite state brought about the appearance of the *Kazanskii*, *Tverskoi*, and *Novgorodskii* prikaz...where the administration of the

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<sup>6</sup> Basil Dmytryshyn and E. A. P. Crownhart-Vaughn, *Russian Penetration of the North Pacific Ocean, 1700 - 1797: A Documentary Record* (Portland: Oregon Historical Society, 1988), xxxii.



newly acquired territories was concentrated.” These prikazes were formed chronologically, as territories were brought under Russian control, and addressed problems not systematically, but rather as they cropped up. Not surprisingly this led to some confusion and overlapping jurisdiction. As “no special effort was made either to separate the business of the new and old prikazes or to define their relationships...[they] were simply added to the existing mosaic of governmental institutions.”<sup>7</sup> The ad hoc nature of the Russian state’s attitude toward the administration of its borderlands allowed for a relatively new approach to emerge with the development of the First and Second Kamchatka Expeditions. These expeditions fell largely under the purview not of the various prikazes related to Siberia or the fur trade, but of the St. Petersburg Academy and the Russian Senate.

### **The First and Second Kamchatka Expeditions**

The First and Second Kamchatka Expeditions were both large-scale academic expeditions, organized by the Academy of Sciences and funded generously by the Russian state. They both took advantage of the network of military outposts already extant in Russia’s hinterlands with similar goals of exploring, detailing, and describing Russia’s Far East. The Second Kamchatka Expedition (1733 – 1743), however, far outstripped the First (1725 – 1730) in terms of funding, manpower, and scientific achievement.

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<sup>7</sup> George V. Lantzeff, *Siberia in the Seventeenth Century: A Study of the Colonial Administration* (New York: Octagon Books, 1972), 3.

Though often considered a failure, the First Kamchatka Expedition did much to prepare the way for the successes of the Second. The head of both expeditions, Vitus Bering, was a Danish naval officer in the Tsar's employ. His primary assignment in both expeditions was to establish the presence of a strait assumed (but not yet proved) to exist between Russia and America. There had been conflicting opinions in the eighteenth century as to the physical relation between Russia and America.

Information from sailors, natives, and local Russian trappers and traders combined in early maps to create a vague and sometimes confusing picture of Russia's eastern borderlands. Peter was certainly not the first Tsar who saw the value in having a clear understanding of the country's holdings, but he was the first to more or less achieve it. The first map of Siberia dated to 1667 was followed by a steady stream of similar attempts to describe Siberia. As Leo Bagrow, a historian of cartography, points out "until the beginning of the 17<sup>th</sup> century all the maps of... 'Siberia', were in the main based on legendary sources."<sup>8</sup>

By the eighteenth century, knowing Russia's border with China, the contour of its coast line along the Pacific, and its proximity to North America all had important ramifications on Russian trade and the future of Russian colonial expansion. The Treaty of Nerchinsk (1689) between Russia and China had restricted Russia's access to the Sea of Japan and the fertile Amur River valley,

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<sup>8</sup> Leo Bagrow, "The First Russian Maps of Siberia and their Influence on the West-European Cartography," *Imago Mundi* 9 (1952): 83.

but had established Russia's first overland trade relations with China. By the eighteenth century Russia began to chafe under its restrictions and began to seek a new route to the Pacific in hopes of establishing sea trade with both China and Japan.<sup>9</sup>

A long series of foreign sea-farers had tried their luck at establishing a water route from Moscow to China usually via the White Sea, but never with any success. This Northeast Passage was only slightly less famed than that in the Northwest and proved so tempting to Russian and foreign explorers alike that a branch of the Second Kamchatka Expedition was devoted solely to its discovery.

The drive to prove the existence of a strait and gain a clear idea of Russia's proximity to North America was also prompted by the growing need to find new hunting grounds for fur bearing animals whose populations were rapidly declining in Siberia. The fur trade had long been important to the Russian Empire's economy. The discovery of new sources of fur almost certainly financed Russia's eastward expansion throughout the seventeenth and eighteenth centuries. Furs added disproportionately to the state's income.

Inspired by all these concerns and ambitions, Peter outlined the First Kamchatka Expedition as early as 1716. It was designed almost to explore by sea the possible existence of a strait between Russia and America, though it did have the subsidiary goals of establishing a harbor and boat manufactory on Russia's

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<sup>9</sup> For a thorough and concise treatment of the events that led up to the signing of the Treaty of Nerchinsk, see the introduction to Thomas Pereira and Joseph S. Sebes, *The Jesuits and the Sino-Russian Treaty of Nerchinsk (1689): The Diary of Thomas Pereira* (Rome: Institutum Historicum S.I., 1961).

Pacific coast. Sometimes called the Great Kamchatka Expedition, its stated aim, in the words of one historian, was “to explore Kamchatka and Chukotka and send out vessels from the mouths of the Anadyr and Kolyma rivers to search for islands and ‘mainland’ opposite Chukotka.”<sup>10</sup> It was a relatively large undertaking, as some “two hundred men were assembled and fitted out with a vast amount of provisions and supplies.”<sup>11</sup> But, this first Kamchatka expedition, like the military expeditions that had come before it, contained no scientists, had no clear plan for those involved and, as it turned out, was poorly funded. Sven Waxell, an officer under Bering on the Second Kamchatka Expedition, who claimed to be the only officer “with the expedition from its inception to the very end” forgave the shortcomings of the First Expedition. It had, after all, “consisted of only a small force and it had suffered from a shortage of provisions and other necessary things, for until then it had not been possible to know exactly what equipment was needful.”<sup>12</sup> Despite this, Bering and his associates accomplished a great deal. Indeed, they actually sailed past Russia’s northeastern most point, passing through what is today known the Bering Strait.

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<sup>10</sup> Evgenii Kushnarev, *Bering’s Search for the Strait: The First Kamchatka Expedition, 1725 – 1730* (Portland: Oregon Historical Society Press, 1990), 6. Chukotka is a region of the Russian mainland that lies just north of the peninsula of Kamchatka. The Anadyr River flows into the gulf of Anadyr, which lies in the Pacific Ocean while the Kolyma River flows into the eastern end of the Arctic. Establishing continuous water passage from one river to the next would establish conclusively the existence of a strait between Russia and North America.

<sup>11</sup> Ibid.

<sup>12</sup> Sven Waxell, *The Russian Expedition to America* (New York: Collier Books, 1962), 19; Ibid. 42. Waxell’s memoir was originally written in German and never published. This English translation is based on a scholarly Danish translation of the German manuscript.

Though their mission had been to establish the existence of a strait between Russia and America by sailing from Okhotsk to the Kolyma River (which lay inland and flowed into the Arctic Ocean), Bering felt he and his crew had accomplished their goal without going so far north. That did not bring back any proof of the existence of the strait probably contributed to Bering's not being advanced in rank when he returned to St. Petersburg. It was also largely the reason that the First Kamchatka Expedition was at that time dubbed a failure. Even after the First Kamchatka Expedition, the existence of the strait between Russia and America remained an open question.

The failings of the First Kamchatka Expedition, however, facilitated the successes of the Second. The First Kamchatka Expedition underscored the problems of transport of cargo across Siberia. The need for a solution to this problem seduced some Russian statesmen to suggest a way be found to circumnavigate the vast Siberian expanses. Most importantly it educated statesmen and adventurers back in St. Petersburg and Moscow as to the incredible difficulty of such an undertaking in a territory with so little local infrastructure. These failings made the development of a new overland route for the most arduous part of the trip to Kamchatka, the road from Yakutsk to Okhotsk a priority in the Second Kamchatka Expedition. Ultimately, the First Kamchatka Expedition, though it pales in historical comparison to the Second, nonetheless helped to develop new routes and located new harbors, opening Siberia and Russia's Far East to future expeditions and movements of peoples.

In Kushnarev's summation, the First Kamchatka Expedition fostered an unprecedented growth of "interest in [the] region." It marked the beginning of a "new stage of geographical exploration," where expeditions were "better organized and more systematic; they took on state significance and the leadership passed directly into the hands of the central government."<sup>13</sup> For all its failings, the First Kamchatka Expedition was a critical predecessor to its more famous offspring.

The Second Kamchatka Expedition was, by all accounts, a vast undertaking sponsored by the state and administered jointly by the Russian Senate, the Admiralty, the St. Petersburg Academy of Sciences. As J. L. Black and D. K. Buse point out, the term "expedition" is "appropriate to their enterprise not only because contemporaries utilized it, but because of the scope and size of the group involved."<sup>14</sup> Sectioned into three semi-autonomous contingents, the Expedition employed an unprecedented number of individuals and had more than a few highly ambitious goals.

Estimations of the number of people involved in the Second Kamchatka Expedition vary. Sven Waxell, however, recalls in his memoir that approximately 500 men initially left St. Petersburg in 1733, including Bering and himself. In the town of Tver they were joined by another 500, soldiers and staff of the Academic contingent. Finally, another 1,500 to 2,000 individuals (convicts and other forced laborers) were employed in the transportation of Expeditions materials, which

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<sup>13</sup> Kushnarev 1990, 166.

<sup>14</sup> J. L. Black and D. K. Buse, *G.-F. Müller and Siberia, 1733 – 1743* (Kingston: Limestone Press, 1989), vi.

ranged from boat making tools, scientific instruments, and food. Waxell's estimate, which is on the conservative side, suggests that a total of 2,500 to 3,000 people officially took part in the Second Kamchatka Expedition.

The first and possibly least well known contingent in the Expedition surveyed Russia's northern coasts from Arkhangelsk to Kamchatka. This contingent met with little success as their objective proved to be too difficult. The explorers who manned this arm of the Second Kamchatka Expedition met with a long and constant series of setbacks, the most damaging of which was the frustratingly unpredictable sea ice. Sven Waxell, who traveled with Bering to the Pacific and then later to Aleutian Islands, included a long discussion on the impracticability of this Northeast Passage in his memoir. Waxell notes that the failure of the northerly arm of the Expedition could not be blamed simply on the rough state of Russian seafaring technology. The Danish Crown had once and might again try and outfit a number of ships to try and cross Russia's northern expanse by boat. But, Waxell argues: "To put the matter in a nutshell, I can say in advance what is likely to happen and be accomplished: they will not achieve their object; they will lose many men, and if they are just a little bit unlucky, they will lose their ship as well. Thus, I hereby state that such a passage is impossible."<sup>15</sup>

The second, or sea-going, contingent of the Expedition was headed by Vitus Bering and was committed to many of the same objectives that the First Kamchatka Expedition had been created to achieve. Bering's orders were to establish a harbor and suitable location in which to build several large sea-worthy

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<sup>15</sup> Waxell 1962, 45.

boats. From there, Bering and his men were to sail from Kamchatka to the mainland of America and determine the existence of a strait between Russia and America by calculating North America's exact proximity to Russia.

The third contingent of the Expedition consisted of the members of the Academy in St. Petersburg who had been chosen to make scientific observations throughout Siberia and, potentially, North America. Waxell explains that, "not wishing that this expedition should lack perfection in any point or miss any opportunity of making the observations it required or of gathering valuable information, [the Senate] by special order sent ... from St. Petersburg a number of well-schooled and learned persons."<sup>16</sup>

This contingent, which "undertook to reach Kamchatka by an overland route and to gather information of value in the study of natural history," astronomy, geography and the other sciences, was both expensive, taxing, and greatly rewarding to the Russian Senate and the Academy back in St. Petersburg.<sup>17</sup> The most prominent members of this contingent included the astronomer Louis Delisle de la Croyère, the botanist Johann Georg Gmelin, the historian Gerhard Friedrich Müller. Later they were joined by the botanist and natural historian, Georg Wilhelm Steller. These men were themselves accompanied, in the recollection of Sven Waxell, by "artists, painters, students and such like."<sup>18</sup> The Academic contingent of the Second Kamchatka Expedition

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<sup>16</sup> Ibid., 37.

<sup>17</sup> Alexander Vucinich, *Science in Russian Culture: A History to 1860* (London: Peter Owen, 1965), 90 – 91.

<sup>18</sup> Waxell 1962, 37.



collected and sent to St. Petersburg an astonishing number of specimens, reports, observations, and maps. The institutions being established in St. Petersburg, including the Botanical Gardens attached to Academy and the archives of the Academy were founded largely on the collections provided to them by the members of the Second Kamchatka Expedition.

### **Eighteenth-Century Scientific Contingents**

The Second Kamchatka Expedition was one of several eighteenth-century expeditions that were sent by the Russian state for various political and economic reasons into its eastern and southern borderlands. Unlike the military expeditions that had come before it, the Second Kamchatka Expedition included an Academic contingent concerned with mapping, cataloguing, and collecting natural phenomena. Typically the development of a scientific aspect to eighteenth-century Russian expeditions has been attributed to Peter the Great who “had a particular interest in geographical expeditions” related to his “pragmatic attitude toward science as a powerful means of achieving a more bountiful and rational exploitation of the country’s natural resources.”<sup>19</sup> The eighteenth-century addition of scientific contingents to military expeditions was certainly something new in Russian history, but the exploitation of natural resources and native peoples in a systematic fashion had been a part of the landscape well before the time of Peter the Great.

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<sup>19</sup> Vucinich 1965, 59.

In Siberia, the exploitation of natural resources was intimately connected with the effective control of the native peoples. Fur was collected by local natives and handed over to Russian officials both as “tribute” to their Russian conquerors and as a form of ransom for Russian-held native captives. This well-established, highly profitable, and reasonably systematic form of exploitation of Siberia’s natural resources required a strong Russian military and bureaucratic presence, but had little use for scientifically trained professors or their students. Native rebellions were not uncommon and were quite damaging to Russian interests. The maintenance of the fur trade was something that oftentimes called for brutal repression and reprisal. This particularly form of natural resource exploitation did not necessarily call for the slow collecting, preserving, and theorizing of natural historians. Asserting an economically pragmatic motive to the creation of scientific contingents fails to explain their true value to the Russian state as educational projects and powerfully symbolic gestures at starting and maintaining a scientific revolution in Russia.

Likewise, attributing all the motive force behind the scientific expeditions to Peter’s singular vision fails to underscore their more broadly appealing nature to the general scientific community. Certainly these expeditions promised to secure and even expand Russia’s borders, to further trade relations with China and Japan, and to identify new places of settlement and more amenable roads and passes by which to travel, but none of these promises required a specifically scientific contingent to ensure their success.

Very little of Siberia had been scientifically studied before the eighteenth century. While people had a vague idea of what the forests of Siberia had to offer, they lacked the kinds of proof then valued by European Scientific Academies, such as maps, collections, and detailed travel narratives. Stories of the Scythian Lamb, for instance, still circulated.<sup>20</sup> Linnaeus campaigned heavily by letter to obtain Siberian plant specimens for his own garden because they were not only potentially useful to his native country which shared the same latitude as most of Russia, but they were exceedingly rare.<sup>21</sup> Siberia may not have been unknown in European scientific communities, but was certainly exotic, and any scientific projects undertaken there by the Tsar and his Academy would be sure to garner a great deal of attention.

By the end of the first quarter of the eighteenth century, Russia was clearly ready to put its new academic community to work. Many Europeans, academicians of the St. Petersburg Academy or otherwise, were more than willing to endure the hardships of the Second Kamchatka Expedition, for the rewards it promised. However, the Russian state did not plan, organize, fund, and execute one of the largest geographical expeditions to date merely out of interest in the

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<sup>20</sup> The Scythian Lamb was a plant believed to grow in Russian Tartary – it was approximately the size and shape of a full grown sheep but was rooted to the ground by a stalk growing from its belly. Its natural enemy was, not surprisingly, the wolf, and so long as it lived, it did not allow any other plants to grow in its vicinity. See: Robert W. Lovett, “The Vegetable Lamb: A Plant Fable,” *AN & Q* November (1962): 37 – 38.

<sup>21</sup> For Linnaeus’ interest in Siberian botany see: Margery Rowell, “Linnaeus and Botanists in Eighteenth-Century Russia,” *Taxon* 29 (1980): 15 – 26; Carl-Otto von Sydow, “Linnaeus and Gmelin,” in *Linnaeus: Progress and Prospects in Linnaean Research*, ed. Gunnar Broberg, 212 – 222 (Stockholm: Almqvist, 1980).

flora and the fauna of Siberia, or because there were European men of science ready to go. Even coupled with the prestige of the undertaking, the promises of more land, a stronger fur trade, and quieter borderlands, do not seem enough to have inspired an expedition of such size and scale.

The Russian state officials involved in the development and instigation of the Second Kamchatka Expedition were tapping into a long, rich, and powerful tradition of European colonial pageantry that could help confer upon their country the standing of a true empire. The connections between science, expedition, colonialism, and the growth of the state were complex, intimate, deep, and definitely not obscure. Patricia Seed's detailed treatment of the Spanish ceremonies performed by conquistadores and priests before native villages to claim possession over territory in the New World as well as Benedict Anderson's work on "imagined communities" both explore the use and the meaning of performance in the establishment of early modern colonial empires.<sup>22</sup> Though much less work has been done on Russian colonial expansion, performance, and pageantry were both important to the process by which Russia sought not just to profit from but to possess its borderlands. Russia engaged in the Second

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<sup>22</sup> Discussion both here and below on European colonial practices is based largely on readings of the following works: Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 2006); Greg Denning, "The theatricality of observing and being observed: Eighteenth-century Europe 'discovers' the 18th century 'Pacific,'" in *Implicit Understandings: Observing, Reporting, and Reflecting on the Encounters between Europeans and Other peoples in the Early Modern Era*, ed. Stuart B. Schwartz, 451 - 483 (Cambridge: Cambridge University Press, 1994); Patricia Seed, *Ceremonies of Possession in Europe's Conquest of the New World, 1492 - 1640* (Cambridge: Cambridge University Press, 1995).

Kamchatka Expedition with the twin goals of gaining material wealth and securing its new standing as a European empire.

### **Russia as Colonial Empire**

This interest in controlling and exploiting Siberia and the Steppe rationally, through systematic, academic study signaled a new phase of Russia's distinctly imperial drive to the east. While many historians have written about Russian imperialism, very few have written about empire from the Russian perspective. "Most historians of empire," historian of empire Dominic Lieven asserts "steer well clear of Russia, which they see as an uncharted swamp patrolled by fierce and slightly weird academic guard dogs."<sup>23</sup> Andreas Kappeler has noted that "In a Western European context, the question arises of whether one ought to see the gathering of the lands of the Golden Horde as part of the process of European colonial expansion."<sup>24</sup> Ultimately both of these historians have concluded that the western bias that leaves Russia out of the narrative of colonial expansion needs not be explained so much as corrected.

Those historians who do attempt to offer some explanation tend to focus on the *way* Russia expanded as being key to why it has come to be excluded from the narrative of colonization. That Russia expanded overland over many hundreds of years rather than over sea within a single generation certainly differentiates the

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<sup>23</sup> Dominic Lieven, *Empire: The Russian Empire and Its Rivals* (New Haven: Yale University Press, 2001), ix.

<sup>24</sup> Kappeler 2001, 55.

Russian and the European colonial experiences. “The Russian imperial experience,” Michael Khodarkovsky argues, was

traditionally set apart from the colonial experience of the Western European empires because of Russia’s expansion in contiguous territories. Indeed, Russia’s imperial vision was articulated in terms of the universal monarch and blurred the separation between metropolitan and colonial periphery, between the peoples within and outside the imperial boundaries, and between the administrative and legal institutions in the metropolitan areas and colonial periphery.<sup>25</sup>

Though this may be a valid point in evaluating Russian colonial expansion, it does not negate the colonial nature of the expansion in general. Willard Sunderland suggests that it is because “the ambiguities of Russian colonization were striking and persistent” that western and Russian historians alike have come instead to view Russian incorporation of its borderlands as a ‘spreading out’ or as a form of ‘internal colonization.’<sup>26</sup> But Willard, like Khodarkovsky, Lievan and Kappeler, asserts that though Russia’s expansion into the Steppe as well as Siberia was unique, it was nevertheless was not fundamentally different than European ventures in the New World.

But writers like Khodarkovsky, Lievan and Kappeler, as well as Willard Sunderland, whose work features the term “colonization” in its title, are recent and few in number. The opinion that Russia was not a colonial empire still persists. Because so many historians have considered leaving Russian expansion out of the general narrative of sixteenth-, seventeenth- and eighteenth-century colonialism, the subject has not benefited from the more recent methodological

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<sup>25</sup> Khodarkovsky 2002, 228 – 29.

<sup>26</sup> Willard Sunderland, *Taming the Wild Field: Colonization and Empire on the Russian Steppe* (Ithaca: Cornell University Press, 2004), 4.

advances in history and other studies evaluating the nature and the fall-out of the early modern colonial enterprise. An unspoken assumption of manifest destiny pervades the topic, leading otherwise astute historians to suggest that Russian expansion was somehow ‘organic’ and ‘natural.’ Even historian Basil Dmytryshyn, a clarion voice for the importance of the study of the history of Russian conquest, has fallen into this pattern, writing

in contrast to the many violent encounters among Europeans in other parts of the world, the meeting along the northern reaches of the date line was relatively peaceful. Generally speaking, the newcomers committed violence only against fur bearing animals and those natives who failed to appreciate some of the benefits of European civilization.<sup>27</sup>

This was, however, clearly not the case. Even if, as Khodarkovsky admits, “expansion to the east between the sixteenth and eighteenth centuries did not correspond to the Western European model of colonial expansion” it was nevertheless a long and violent process by which Russia came to exert political power over a vast and culturally alien territory.<sup>28</sup>

Andreas Kappeler argues that Russian expansion became colonial as far back as the sixteenth century when Muscovite rulers made a “qualitative leap,” from annexing traditionally Slavic lands to culturally very different lands of the Steppe. Paralleling this territorial growth was a “new self-image [of] the young tsar and his court” that “revolved around a sense of their imperial mission, and this found expression both in [Ivan IV’s] coronation in 1547, and in legends that

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<sup>27</sup> Basil Dmytryshyn, preface to *Explorations of Kamchatka North Pacific Scimitar*, by Stepan Petrovich Krashenninnikov (Portland: Oregon Historical Society, 1972), i.

<sup>28</sup> Andreas Kappeler 2001, 55.

traced claims to legitimacy back to Kiev, Byzantium and even to Rome.”<sup>29</sup> In Kappeler’s view, Russia’s patterns of annexation reflected its growing conception of itself as a unified and formidable political power, a conception which it sought to enforce with the conquest of territories that were culturally and environmentally very different from their own.

Eighteenth-century colonization was both characterized by and characteristic of the scientific practice of natural history. Natural history relied on the specimens collected in newly colonized territories, just as the process of colonization itself relied on the twin justifications of scientific endeavor and rational exploitation of natural resources to maintain its legitimacy. The practice of natural history was the scientific twin of Russia’s political and military expansion. Their intertwined histories cannot be fully separated and must, at times, be studied together to be studied at all.

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<sup>29</sup> Ibid., 26.



### CHAPTER THREE

#### NATURAL HISTORY

Eighteenth-century Russia's imperial interest in Siberia was not entirely mercantile. To a large extent it was tied to the "goal of transforming Russia into a systematized, regulated and uniform absolutist state based on the Western European model."<sup>1</sup> This particular goal required for its success the work of scientifically trained natural historians, botanists, astronomers, and their colleagues. The naturalists introduced to Siberia at the beginning of the eighteenth century were characteristic of a fundamentally new aspect of Russia's interest in Siberia. Employing natural historians in the conquest of Siberia signified the government's faith in the potential of a more empirically based rational exploitation of natural phenomena as well as its interest in conducting its colonial enterprise in alignment with western models.

The figure of the eighteenth-century natural historian is not easy to define, partly because they were rarely just natural historians and partly because there were many different views of nature competing for naturalist's attention at the time.<sup>2</sup> Eighteenth-century natural history concerned itself primarily with the

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<sup>1</sup> Andreas Kappeler, *The Russian Empire: A Multiethnic Empire*, trans. Alfred Clayton (Harlow: Longman, 2001), 31.

<sup>2</sup> This discussion of eighteenth-century natural history relies heavily on: Paul Lawrence Farber, *Finding Order in Nature* (Baltimore: Johns Hopkins Press, 2000); Paula Findlen, "Courting Nature," in *Cultures of Natural History*, eds. N. Jardine, J. A. Secord and E. C. Spary, 57 - 74 (Cambridge: University of Cambridge Press, 1996); Thomas L. Hankins, "Natural History and Physiology," in *Science and the Enlightenment*, 113 - 115 (Cambridge: Cambridge University

description and the classification of the natural world, living and nonliving. The practice of natural history was both time-consuming and expensive, and before the seventeenth and eighteenth centuries it primarily engaged talented and well-supported amateurs. Building a natural history collection required time and patronage and was, therefore, a pursuit well-suited to court doctors and other medically trained men in positions of power.

The practice of natural history, especially as it flourished under royal patronage throughout the sixteenth and seventeenth centuries, had a distinctly political purpose. The collections sought to display the power of the prince through their size, the breadth of their collection, the exotic nature of their specimens, and their ability to produce awe and wonder in the observer.<sup>3</sup>

Oftentimes the interests of the patron's were practical in nature, but they could just as easily center on the patron's desire to present himself to other princes in a spectacular and ostentatious manner. Those natural historians patronized by the Royalty, therefore, studied most intently what the sovereign wished to know and display, be it fertility of soils and potential for agriculture, or exotica from distant lands. The presence of exotica in collections indicated either the patron's far-flung

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Press, 1985); Joseph M. Levine, "Natural History and the History of the Scientific Revolution," *Clio* 13 (1983): 57 – 73; Jacques Roger, "The Living World," in *The Ferment of Knowledge*, eds. G. S. Rousseau and Roy Porter, 255 – 283 (Cambridge: Cambridge University Press, 1980).

<sup>3</sup> For the role of wonder in natural history collections see: Lorraine Daston and Katharine Park, *Wonders and the Order of Nature, 1150 – 1750* (New York: Zone Books, 1998). For the relationship between natural history collections and the development of early modern scientific culture, see: Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994).

territorial possessions or his favorable relationship with other princes whose range of influence extended into alien regions. The content of a prince's natural history collection depended on his colonial prowess and his diplomacy as much as on his political power. The advent of colonialism, therefore, was integral to the flourishing of the early practice of natural history; they mutually fostered, justified, and gave legitimacy to the one another as twin expressions of the extent of the prince's power.

### **Science and Colonialism**

Europe's scientific revolution was based, in part, on the work of natural historians who benefited from an intellectual tradition that dated back to Aristotle, flowering mostly in the Renaissance. The so-called scientific revolution of the seventeenth century is difficult to characterize, not least because of its complexity and duration. The temptation to apply the name revolution comes from the fundamentally different and radically new view of nature and the world it offered. The term "scientific revolution," however, has become something of a catch-all phrase, encompassing almost every major intellectual and technological development in Europe throughout the seventeenth century. The development of the printing press, the adoption of the heliocentric model of the universe, the discovery of the New World, the advent of the Linnaean system of binomial nomenclature – all of these changes and more facilitated a flood of information about the world, familiar and previously unknown, to be collected and categorized, laying the foundation for a new, secular world-view.

This revolution was preceded by and predicated upon the rapid accumulation and dissemination of new information. New places, peoples and things that did not fit within the philosophical or explanatory model provided by the ancient Greeks and Aristotle in particular created an intellectual crisis for educated Europeans. Proponents of scientific inquiry tried to allay this crisis of knowledge by founding their new world view on observational and rationality. The gaps in the ancients' knowledge of the world that had become glaringly apparent with the discovery of continents and peoples called for a new ways of establishing and verifying truth.<sup>4</sup>

The scientific revolution was a powerful event in the history of the western world. Many critical studies of the subsequent growth and development of scientific thought have focused on scientific practice as it existed within the capitals of Europe. A subset of these historians have begun to look more closely at those colonial outposts that had been so influential to the advent of the new scientific world view, as interesting and important locations in the history and development of scientific thought. They have tried to explain in detail the relationship between the science of European capitals and the science of the colonial frontiers. Raymond Phineas Stearns' *Science in the British Colonies of America* is a foundational text in the literature of colonial science, describing how scientific practice developed both under the patronage of and yet at a great

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<sup>4</sup> Steven Shapin, *Scientific Revolution* (Chicago: University of Chicago Press, 1996).

distance from the Royal Society of London.<sup>5</sup> Stearns shows how a dynamic community of scientific practitioners arose from a creole population of new immigrants and second and third generation Europeans. Stearns' work stresses the dynamic nature of the relationship between scientific center and periphery. It acknowledges the debt naturalists and scientists in the American colonies owed to the academies and societies of Europe for their training as well as their income while maintaining that the nature of colonial scientific practice in the colonies was neither unsophisticated nor derivative.

Studies such as these, insightful and informative though they may be, focus primarily on the tributary relationship between scientific centers and scientific peripheries. The men (and occasionally women) who scoured the forests and jungles observing nature and collecting specimens were the social and professional inferiors of the purchasers of their products at the academies, museums and universities. Because they were not professionalized or unified to any significant degree, field collectors are difficult to historicize. Their stories have been overshadowed by rich traditions of textually based analyses of institutions. Though difficult to examine, it is nonetheless a valuable project to try and understand the motivations, rewards, successes, and failures that these early collectors experienced. Not least because it can illuminate what exactly scientific practice and natural history offered to them in terms of security, identity, or opportunity.

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<sup>5</sup> Raymond Phineas Stearns, *Science in the British Colonies of America* (Urbana: University of Illinois Press, 1970).

Only more recently have the peripheries begun to be studied in their own right as places of real inquiry, where the demands of life on a frontier dictated the movements, aims, and observations of local naturalists. The European centers, while providing much needed financial and social support for the work of these early scientists did not, indeed could not, direct the course of systematic inquiry into nature that occurred in the peripheries. The haphazard, spontaneous and necessarily sporadic nature of specimen observation, collection, preservation, and transmission all contributed as much as the specimens themselves did to the picture European collectors constructed of the New World.

The center-periphery distinction, therefore, while still useful, has its drawbacks. It suffers, not surprisingly, from a bias towards the nineteenth century which was an age when the centers had established themselves throughout Europe and could be treated as a well-connected network. Center-periphery studies also tend to focus rather tightly on key, central people like Joseph Banks and places like Kew Gardens, or the Academie des Sciences in Paris, disregarding small institutions and less well-known individuals.<sup>6</sup> No doubt center-periphery distinctions strengthen the methodologies of those historians looking at well-

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<sup>6</sup> For collections of essays exploring (in part) the center-periphery theme, see: N. Jardine, J. A. Secord, and E. C. Spary, eds., *Cultures of Natural History* (Cambridge: Cambridge University Press, 1996); Roy MacLeod, ed., *Nature and Empire: Science and the Colonial Enterprise* (Chicago: University of Chicago Press, 2000); David Phillip Miller and Peter Hans Reill, eds., *Visions of Empire: Voyages, Botany, and Representations of Nature* (Cambridge: Cambridge University Press, 1996). For a particularly readable account of the life and work of John James Audubon that examines the tension between America and Europe as periphery and center in the early nineteenth-century world of ornithology, see: Richard Rhodes, *John James Audubon: The Making of an American* (New York: Alfred A. Knopf, 2004).

established and thoroughly European institutions. These institutions, having derived their political and cultural capital from the success and popularity of their investigations conducted at their peripheral (colonial) locations, only reveal a narrow aspect of the development of scientific practice. The periphery did not exist solely in relation to the center. The people and institutions that came to inhabit the outlying colonial areas had lives and programs of their own that exerted their own considerable influence back on the centers of learning and study to which they were purportedly subject.

The recent historiographical tradition established in center-periphery studies is important to any study of eighteenth-century Russian science for St. Petersburg was widely accorded the status of periphery by many European centers. As recent historians have grappled with the center-periphery distinction, many have come to the conclusion that the evaluation of local knowledge as well as native knowledge enables a deeper analysis of the practice of science in the borderlands.<sup>7</sup>

The concept of local knowledge, which is both broad and diffuse, has come to mean many things. Historian Lewis Pyenson, one of the earliest to use the term, argues that science in general is “‘local knowledge’, validated

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<sup>7</sup> For an early work on native knowledge see: James P. Ronda, *Lewis and Clark Among the Indians* (Lincoln: University of Nebraska Press, 1984); for work on local knowledge with respect to natural history in a colonial setting, see: Thomas P. Slaughter, *The Natures of John and William Bartram* (New York: Alfred A. Knopf, 1996); Amy R. W. Meyers and Margaret Beck Pritchard eds., *Empire's Nature: Mark Catesby's New World Vision* (Chapel Hill: University of North Carolina Press, 1998).

globally.”<sup>8</sup> For this purposes of this discussion, “local knowledge” indicates something more confined. It suggests that the local conditions of any scientific experiment or observation are essential to understanding both the meaning and the accomplishment of the practice in question. The concepts of local knowledge and native knowledge both suggest the importance of the environmental and cultural context of scientific practice at the borders of empire.

Just as St. Petersburg was something of a hinterland with respect to the rest of Europe in the eighteenth century, so was Siberia a hinterland with respect to St. Petersburg. The importance of these studies to the analysis of eighteenth-century Russian natural history is in the methodological pathways they suggest for incorporating local knowledge into studies of scientific practice in colonial borderlands.

Like so many of the other sciences, natural history garnered little popular interest in Russia before the reforms of Peter the Great. There was almost no educational infrastructure that taught natural history and private education was bound by Russian cultural mores which prepped (male) children almost exclusively for employment with the state. The secular education of the children of nobles had been, to the eighteenth century, a relatively haphazard and unorganized affair. Religious education, on the other hand, was rigorous and well-established, but constrained by its texts and traditions.

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<sup>8</sup> Lewis Pyenson, “An End to National Science: The Meaning and the Extension of Local Knowledge,” *History of Science* 40 (2002): 252.



Given the exacting service standards that Peter had imposed on the *boyar* elite, young noble children often spent the bulk of their youth without the direct supervision of their fathers. Noble mothers tended not to impose discipline on their children, especially academic discipline, and for the most part children were left in the care and supervision of trusted serfs and servants.<sup>9</sup> Institutions of elementary learning were often Church based and focused heavily on rhetorical, religious, and liturgical lessons. Mathematics and natural history were not a central part of the curriculum of even more prominent institutions of secondary education, like Moscow's Slavic-Greek-Latin Academy. More prosperous families could afford to hire foreign tutors to educate their children. These tutors were afforded little respect by the students who were unused to the discipline and often met with the disapproval of the serfs who resented being displaced from the child's life.<sup>10</sup>

The Russian elite, therefore, had no core community of educated individuals who might join the ranks of amateur naturalists at the beginning of the eighteenth century. There was no cultural niche in Russian society for the interested collector. Nonetheless, the creation of a scientific community and the attachment of scientific components to the various military expeditions was clearly a priority for Peter the Great as it was for the Russian monarchs who followed him. The development of natural history in Russia therefore took a

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<sup>9</sup> "Home and School," in Marc Raeff, *Origins of the Russian Intelligentsia: The Eighteenth-Century Nobility*, 122 - 147 (New York: Harcourt Brace Jovanovich, 1966).

<sup>10</sup> *Ibid.*, 127.

different path than it had in Europe. European collectors fell under the patronage of princes and other powerful people, and so they had to satisfy certain wishes, but they were largely independent and traveled between courts frequently. Beginning with Stepan Petrovich Krasheninnikov, the naturalist came increasingly to be identified as a servitor to the state, thus falling within the already well-established, culturally and historically rich Russian social class system.

A number of members of the Romanov family before Peter had shown an interest in collecting, had invited foreign scholars into Russia, and had even sent students abroad to learn in foreign lands.<sup>11</sup> None of Peter's predecessors, however, displayed as much interest in and commitment to the sciences as Peter did. While abroad for the second time from 1716 - 1717, Peter had purchased wholesale several private collections, including that of Fredrick Ruysch, a great collector and embalmer. Peter's new collections purchased in Europe combined

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<sup>11</sup> Oleg Yakovlevich Neverov examines the collecting practices of Peter's father and grandfather in his essay "The Emergence of Private Collections in Russia: Peter the Great and his Inner Circle: the early 18<sup>th</sup> century," in *Great Private Collections of Imperial Russia* (New York: Vendome Press, 2004). Also see Idem., "'His Majesty's Cabinet' and Peter I's Kunstkammer," in *The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe*, ed. Oliver Impey and Arthur Mac Gregor, 54 – 61 (Oxford: Clarendon Press, 1985). An informative general history of the Kunstkammer can be found in: T. V. Stanyukovich, *The Museum of Anthropology and Ethnography named after Peter the Great* (Leningrad: Nauka, 1970). More recent work has been done by Anthony Anemone, "The Monsters of Peter the Great: The Culture of the St. Petersburg Kunstkamera in the Eighteenth Century," *Slavic and East European Review* 44 (2000): 583 – 602. For more information on the sending of students abroad up to and during the time of Peter the Great see: Max J. Okenfuss, "Russian Students in Europe in the Age of Peter the Great," in *The Eighteenth Century in Russia*, ed. J. G. Garrard, 131 – 145 (Oxford: Clarendon Press, 1973).

with the famed Gottorp Globe (a gift to Peter from the Duke of Holstein in 1715) to enrich Peter's own personal collection, the Kunstkammer. By 1719 Peter had opened a section of this collection to the public, and by 1726 it had its own building located on Vasilevsky Island in St. Petersburg.<sup>12</sup>

After Peter's death, the Kunstkammer grew dramatically with the addition of the rest of Peter's own private collection, which had previously been housed in the Summer Palace. During his lifetime Peter was well known as a collector of curiosities and many government officials and individuals close to the court (or those hoping to become so) made a habit of presenting Peter with rare and curious objects. Peter's consort, wife, and Tsarina from 1725 – 1727, Catherine I, received from the owner of the Tagil mines, Nikita Demidov, a large collection of Scythian gold from Siberia. Similarly, Matthew Gagarin, governor of Siberia, also channeled a wealth of new and interesting phenomena from Siberia into the Russian court.<sup>13</sup> By the opening of the Academy of Sciences in 1727, the

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<sup>12</sup> The Gottorp Globe was built between 1654 and 1664 under the supervision Adam Olerius then in the court of the Duke of Holstein. The hollow Globe was 3.1m in diameter and rotated by water power. Inside were painted various constellations and their mythological representations. The exterior of the Globe contained a map of the world. This fabulous mechanism was presented to Peter in 1714 and transported to Russia. It remained in Peter's personal possession until 1726, when it was put on display at the Academy's Kunstkammer. For more information on the Gottorp Globe, see: Anemone 2000; Leo Bagrow, "The Gottorp Globe in Russia," *Imago Mundi* 6 (1949): 95 – 96; Martin Ramming, "A Description of the Gottorp Globe in a Japanese Manuscript Book," *Imago Mundi* 9 (1952): 103 – 105.

<sup>13</sup> Neverov 1985, 55.

Kunstkammer had become a significant locus of scientific and intellectual inquiry in St. Petersburg and, at least in principle, was open to everyone.<sup>14</sup>

Like the early history of the Academy, the beginnings of natural history in Siberia consisted of foreign practitioners and Russian patrons. Probably the first European trained natural historian to study Siberia was Daniel Messerschmidt, commissioned by Peter himself in 1719 to study the natural phenomena of Siberia. After its creation, Messerschmidt became answerable to the Academy in St. Petersburg. Messerschmidt was a naturalist of astonishing discipline and range. Alexander Vucinich, who mentions him briefly, calls him “the founder of Siberian geography and ethnography.” Anke te Heesen, one of the only historians to write extensively on Messerschmidt in English, writes that he “performed the work of a draftsman, geographer, secretary, natural scientist and archivist almost without help.”<sup>15</sup>

Messerschmidt traveled throughout Siberia from 1720 to 1727. His winter quarters were located in the city of Tobolsk then the capital of the region. Before he left St. Petersburg in 1720, Messerschmidt was given a set of instructions from the court to carry out six duties relating to building a collection. He was to describe the land, the natural history, the *Materia Medica* (including disease among the natives), the Siberian peoples (and their languages), and other strange

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<sup>14</sup> Anemone 2000; Neverov 1985, 55; Idem 2004, 16 – 17.

<sup>15</sup> Alexander Vucinich, *Science in Russian Culture: A History to 1860* (London: Peter Owen, 1965), 59; Anke te Heesen, “Boxes in Nature,” *Studies in History and Philosophy of Science* 31 (2000), 388.

and interesting items.<sup>16</sup> Messerschmidt conducted his studies largely in isolation for he had no traveling companions and few locals shared his interests. He was able, however, to accomplish a great deal. He sent a great wealth of materials first to the Kunstkammer, and then to the Academy of Sciences after it was officially established. The volume of Messerschmidt's collections, as well as the acrimony with which Messerschmidt and the Academy came to interact with one another, stalled the use and interpretation of Messerschmidt's materials for some years. His expertise, however, were tapped by increasing number of foreign academicians in St. Petersburg, including G. F. Müller and Georg Wilhelm Steller.

One year before Messerschmidt set out for Siberia, Peter sent two Russian geodesists to describe Russia's easternmost regions. Ivan Evreinov and Feodor Luzhin were sent to the region of Kamchatka to determine the geographical relationship between Russia's far eastern terminus (the recently acquired peninsula of Kamchatka) and North America. Instructed to, among other things, "search for precious metals on the Kuril Islands," the two Geodesists educated at Peter's recently founded Naval Academy did not experience much success and returned with a map that was only slightly improved by their findings.<sup>17</sup>

The expedition of Evreinov and Luzhin was particularly emblematic of Russian geodetic expeditions in general which were far more common than lone

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<sup>16</sup> Heesen 2000, 381.

<sup>17</sup> Stephen Haycox, *Alaska: American Colony* (Seattle: University of Washington Press, 2002), 46; Evgenii G. Kushnarev, *Bering's Search for the Strait: The First Kamchatka Expedition, 1725 - 1730*, trans. E. A. P. Crownhart-Vaughan (Portland: Oregon Historical Society Press, 1990), 6.

flights of academic research like Messerschmidt's. By the middle of the eighteenth century graduates from Peter's Naval Academy were regularly conducting small, localized geodetic surveys thereby laying the foundations for a Russian geodetic and cartographical tradition.<sup>18</sup>

Another important figure in early Russian natural history was the Swedish prisoner of war, Joseph Philip von Strahlenburg. Strahlenberg spent over ten years in Siberia, time which he spent systematically studying the region. He befriended Messerschmidt and even used some of the lone naturalist's scientific material, but the two do not seem to have spent a great deal of time with one another.

Strahlenberg's life and published work, like those of Messerschmidt, have been the focus of scant historical attention, but continue to be important to understanding eighteenth-century natural history and the history of Siberia.<sup>19</sup>

Strahlenberg's 1737 work, translated in the eighteenth century as *An Historico-Geographical Description of the North and Eastern Parts of Europe and Asia*,

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<sup>18</sup> For interesting and detailed discussions about the relative 'Russian' and 'foreign' foundations of a Russian cartographic tradition, see: Leo Bagrow, *A History of Russian Cartography up to 1800*, ed. Henry W. Castner (Wolfe Island: Walker Press, 1975); L. A. Goldenberg and A. V. Postnikov, "Development of Mapping Methods in Russia in the Eighteenth Century," *Imago Mundi* 37 (1985): 63 – 80. For a distinctly patriotic take on the history of Russian cartography, see: V. Akhmatov, "Cartography," in *The Pacific, Russian Scientific Investigations*, Academy of Sciences of the SSSR, 27 – 40 (Leningrad: Publishing Office of the Academy, 1926).

<sup>19</sup> Exceptions to this include Anke te Heesen's wonderful article (2000) on Messerschmidt's practice of collecting and a short Russian language biography of Johann Philipp Strahlenberg: M. G. Novlianskaia, *Filipp Iogann Strahlenberg: ego raboty po issledovaniiu Sibiri* [*Philipp Johann Strahlenberg: His Work on the Study of Siberia*] (Moskva: Izdatelstvo "Nauka," 1966).

proved influential not just for his audience at home, but also for the organizers and the participants of the Second Kamchatka Expedition.<sup>20</sup>

Despite the work of Strahlenberg, Messerschmidt, Evreinov and Luzhin, as well as other less well known trappers, traders, and surveyors, Siberia remained a relative blank in the minds of most. Small scale geodetic surveys were constantly providing more accurate information for the growing mapmaking division of the Academy to incorporate into their publications. A complete and thorough observation of the land as a whole was still lacking however.

A unified approach to Siberia was one of the many goals of the grandly conceived Second Kamchatka Expedition. The application of natural historical practices to Siberia had been patchy at best and the organizers of the Second Kamchatka Expedition did not doubt the efficacy of a scientific examination of Siberia so much as they doubted the ability of a single man to do it. Accordingly they increased the number of trained participants several times over and allowed for more specialized researches to take place. The Second Kamchatka Expedition was largely conceived of by Peter the Great, but it was carried out during the reigns of the several monarchs to succeed Peter, including Peter's wife, Catherine I (r. 1725 – 1727), Anne of Courland (r. 1730 – 1740), and finally Peter's daughter, Elizabeth I (r. 1741 – 1762). The Expedition received such unflagging

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<sup>20</sup> Philip John von Strahlenberg, *An Historico-Geographical Description of the North and Eastern Parts of Europe and Asia* (London: J. Brotherton, J. Hazard, W. Meadows, T. Cox, T. Astley, S. Austen L. Gilliver, and C. Corbet, 1737).

funding, support, and manpower for over ten successive years in part because it was tailored so closely to the aims and desires of the Russian state.<sup>21</sup>

Stepan Petrovich Krasheninnikov's *Opisanie zemli Kamchatki* (1755) came out of this tradition. It was a work that directly resulted from the Second Kamchatka Expedition, it likely used Messerschmidt's collections housed in the Academy, and it entered the European scientific publishing world in competition with Strahlenberg's popular historical descriptions of Siberia. Krasheninnikov's work is important for many reasons, not least of which because it is the only such of its kind written by a Russian. Krasheninnikov's *Opisanie* offers one of the first detailed scientific descriptions of a region in Russia's borderlands written by a Russian who had been educated solely on Russian soil. And yet for all of Krasheninnikov's 'Russianness' his work remains firmly grounded in the natural history tradition that had been developing in Siberia since the earlier part of the century. Like Strahlenberg, Krasheninnikov adopts a thematically arranged, chronological travel-narrative style to convey his research in objective and temporal terms.

Krasheninnikov's *Opisanie* was an important part of the natural history tradition in Russia not least because it sheds much light on the growing russification of a primarily western tradition. Krasheninnikov's *Opisanie* also allows the historian to examine the role of natural history in eighteenth-century Russian cultural reforms, including the development of a new Russian literary

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<sup>21</sup> Raymond H. Fisher, *Bering's Voyages: Whither and Why* (Seattle: University of Washington Press, 1977); Vucinich 1965, 99 – 104.



language and the use of the process of westernization not to reject Russia's Muscovite past, but to embrace Russia's special purpose in world history.

The following sections, therefore, examine Krasheninnikov's life, his work, and the reception of his work among European audiences. The practice of natural history was, indeed, brought to Russia by foreign doctors and scholars, but Krasheninnikov's initiation into this community indicates the increasing acclimatization of the science to Russian culture. A critical look at Krasheninnikov's training, his publications, and his career all help to clarify the process by which scientific practice came to be established in eighteenth-century Russia. It illuminates as well the development specifically of a natural history tradition within and between St. Petersburg and Siberia.

Chapter four on Krasheninnikov's early years and education demonstrates the role that the changing trends in eighteenth-century Russia's secondary schools came to play in Krasheninnikov's development. It also hints towards the effects that the establishment of the St. Petersburg Academy of Sciences was having on promising Russian youth at the time. The following chapter focuses on the small corpus of Krasheninnikov's writings, including Krasheninnikov's letters, his early reports, and his magnum opus, the *Opisanie zemli Kamchatki* (1755). It explores the various literary and scientific traditions that Krasheninnikov actively participated as worked to become a professional academic. Finally, chapter six on the reception of Krasheninnikov's works among European scientific audiences indicates the level of success and assimilation Krasheninnikov achieved, while

simultaneously pointing to the degree of apartness he seems to have intentionally maintained.

## CHAPTER FOUR

## EARLY YEARS

Very little is known about Krasheninnikov's life before his involvement with the Second Kamchatka Expedition. The contemporary literature issuing after the completion of the Expedition usually depicts Krasheninnikov as a bright and accomplished student, who, having trained with professors Müller and Gmelin in the first years of the Expedition, was eventually allowed to conduct his own research on the peninsula of Kamchatka. Little is made of his academic training before the Expedition, and little is mentioned of his subsequent career. Standing, perhaps, in the shadow of his great academic peer, Mikhail Lomonosov (1711 – 1765), Krasheninnikov's achievements have, to this day, been continually evaluated only within the context of the Second Kamchatka Expedition and not in light of the development of eighteenth-century Russian science more generally. Aside from the thoughtful and informative introduction given by E. A. P. Crownhart-Vaughan in a 1972 English translation of Krasheninnikov's *Opisanie zemli Kamchatki* there have been no treatments of Krasheninnikov's life, his work, or his role in the development of eighteenth-century Russian science in English.<sup>1</sup>

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<sup>1</sup> Stepan Petrovich Krasheninnikov, *Explorations of Kamchatka North Pacific Scimitar*, trans. E. A. P. Crownhart-Vaughan (Portland: Oregon Historical Society, 1972). There has been some discussion of Krasheninnikov's role in the description of Kamchatka, especially with reference to the work of fellow naturalist, Georg Wilhelm Steller, by historian Orcutt Fost, but the focus of his works is always Steller. Orcutt Frost, "Georg Steller and Stepan Krasheninnikov:

The only extant biography of Krasheninnikov is N. G. Fradkin's somewhat elementary, yet informative Russian work: *S. P. Krasheninnikov*. Though this work provides a useful guide for the Russian language materials on Krasheninnikov, it was originally published in 1951 and reissued in 1974 without any apparent revisions.<sup>2</sup>

The first published treatment of Krasheninnikov's life was Gerhard Friedrich Müller's preface to the original 1755 Russian edition of Krasheninnikov's *Opisanie zemli Kamchatki* [*Description of the Land of Kamchatka*].<sup>3</sup> Written just after Krasheninnikov's death, Müller's short account is both respectful and laudatory, while it avoids the sometimes hagiographic tone of an eulogy. A substantial two-volume work, the *Opisanie* was condensed and translated into English by James Grieve in 1764, with Müller's preface translated in full.<sup>4</sup> For both Russian and English readers alike the definitive source of information throughout the eighteenth-century on Krasheninnikov's life and career was this short essay.

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Pioneer Scholars on the North Pacific Rim," *Pacific Northwest Quarterly* 95 (2004): 59 – 69.

<sup>2</sup> N. G. Fradkin, *S. P. Krasheninnikov* [in Russian] (Moskva: Mysl, 1974). Elementary though it may be, Fradkin's biography does make use of a variety of Russian secondary materials and contains copious footnotes. He relies heavily on the work of N.N. Stepanov, a prominent Krasheninnikov scholar who had a hand in almost every twentieth century Russian publication of Krasheninnikov's work and who will be cited in detail below.

<sup>3</sup> S. P. Krasheninnikov, *Opisanie zemli Kamchatki* (Sanktpeterburg: Pri Imp. Akademii Nauk, 1755). A fully digitized, first edition copy of this work can be found on the Library of Congress's website at: <http://frontiers.loc.gov>.

<sup>4</sup> The Russian version of Müller's preface appears at the beginning of vol. 2 of Krasheninnikov's 1755 *Opisanie*.

Müller's describes Krasheninnikov as one of "six *Russian* students," who, while participating in the Second Kamchatka Expedition, "had an opportunity to improve themselves while they were assisting the professors."<sup>5</sup> The professors, Johann Georg Gmelin, Louis Delisle de la Croyere, and Müller himself, were well known enough or from such prestigious families (in the case of Delisle) that most readers would have considered Krasheninnikov's training at least sufficient for the task he later assumed. In Müller's retelling, Krasheninnikov rapidly proved himself capable and worthy of the professors' trust, eventually assuming "all enquiries into the state of *Kamtschatka*."<sup>6</sup>

Perhaps to assure the readers, Müller stresses in this brief essay that the professors, "in the frequent accounts received from him, found that his observations in natural history and physics were just; and in any difficulties assisted him with their advice by letters."<sup>7</sup> The names of the illustrious professors involved would likely have assured European skeptics as to the reliability of the subsequent work.

Of Krasheninnikov's early education, Müller writes only a single sentence. Born in Moscow, Krasheninnikov "had his first education in the Latin

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<sup>5</sup> Gerhard Friedrich Müller, introduction to *The History of Kamtschatka and the Kurilski Islands with the countries adjacent*, by Stepan Petrovich Krasheninnikov, trans. James Grieve (London: T. Jefferys, 1764): iii. The names of only *five* participating students, however, are given by Johann Georg Gmelin: Krasheninnikov, Feodor Popov, Alexis Gorlanov, Lucas Ivanov, and Alexis Tretijakov. Johann Georg Gmelin, "Reise nach Kamtschatka durch Sibirien. Tagebuch des Herrn Gmelins," *Allgemeine Historie der Reisen zu Wasser und Lande* 19 (1769): 74.

<sup>6</sup> Krasheninnikov 1764, iii.

<sup>7</sup> *Ibid.*, iv - v.

school of the convent of our Lord, where he learned the principles of rhetoric and philosophy.”<sup>8</sup> The school Müller refers to here was, indeed, important to the development of eighteenth-century Russian Science. The Latin-Greek-Slavonic Academy (otherwise known as the Ikonospaskii School) for a brief time provided the most secular secondary education in Latin and Greek, providing students with a firm foundation in the work of the ancients.<sup>9</sup>

Müller’s was not the only eighteenth-century voice describing Krasheninnikov’s life. A short autobiographical statement, apparently written in Krasheninnikov’s own hand just before his death, has been published only in the twentieth century. Just over 200 words, this mysterious piece was published in the 1949 Soviet reprint of the *Opisanie zemli Kamchatki*.<sup>10</sup> The statement begins: “I, the below named, studied in the Moscow Ikonospasski school from 1724 to 1732, in the last two years of which I received...one *altyn* every month.”<sup>11</sup> The statement continues to detail ranks and rates of pay Krasheninnikov received at various turns in his career. Merely titled “Autobiography” (a title we cannot be sure Krasheninnikov himself applied to the piece) the whole of the statement gives only the most skeletal outline of Krasheninnikov’s employment career. The final line, however, is the most suggestive, indicating quite possibly fatigue or

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<sup>8</sup> Ibid., iv.

<sup>9</sup> This school is discussed in more detail below, see page 83.

<sup>10</sup> S. P. Krasheninnikov, *Opisanie zemli Kamchatki, s prilozeniem raportov, doneseni i drugikh neopublikovannykh materialov*, ed. N. N. Stepanov [in Russian] (Moskva: Glavsevmorputi, 1949)

<sup>11</sup> Krasheninnikov 1949, 545. “Я, нижеименованной, обучался в Московской иконоспасской школе с 1724 по 1732 год, в которых послед них двух годах получал по сороку алтун на месяц.” The *altyn* was a unit of money in use in Moscow at that time.

frustration at the course of his career. He writes: “I am 43 years old with a male son Vasili, eight months, and I have no serfs. To this statement, the professor of the Academy of Sciences Stepan Petrov son of Krasheninnikov has placed his signature.”<sup>12</sup> To not yet own serfs was a mark of Krasheninnikov’s own continuing subservience to the state. To have a young son and as yet no serfs underscored (perhaps in a way that the mere repetition of salaries earned could not) Krasheninnikov’s own not yet fully realized striving.

Another important eighteenth-century source of information on Krasheninnikov’s life is Nikolai Novikov’s 1772 *Opyt Istoricheskavo Slovaria o Rossiskikh Pisateliakh* [*Dictionary of Russian Authors*].<sup>13</sup> This work gives a surprisingly detailed and thorough, if brief, account of Krasheninnikov’s life and career. The bulk of the entry concerns the Second Kamchatka Expedition but Novikov ends on what would become an oft repeated interpretation of Krasheninnikov’s background. According to Novikov, Krasheninnikov was one “of a number, who [though] not of noble breed, do raise themselves up by good deeds...and make themselves deserving of everlasting memory for their personal quality, their work and the honor they bring to their people.”<sup>14</sup> This sentiment

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<sup>12</sup> Ibid., 545. “...от мне сорок третей год детей мужеска полу сын Василей [в]осьми месяцев, а крестьян за мною не имеется. К сей скаске Академии Наук профессор Степан Петров сын Крашенинников руку приложил.”

<sup>13</sup> Nikolai Novikov, *Opyt Istoricheskavo Slovaria o Rossiskikh Pisateliakh* [in Russian] (Moskva: Knigi, 1987). This is a facsimile reproduction of the 1772 first edition and therefore, I have left most of the eighteenth century orthography intact.

<sup>14</sup> Novikov 1987, 97. “Он был из числа тех, кои не знатностью породы, ни благодеянием щастия возвышаюся; но сами собою, своими качествами,

changed overtime from a ringing enlightenment encomium to a hollow-sounding Soviet standard by the twentieth century. It is true, however, that Krasheninnikov, like his great colleague Lomonosov, came from a non-elite family background and found, through his early education and his latter service with the Second Kamchatka Expedition a widening path to social upward mobility.

What can be culled from available eighteenth-century sources suggests that Krasheninnikov was a mid-level academic who performed extraordinarily well under the circumstances but who, ultimately, could be appreciated only in connection with his work on the Second Kamchatka Expedition. To be sure, his work on the Second Kamchatka Expedition did garner him a good deal of attention from scientific communities across Europe. However, interest died considerably by the 1790s and the nineteenth century saw only one Russian language reprinting of Krasheninnikov's work. From 1818 to 1825 Krasheninnikov's work was combined with the publications of other prominent scientific explorers of the Russian territories, Johan Peter Falck and Ivan Ivanovich Lepekhin and released serially. For the most part, however, Krasheninnikov's life receded into the background of eighteenth-century Russian studies.

Serious interest and archival research into Krasheninnikov's life did not begin until the middle of the twentieth century with the work of N. N. Stepanov and others. The 1949 Stepanov edition of Krasheninnikov's *Opisanie zemli*



*Kamchatki* has been particularly important to Krasheninnikov studies as well as studies of the Second Kamchatka Expedition for it includes unpublished reports, letters, and other archival miscellany previously unavailable. The introduction to this collection written by N. N. Stepanov is particularly useful to the scholar who does not have access to Russian archives. Calling the *Opisanie* a “classic of Russian science” Stepanov contextualizes and gives detail to Krasheninnikov’s time with the Second Kamchatka Expedition.<sup>15</sup> He notes the amount of historical and textually based work Krasheninnikov did in the archives in Yakutsk, favorably comparing Krasheninnikov with the other, more prominent, members of the expedition.

Stepanov’s assessments may sound distinctly Soviet at times, but many of Stepanov’s conclusions came from eighteenth-century characterizations of Krasheninnikov’s work. His comment that “Krasheninnikov tirelessly fought for the advancement of Russian science and culture” should be taken seriously, regardless of the fact that it is followed by such hollow-sounding Soviet standards as: “Krasheninnikov came from the people,” or “Krasheninnikov was a patriot of his great homeland.”<sup>16</sup> Indeed, sentiments such as these are not far different from Müller’s almost two centuries before. The eighteenth-century German might have found a friendly listener in Stepanov when he wrote that Krasheninnikov was

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<sup>15</sup> Krasheninnikov 1949, 14. “Крашенинников поправу можно назвать классиком русской науки.”

<sup>16</sup> Ibid., 22. “Так же как Ломоносов, Крашенинников вышел из народа... Подобно Ломоносову, Крашенинников был патриотом своей великой родины и неустанно работал и боролся за развитие русской науки и русской культуры.”

“one of those few whom personal merit alone, and no advantages of birth or fortune, contributed to raise.”<sup>17</sup>

Despite the dearth of information directly relating to Krasheninnikov’s life, much can be learned by studying those institutions which formed him academically and which have been the subject of more assiduous research. The Slavic-Greek-Latin Academy in Moscow, referred to by Krasheninnikov as the Moscow Ikonospasski School, was rapidly changing at the turn of the eighteenth century.<sup>18</sup> The early curriculum of the school, dating back to the 1680s had scholastic overtones, and included classes on “speculative philosophy, natural philosophy, rhetoric, logic, theology, pietism, and dialectic.” By the time of Peter the Great, however, it began to allow for “the teaching of several ‘civil sciences’ not incompatible with the religious point of view,” which included basic mathematics and Aristotelian physics.<sup>19</sup>

Eighteenth-century Russian educational policy, especially after the reign of Peter the Great, is often characterized in the historical literature as essentially “utilitarian” and “pragmatic.” Peter needed bureaucrats who could read and write for the rapidly expanding infrastructure of his empire. He needed educated clergy

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<sup>17</sup> Krasheninnikov 1764, vi.

<sup>18</sup> This institution is called throughout the literature by two basic names. Both Krasheninnikov and Lomonosov refer to their alma matter as the Moscow Ikonospasski School [Московская Заиконоспасская школа], Vucinich and other English language historians often call it the Slavic-Greek-Latin Academy, the Slavo-Greco-Latin Academy, or the Slavonic-Greek-Latin Academy. I will use either ‘Slavic-Greek-Latin Academy,’ or ‘Moscow Academy’ when the meaning is clear.

<sup>19</sup> Alexander Vucinich, *Science in Russian Culture: A History to 1860* (London: Peter Owen, 1965), 23.

and cosmopolitan military leaders to support his reforms, as well educated civil servants to help carry them out. These needs inspired the foundation of new, narrowly conceived, almost vocational, schools throughout Russia. Marc Raeff writes that “Peter’s educational orientation had been technological and utilitarian... [and that] even the Academy of Sciences...had originally received this pragmatic bent.”<sup>20</sup> However, as historian Max Okenfuss points out, the older diocesan schools, such as the Slavic-Greek-Latin Academy in Moscow, successfully balanced the pragmatic aims of the state with religious dogma.<sup>21</sup>

Alexander Vucinich writes, perhaps unfairly, that “students of this institution learned a good deal about Aristotelian philosophy, the hardly intelligible discourses of Plato, and the teachings of Church Fathers, but nothing at all about new discoveries and scientific theories. Physics, chemistry, and mathematics were totally alien subjects.”<sup>22</sup> Nicholas Riasanovsky, whose Russian history text book remains a well-used standard, argues that “the Academy was to protect the faith and to control knowledge as well as disseminate it,” with a curriculum that “resembled closely, at corresponding levels, that of medieval Europe. In particular, it included almost no study of science and technology.”<sup>23</sup>

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<sup>20</sup> Marc Raeff, *Imperial Russia 1682 – 1825: The Coming of Age of Modern Russia* (New York: Knopf, 1971), 136.

<sup>21</sup> Max Okenfuss, “The Jesuit Origins of Petrine Education,” in *The Eighteenth Century in Russia*, ed. J. G. Garrard, 106 – 130 (Oxford: Clarendon Press, 1973): 106 – 130.

<sup>22</sup> Vucinich 1965, 24.

<sup>23</sup> Nicholas Riasanovsky, *A History of Russia*, 6th edition (New York: Oxford University Press, 2000), 207.

However, even Riasanovsky is quick to admit that the history of seventeenth- and eighteenth-century Russian educational policy is still highly disputed. While historians like Riasanovsky, Vucinich, and Raeff all argue that the Moscow's Academy remained a bastion of orthodox religious dogma throughout the eighteenth-century, historians like Max Okenfuss and Nicholas Hans argue that it was, in fact, an intellectually dynamic institution. Nicholas Hans characterizes Peter's new schools "scientific, utilitarian, and modern, yet not narrowly vocational."<sup>24</sup> Okenfuss, for example, argues that Peter's reforms of the Moscow Academy were undertaken in order to make it resemble the much more westward leaning, and strongly Jesuit Academy in Kiev, which itself was modeled after the "classical grammar schools" of Europe.<sup>25</sup> This is not to say that the Moscow Academy became, therefore, a bastion of seventeenth-century scientific thinking in Russia, but rather, that it stressed a classical education and a fluency and familiarity with ancient Latin and Greek texts that introduced a more cosmopolitan element to seventeenth- and eighteenth-century Russian education.

Krasheninnikov attended the Slavic-Greek-Latin Academy in Moscow from 1724 to 1732, where, along with other prominent eighteenth-century Russian academics like Mikhail Lomonosov and Leontii Magnitskii, he progressed through the curriculum, gaining a firm grasp of Russian grammar and orthography, and as well as Latin and Aristotelian philosophy. N. N. Stepanov tells us that when academician Bayer examined Krasheninnikov in 1733, he

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<sup>24</sup> Nicholas Hans, *The Russian Tradition in Education* (London: Routledge, 1963), 9.

<sup>25</sup> Okenfuss 1973, 111.

commented on Krasheninnikov's (and Krasheninnikov's fellow students') superior knowledge of Aristotelian logic and physics, subjects that were, in Bayer's words, "so old and messy and having such mixed terminology that I myself couldn't make my way through them."<sup>26</sup>

Krasheninnikov entered the Moscow Academy at the age of thirteen and graduated eight years later at the age of 21. 'Graduated' may be misleading in this case, for there appeared to have been no set point which a student had to reach in order to graduate, rather, in Krasheninnikov's case, he was deemed a talented enough and advanced enough student to be transferred, by decree of the Royal Senate, to the University attached to the St. Petersburg Academy of Science, for further study and academic training. A similar decree had taken Lomonosov from the Moscow Academy in 1736 and had sent him to the University attached to the St. Petersburg Academy of Sciences. Owing to the lack of advanced curriculum, Lomonosov was then sent on to Marburg to study metallurgy. Alternately referred to as the 'academic gymnasium' and the 'university,' the advanced school attached to the St. Petersburg Academy of Sciences, though ultimately short lived, had been in operation for five years by the time Krasheninnikov arrived (and nine by the time Lomonosov arrived). Lectures were given there in Latin and

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<sup>26</sup> Krasheninnikov 1949, 23. "Когда академик Байер экзаменовал в 1733 г. в Академии Наук Крашенинникова и его товарищей, он отменил о лучших (в числе их был и Крашенинников), что у них хорошее понимание «логики аристотелической»; что же касается их представлений о физике, то они «так стары и непорядочны и втерминах так смешаны, что я и сам того разоврат не мог.» Though Stepanov does not use a first name for the Academician in question, the only member of the Academy at that time with the same last name was Gottlieb Siegfried Bayer, a sinologist and professor of Greek and Roman antiquity in the St. Petersburg Academy from 1726 until his death in 1738.

oftentimes students had the benefit of learning from the illustrious members of the St. Petersburg Academy of Sciences themselves.

Krasheninnikov, unlike Lomonosov, seems to have been chosen and sent to the burgeoning university with a specific goal. He was to be trained to participate in the Second Kamchatka Expedition which was scheduled to leave St. Petersburg in a year. It remains unclear what exactly Krasheninnikov studied while in St. Petersburg, though it seems likely that he met and worked with his future mentors, Gmelin and Müller.

Krasheninnikov left St. Petersburg with Gmelin, Müller, de la Croyère and the rest of the Academic contingent in 1733. Travel was slow in any part of Russia in those days. Travel through Siberia was even more so. The studies of the professors, the various observations that needed to be made and the constant regrouping of the party (which was large and required no small amount of organization) meant that Krasheninnikov and the professors did not make it to Yakutsk until 1736. By that time, Müller writes, Krasheninnikov so excelled that “though he was principally employed in the study of natural philosophy, yet he shewed such inclination to geography and civil history, that in the Year 1735 he was employed in these different enquiries at such places as the professors themselves did not visit.”<sup>27</sup> These ‘different enquiries’ included small excursions to observe hot springs and other natural phenomena. He wrote up his excursions in the form of letters to the professors that were then forwarded on to the Senate and the Academy back in St. Petersburg. By 1737 the professors had decided not

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<sup>27</sup> Krasheninnikov 1764, iv.

to continue to Kamchatka from Yakutsk themselves, but rather to send Krasheninnikov in their stead.

## CHAPTER FIVE

## WRITINGS

Krasheninnikov published a limited but important number of works during his lifetime that display his intellectual growth and assimilation into the western natural history tradition. Throughout these works he deftly uses a European scientific writing style to promote his allegiance to Russian social and cultural enlightenment. His writings reveal how steeped in the western natural history tradition Krasheninnikov had become, and include an illuminating depiction of his introduction to the 'Republic of Letters' as a younger student. Moreover they assert his position as an early Russian naturalist, a botanist, and as a promoter of science. Regardless of his country of origin, this collected body of writings suggests that Stepan Petrovich Krasheninnikov is an important figure in the history of eighteenth-century science.

These writings also reveal those of Krasheninnikov's interests that lay somewhat closer to home, including his deep and abiding commitment to the enlightenment of the Russian state and the Russian people. For Krasheninnikov scientific training did not mean that he, or any of his other Russian colleagues, had to become more western, rather it promised to help realize the true potential of the Russian people. The successful and increasingly rapid adoption of scientific culture signified for Krasheninnikov the goodwill of God towards Russia, promising, above all, technological and spiritual progress for the Russian people.



Having finally been recalled back to St. Petersburg from Kamchatka in 1741, Krasheninnikov left the peninsula where he had spent the last three years and headed from Okhotsk for Yakutsk. Perhaps sensing the rigors through which he would be put before members of the Academy, Krasheninnikov took a circuitous route home. He left Kamchatka in June and wintered in Yakutsk. While there he was he married to Stepanida Ivanovna Tsibulskaya, daughter of the local governor. The two then traveled over much of the same territory Krasheninnikov had traveled through with Müller and Gmelin, revisiting and perfecting his earlier notes and observations. The two arrived in St. Petersburg in February of 1743, a year and a half after Krasheninnikov had left Kamchatka. According to Krasheninnikov's own calculations, he covered over 25,700 versts (or about 17,000 miles) throughout his time in Siberia and Kamchatka.<sup>1</sup> Though Krasheninnikov was not officially in the employ of the Second Kamchatka Expedition during his return, these travels were likely very important to the development of his work, for Krasheninnikov was able to verify previous observations and make new ones. Despite the fact that he had been away from western Russia for eight years, Krasheninnikov was in no hurry to get back to the capital and in fact seemed to luxuriate in his time on the road.

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<sup>1</sup> N. G. Fradkin, *S. P. Krasheninnikov* (Moskva: Mysl, 1974), 37. "[Он] длился обратный путь около полутора лет и что всего за годы путешествий по землям сибирским и камчатским Крашененников, по его собственным подсчетам, прошел 25 773 версты." "[He] made his return trip in about a year and a half, and overall his travels through Siberia and Kamchatka Krasheninnikov covered, according to his own calculations, 25,773 versts."]

Two months after his arrival Krasheninnikov, along with several of the other students who had also been assigned to the Second Kamchatka Expedition, took an oral examination before Johann Georg Gmelin and Johann Siegesbeck, then the keeper of the Academy's Botanical Garden as well as the older, better-established Apothecary's Garden. Krasheninnikov passed the oral examination (which focused on botany and Latin) with the highest marks, which he followed by submitting an impressive dissertation on smelt fishes. The caliber of Krasheninnikov's academic performance led the examining committee of academicians to award him a small pension of 200 rubles a year and the permission to study natural history full time.<sup>2</sup>

### **The Letters (1737 – 1740)**

Krasheninnikov's letters to the professors Müller and Gmelin comprise the young naturalist's first concerted efforts to write scientifically about natural history. Krasheninnikov wrote these letters as he traveled with the two professors, continuing the important practice after he had departed for Kamchatka. As Krasheninnikov gained experience, the letters gradually lose their chronological, narrative style and become reports in a more scientific style. The function that these letters service in Krasheninnikov's intellectual and professional development cannot be underestimated. They provided him with a forum to in

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<sup>2</sup> P. A. Novikov, "Akademik S. P. Krasheninnikov kak pervii issledovatel zhivotnogo mira Kamchatki," ["Krasheninnikov as the first researcher of Kamchatka's living world,"] in *Trydi Instituta Istorii Estestnovaniya* vol. 3, ed. S. I. Vavilov, 262 - 296 (Moskva: Izd. Akademii Nauk SSSR, 1949), 270.

which to practice his scientific essay style before a critical audience, and they introduced him to the wider scientific community (via St. Petersburg) by introducing him to the important ‘republic of letters’ that characterized the eighteenth-century scientific community.

The letters that Krasheninnikov wrote to Müller and Gmelin primarily served a utilitarian purpose. They were not personal; rather they performed an important professional function for Krasheninnikov. They acted as open statements to the members of the Academy of Sciences as well as to the royal underwriters of the Second Kamchatka Expedition, attesting to Krasheninnikov’s progress as a student. They also served as good indicators Gmelin and Müller’s satisfaction of their duties as teachers and mentors towards their students.

Krasheninnikov had to display his diligence, his hard work, and his method whenever he was not under the direct supervision of Müller and Gmelin. Before his excursions Krasheninnikov received detailed written instructions from the professors which he then replied to in equally detailed letter form. The letters themselves depict common observations, systematically and methodically made. Their very ordinariness, combined with their vivid description of the educational rigors Krasheninnikov went through, suggest the great importance that education and its public display had in the Second Kamchatka Expedition. Like the many natural history specimens that the professors sent to back to the Academy, they were required to offer proof that the goals of the Second Kamchatka Expedition were being met and that Russian students under their care were advancing academically.

Not only were Krasheninnikov's letters important in satisfying the Academy's expeditions of the Second Kamchatka Expedition, but equally significant is the use of these missives to introduce and include Krasheninnikov in the eighteenth-century 'republic of letters.' One prominent historian of science has argued that "scholarly letter of this period was a peculiar hybrid of the personal and the public composed with both a particular reader and a general readership in mind."<sup>3</sup> The 'republic of letters' was vital to the development of the international scientific community of the eighteenth century, helping scholars to trade information and natural specimens via letter often without ever meeting one another. The letters Krasheninnikov wrote helped him on his way to becoming a fully-fledged eighteenth-century natural historian by simultaneously facilitating sociability with his distant colleagues and helping him to practice, in a semi-public manner, correct scientific language and practice.

The content of these early letters varies widely. They cover a range of topics that would become familiar territory to Krasheninnikov over the course of his career. They included the observation of hot springs, volcanoes, river courses, sable hunts, and the customs and dress of native peoples. Many of these letters include Krasheninnikov's reports detailing the small excursions he and usually several other people (students and soldiers) made at the request of the professors.

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<sup>3</sup> Lorraine Daston, "The Ideal and the Reality of the Republic of Letters in the Enlightenment," *Science in Context* 4 (1991): 371. For more on the republic of letters see: Robert Mayhew, "British Geography's Republic of Letters: Mapping an Imagined Community, 1600 – 1800," *Journal of the History of Ideas* 65 (2004): 251 – 276; idem., "Mapping science's imagined community: geography as a Republic of Letters, 1600 – 1800," *British Journal for the History of Science* 38 (2005): 73 – 92.

The reports themselves are written in the third person, and instead of communicating a direct experience, they describe the actions of Krasheninnikov and his traveling partners took, stressing their adherence to instruction. They underscore the method and behavior of the participants over results.

Typical of several of Krasheninnikov's excursions is the one he details in a report dated 25 May, 1736.<sup>4</sup> In this excursion Krasheninnikov traveled with the geodesist Ivanov to several hot springs on the river Barguzin not far from Lake Baikal. In this report, he describes an interesting and innovative experiment for gauging the mineral content of the hot springs. Krasheninnikov placed two samples of the spring water in flasks and then added into one an iron nail and into the other some silver. After a night, Krasheninnikov reexamined the water to see if "the color of the silver or of the iron had changed, or if there occurred by day the appearance of some material in the flask."<sup>5</sup> Though Krasheninnikov does not report the results of this experiment, he does write that had there been any such 'material,' he would then have gone on to describe its form and quantity.

Krasheninnikov was also commonly interested in determining the temperature of these hot springs. When possible, Krasheninnikov used a thermometer, but in some cases he found himself having to employ a simpler method, either instead of using a thermometer or to calibrate its readings. In a

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<sup>4</sup> Stepan Petrovich Krasheninnikov, *S. P. Krasheninnikov v Sibiri: neopublikovannye materialy* ed. N. N. Stepanov (Mosva: Nayka, 1966), 110 – 122.

<sup>5</sup> Krasheninnikov 1966, 112. "и на утро посмотреть, не переменялся ли цвет как у серебра так и у железа и не пристала ли ко дну и к сторонам того сосуда какая-нибудь материя, притом записать, какой формы и величины те сосудцы были, в которых сии пробы чинены."

report dated 11 August 1735, Krasheninnikov describes having thrown small, uniform pieces of meat into the water, and recording the time it took for them to cook. He performed this experiment in several parts of the hot spring, and he did it in combination with taking thermometer readings.<sup>6</sup>

These experiments with hot springs, performed, he assures, just as the professors instructed, were basic but systematic, and Krasheninnikov performed them rigorously at several locations. Certainly they were rough tests, but they reveal Krasheninnikov's growing familiarity with the experimental method. The actual temperature results do not appear in the letters but do much later in Krasheninnikov's book, the *Opisanie zemli Kamchatki* (1755). The letters give rather a detailed and descriptive narrative of his actions, of the experiments he performed, and the manner in which he approached his clearly delineated tasks. These narratives he diligently wrote up and sent Müller and Gmelin, who then forwarded them on to the Academy and the Senate in St. Petersburg where they assured those highest in power that the Second Kamchatka Expedition was accomplishing its primary goals: the collection of information and the training of Russians scientists.

In the long term, Krasheninnikov's letters helped to establish his remarkable linguistic facility, allowing him to develop a Russian scientific style by writing initially in Latin. Though the letters are published in N. N. Stepanov's edition of Krasheninnikov's unpublished works in Russian with no attribution of a translator, it is quite likely that they were all initially written in Latin for the

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<sup>6</sup> Krasheninnikov 1966, 88 – 98.

professors knew very little Russian. Gmelin certainly wrote his letters to Krasheninnikov in Latin and there exists at least one letter from Krasheninnikov to Linnaeus in Latin as well.<sup>7</sup> Given Krasheninnikov's extensive experience with Latin to Russian translation, it seems likely that upon his return to St. Petersburg he translated his own letters to the professors from Latin to Russian himself.<sup>8</sup> Indeed, Krasheninnikov was ordered to translate into Russian the private papers of Georg Wilhelm Steller, a man whose manuscripts challenge modern translators due to their idiosyncratic German, Latin, and Russian mix.<sup>9</sup> While Krasheninnikov is not usually appreciated as a linguist, he was actively involved with the creation of a scientific style in the Russian language. His skill and experience in Latin which date back to his earliest years of training no doubt

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<sup>7</sup> There are two letters written by Gmelin to Krasheninnikov in Latin, published in: J. G. Gmelin, *Reliquias quae supersunt commercii epistolici cum Carolo Linnaeo, Alberto Hallero, Guilielmo Stellero et al...* ed. Dr. Guil. Henr. Theodor Plieninger (Stuttgartiae: Typis C. F. Heringianis, 1861), 9 – 17; For Krasheninnikov's letter to Linnaeus see: <http://linnaeus.c18.net/Letters/> document number L1207, from Stephan Petrovich Krascheninnikov to Carl Linnaeus, 7 December 1750.

<sup>8</sup> This, however, is largely speculation. It is apparent that Krasheninnikov communicated with his superiors in Latin, however they appear in published collections translated into Russian. While members of the Academy could have read them with ease in Latin, the members of the Senate, an important decision making body at the time, do not seem to have had the same facility with the language. N. N. Stepanov takes no credit for these translations, so it remains an open question who translated Krasheninnikov's early, unpublished materials.

<sup>9</sup> For Krasheninnikov's translation activities, see: A. I. Andreev, "Stepan Petrovich Krasheninnikov," in *Liudy Russkoi Nauki: Ocherki o Vydaiushchikhsia Deiateliakh Estestvoznaniia i Tekhniki* [People of Russian Science: studies of prominent figures of the natural sciences and technology] ed. C. I. Vavilov, 533 - 544 (Moskva: Ogiz, 1949), 540. For Steller's propensity to keep his own papers in a polyglot manner, see: Margritt Engel and Karen Willmore, "Translators' Preface" in Georg Wilhelm Steller, *Steller's History of Kamchatka*, ix - xiv (Fairbanks: University of Alaska Press, 2003), ix.

influenced the way he came to conceive of a simple, straight forward, and scientific style of Russian composition.

Krasheninnikov left the professors in Yakutsk in 1737, ostensibly traveling ahead to set up quarters for the more senior professors on Kamchatka. Müller and Gmelin never joined him, however, for reasons of ill health and over work. Krasheninnikov's time on Kamchatka will be discussed below in conjunction with his book, the *Opisanie zemli Kamchatki* along with the details his studies there. It suffices it to say here that Krasheninnikov weathered what may have been the most arduous section of his journey between leaving Yakutsk and arriving in Bolsheretsk on Kamchatka. The road from Yakutsk to Okhotsk, the departure point for boats crossing the Sea of Okhotsk to Kamchatka, was the deadliest in Russia for pack horses and included several dangerous river crossings. The boat Krasheninnikov took out of Okhotsk began taking on water several days after they had left the harbor and, in order to make it to shore, Krasheninnikov had to jettison all of his belongings including a two year supply of food and all his material for making observations and taking notes. Once on Kamchatka Krasheninnikov almost immediately experienced an earthquake so violent it threw him off his feet.

Throughout these trials, Krasheninnikov remained in regular contact with the professors back in Yakutsk. These letters and reports remained unpublished in Krasheninnikov's lifetime. They were very likely available to members of the Academy and the Senate, and have continued to be consulted by subsequent researchers until the twentieth century. Krasheninnikov's first actual publication



was a short article that appeared in the second volume (1749) of the Academy's new, but increasingly prestigious, journal *Novii Commentarii*.

Krasheninnikov had been awarded the status of adjunct in the Academy in 1745 three months after he had submitted an official, written request to be reviewed for advancement. In this same year, Krasheninnikov began to work in the Academy's Botanical Garden, which was then still under the directorship of Johann Siegesbeck, Krasheninnikov's former examiner. When Siegesbeck left in 1747, the running of the botanical garden fell entirely to Krasheninnikov. Contained within the Botanical Garden were the collections, observations, and reports that Krasheninnikov himself had sent to the Academy during his years in Siberia and Kamchatka; collections which were, according to one historian of Russian botany, of "inestimable value, contributing much that was new to the knowledge of the floras of Alaska, the Aleutian Islands and Kamchatka."<sup>10</sup>

Krasheninnikov's first article is a result of these first years spent at the Botanical Garden. The article, entitled "De Acere Foliis Oblonge Cordatis Inaequaliter Serratis" consists of a short, three-page description of the leaf of a certain maple, written in botanical Latin.<sup>11</sup> It appears just before an article submitted by Steller to the Academy before his death in 1746 on the now extinct "Steller's Sea Cow." Perhaps overshadowed by Steller's the rightfully famous

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<sup>10</sup> Margery Rowell, "Medicinal Plants in Russia in the Eighteenth and Early Nineteenth Centuries," (Doctoral Dissertation, University of Kansas, 1977), 100.

<sup>11</sup> Stephan Krasheninnikov, "De Acere Foliis Oblonge Cordatis Inaequaliter Serratis," *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 2 (1749): 285 – 288. A digitized version of this article (as well as the entire contents of the second, third, and fourth volume of the *Novi Commentarii*) is available on the Library of Congress website: <http://frontiers.loc.gov>.

piece, Krasheninnikov's various biographers rarely refer to this article as they list his works. Published by the Academy only sporadically in its first years, the *Novi Commentarii* carried articles by the most famous of St. Petersburg's professional Academics. The volume that carried Krasheninnikov's and Steller's articles also carried the work Leonhard Euler and M. V. Lomonosov. It was no small feat, even as a favored Russian native son, to publish in the Academy's journal. The article itself is accompanied at the end of the volume with an elegant and detailed drawing of the maple leaf and its seeds (Figure 1). "De Acere" stands, therefore, as a testament to Krasheninnikov's growing academic capabilities and increasing professionalization.

As the "De Acere" article suggests, much of Krasheninnikov's early professional scholarly work focused on botany, for which he had a special aptitude. During these years he compiled, though never published, a flora of the St. Petersburg region. Later this Flora was revised and published by David de Gorter in 1761 as one of the first books to attempt to fully incorporate Linnaeus' sexual system of classification.

From 1745 Krasheninnikov was busily integrating himself into the Academy apparatus, having already been named as an adjunct to the Academy and appointed to the Academy's Botanical Garden. The responsibility for sorting the botanical and ethnographical papers of the deceased Georg Wilhelm Steller fell to him not only because of his scientific expertise in the area, but also because of his skill as a translator. His obvious talents as a translator have yet to be fully recognized by Krasheninnikov's biographers. They were, however, appreciated

by his colleagues at the Academy and Krasheninnikov found himself constantly employed throughout his tenure at the St. Petersburg Academy of Sciences translating between Latin and Russian. Aside from Steller's work, Krasheninnikov translated the first volume of Johann Georg Gmelin's *Flora Sibirica* into Russian, and helped to see it into publication in Russia.<sup>12</sup>

Krasheninnikov was also appreciated in his capacity as an administrator, becoming in 1750 the Rector of the Academy's University. The most promising Russian academics often became administrators in this period. Perhaps drawn to the prestige and political power such positions offered, these talented and well-educated Russians were also unable to deny what amounted to a call to duty. V. E. Adodurov, for example, became the first Russian adjunct to the Academy in 1733. He had studied higher mathematics at the Academy and even taught there. M. V. Lomonosov was for a time one of his students. Instead of becoming a full professor, Adodurov left the Academy for the civil service, eventually becoming Catherine II's Russian language tutor.<sup>13</sup> Nor is Adodurov a unique example. The presence of academicians like Krasheninnikov and Lomonosov within academic and civil administration became increasingly important to a growing sense of Russian national pride among the elite in the second half of the eighteenth century. The professional rise of people like Krasheninnikov played no small part

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<sup>12</sup> Johann Georg Gmelin, *Perevod s predisloviia sochinennago Professorom Gmelinym k pervomu tomu Flory Sibirskoi*, trans. Stepan Petrovich Krasheninnikov (Sanktpeterburg: v Tipografii Akademii Nauk, 1749). Unfortunately, this translation has been unavailable for consultation in this work.

<sup>13</sup> Ludmilla Schulze, "The Russification of the St. Petersburg Academy of Sciences and Arts in the eighteenth century," *British Journal for the History of Science* 18 (1985): 311 fn. 28.

in the growing anti-German sentiment that came to overshadow Russian scholarly life later in the century.<sup>14</sup> While tensions simmered, in the years that Krasheninnikov was most active (from his return to the Academy in 1743 to his death in 1755), anti-German sentiments were still buried among the Russians members of the Academy. Indeed Krasheninnikov's academic advancement relied on the respect and goodwill of his fellow German colleagues, which, for the most part, he seemed to curry successfully.

A caveat to this, however, is the conspicuous correlation between the blossoming of Krasheninnikov's career and the imbroglio over Gerhard Freidrich Müller's 'Norman Thesis' of the origins of the Russian people. In his capacity as a professor of history at the Academy, Müller gave a paper before the Academy in 1749 suggesting that the earliest Russian princes and progenitors of the Russian "race" had in fact been Swedish. Lomonosov spearheaded the attack against the historian's theory. Krasheninnikov, though less vocal than his colleague, also took a stance against the Norman thesis, pitting himself against his former mentor and traveling partner.<sup>15</sup> Shortly after the controversy Krasheninnikov assumed Müller's position of the Rectorship of the Academy's University, apparently sowing some discord between himself, Müller, and Gmelin.

One must not be too quick to assume that the attack on Müller was wholly nationalistic in nature. Interpersonal issues between Lomonosov, Müller, and the director of the Academy, J. D. Schumacher, go a long way in explaining the

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<sup>14</sup> Schulze 1985, 305 - 335.

<sup>15</sup> For a brief recapitulation of the debate, see: J. L. Black and D. K. Buse, *G. -F. Müller and Siberia, 1733 - 1743* (Kingston: Limestone Press, 1989), 24 - 26.

disdain that was heaped upon Müller as a result of his paper. There was certainly no love lost between Müller and Lomonosov, while J. D. Schumacher, quite possibly the instigator of the whole affair, seems to have arbitrarily decided years previously to squash Müller's career. Some historians even suggest that Müller sought a position within the Second Kamchatka Expedition in order to escape the political onslaught Schumacher had initiated against him. As historian David Griffiths reminds us: "the element of personality, which transcends national frontiers, must be incorporated into any discussion of 'struggle' within the [St. Petersburg] Academy."<sup>16</sup> Müller's misfortunes seemed to increase apace with Krasheninnikov's (and Lomonosov's) professional successes. Müller's star, however, had not yet set at the end of this highly politicized ordeal and he remained a vital member of the Academy for many years afterwards. Krasheninnikov's star, by contrast, was distinctly on the rise after the affair.

### **Rech o Polze Nauk i Khudozhestv**

#### **[Speech on the Use of the Sciences and the Arts]**

Out of his 'struggle' with Müller Krasheninnikov emerged in 1750 as a fully fledged member of the St. Petersburg Academy of Sciences. In September of that year Krasheninnikov gave a speech before the Academy as part of a celebration of the Empress's name day entitled "On the Use of the Sciences and

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<sup>16</sup> David M. Griffiths, "The Early Years of the Petersburg Academy of Sciences as Reflected in Recent Soviet Literature," *Canadian-American Slavic Studies* 14 (1980): 440.

the Arts.”<sup>17</sup> The assembly included the Empress herself, an occasion which served as one of a number of “public displays of the Academy at work.”<sup>18</sup> The stress of the bulk of the speeches was laid on “practical usefulness,” notwithstanding many were delivered in Latin and therefore indecipherable to attending Empress.

Krasheninnikov’s speech was first heard and criticized by his fellow Russian colleagues, including M. V. Lomonosov, V. K. Trediakovskii, and N. Popov, who came together as a committee on Krasheninnikov’s essay. Though they found certain “shortcomings” in the essay, they included it in the program and suggested that “in order to avoid the rough criticism of envious persons, the author may yet improve upon his work for which there is time.”<sup>19</sup> The essay that

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<sup>17</sup> The Academy published the proceedings of the meeting later that year as: *Diem lustricum...Imperatricis Elisabethae...Academia Scientarium oradonibus solemnibus ac fests imibus celebrat anno MDCCL. Sept. VI.* (Petropoli, 1750). This publication could not be consulted for this work, but J. J. Hall has given a brief description of it and other such volumes: J. J. Hall, “Some Early Publications of the Russian Academy of Sciences,” *Study Group on Eighteenth-Century Russia Newsletter* 19 (1991), and is available at:

<http://www.sgecr.co.uk/1991-hall.html#3>. Hall’s description implicitly calls into question whether Krasheninnikov’s contribution was actually included in this volume. The reproduction of the speech used here is: Stepan Petrovich Krasheninnikov, “Rech o Polze Nauk i Khudozhestv, chitannaia Stepanom Krasheninnikovym, Botaniki i Istorii Naturalnoi Professorom v Publichnom Akademicheskome Sobrannii Sentiabria 6 dnia, 1750 gody,” [“Speech on the Use of the Sciences and the Arts, read by Stepan Krasheninnikov, Professor of Botany and Natural History at the Public Academic Conference of September 6, 1750”] in *S. P. Krasheninnikov v Sibiri: neopublikovannye materialy* ed. N. N. Stepanov, 225 – 240 (Moskva: Nauka, 1966). All translations of this essay are my own.

<sup>18</sup> J. J. Hall 1991.

<sup>19</sup> Petr Petrovich Pekarskii, *Istoriia Imperatorskoi akademii nauk v Peterburge* [History of the Imperial Academy of Sciences in St. Petersburg] vol. 2 (Sanktpeterburg: Imp. Akademii Nauk, 1873), 462. “При рассмотрении этого прозведения, въ немъ нашлись некоторые недостатки, а потому было записано, что речь, для избежания от завистников грубой критки, автору возможно еще выправить къ чему еще есть и время.”

resulted was one full of the ringing encomiums of enlightenment rhetoric and exhortations to his audience to recognize the work of God's favor in the fortuitous adoption of science in Russia.

Krasheninnikov's speech nicely articulates his vision of the philosophical as well as the practical role science was to play in Russian society. As the Academy's newest Russian professor, and only the second, after Lomonosov, to be advanced past adjunct, Krasheninnikov himself was an example of the success, both potential and actual, of Russian science. The main theme of Krasheninnikov's message concerns the enlightening potential of science, but he uses a rhetoric that is heavily religiously inflected to communicate the gravity of his claims. He begins by declaring that it is his duty first and foremost to awake in his audience due reverence for the "ineffable goodwill" of God towards Russia, the evidence of which could be found in Russia's recent transformation, under the monarchs Peter I and Elizabeth II, into an enlightened state.<sup>20</sup> Because of these two individuals, he argues, the enlightening power of natural philosophy was unleashed upon a benighted Russia.

Pervaded by the enlightenment ideal of progress, Krasheninnikov argues that both the "blessedness and the poverty of humankind depends solely upon the difference in education of the intellect" and that "in so far as one grasps this truth,

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<sup>20</sup> Krasheninnikov 1966, 225 – 26. "Первая часть должности моей сколь важна и сильна возбудить в нас познание неизреченного божьего о России благоволения в прославлении ее премудрыми государями столь и труда к исполнению." [How important and forceful the first part of my duty to awake in us the knowledge of god's ineffable goodwill towards the glorification of Russia by means of her wise government and her work towards the fulfillment [of her aims.]

one approaches real happiness.”<sup>21</sup> Indeed, the blessedness and poverty of Russia itself was predicated, or so supporters of the Academy would like to think, on the education of her various intellects. He admits that there is a diversity of philosophies in the world, but he hopefully holds out that “the holiest philosophy from the beginning of life and encompassing our existence in this universe has not yet come to us. The mind like the body, grows, and from hour to hour gains more understanding.”<sup>22</sup>

So with the body grows the mind, and with the intellect of the people, grows the potential wisdom and goodness of the state. Abstract knowledge is not necessarily the most divine, but rather, that knowledge that most serves the individual. Men know best what they use every day. Krasheninnikov suggests that while a good farmer who knows his business well cannot be considered a simpleton, yet he does not understand whether the moon goes around the sun or vice versa because it does not directly affect his livelihood. Similarly, the savage cannot count above three without using his fingers, yet he can construct fine boats and canoes. Clearly Krasheninnikov is using some of the knowledge he gained while observing the natives of Kamchatka and Siberia. Knowledge, for Krasheninnikov, is valued according to its use.

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<sup>21</sup> Ibid., 227. “Блаженство и бедность рода челевечского единственно зависит от разности просвещения разума. Сколько кто может постигать истину, столько приближается и к сущему своему благополучию.”

<sup>22</sup> Ibid., 228. “Я думаю что славнейшие философы с начала жизни и о бытии своем на свете не ведали. Разум наш купно с телом будто возрастает, получая час от часу большее познание...” [I think we have not yet known the most glorious philosophies from the beginning of life, encompassing our mode of life in this world. Our intellect grows with our bodies, attaining hour by hour greater understanding...]



Moreover, Krasheninnikov implies that embracing truth derived from the right philosophy allows man to achieve an almost god-like level of knowledge. He writes, with the correct philosophy acting as a guide, or a leader, one can ascend to the “very heights of human perfection...[to the level of] divine understanding.” Mixing the mystical and practical, he concludes this sentiment, saying “we can comprehend the secrets of which danger and true usefulness are comprised, and from them learn the true form of the divine.”<sup>23</sup> Should man strive with this particular philosophy towards the divine, then he may well truly achieve peace. Krasheninnikov’s view of knowledge, then, is essentially hopeful and broad. While he maintains that divine knowledge ultimately comes from God, he states repeatedly that it can also come from ‘natural’ knowledge of the movement of the stars, of mathematics, or of natural history.

This speech demonstrates Krasheninnikov’s ability to effectively and stylistically use Russian to espouse his philosophical opinions concerning scientific practice. Krasheninnikov presents before an audience of primarily European intellectuals his conception of the use of science in the context of Russian cultural and political development. The speech itself suggests that Krasheninnikov had reached a new highpoint in his career, displaying a literary

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<sup>23</sup> Ibid., 229. “с добрым предводителем можем мы взойти на самой верх человеческово совершенства, можем основательное понятие получить о себе самых и о твори и от того возвыситься до познания божего, можем постигнуть таинство, в чем состоит вред и сущая польза, и тем учиниться истинным образом Божиим и подобием.” [“with the right leader we rise up to the very heights of human perfection, we may achieve a thorough understanding of ourselves and of creation and of that which leads to divine understanding, we may comprehend the secrets of which danger and true usefulness are comprised, and from them learn the true form of the divine.”]

style and a mastery of European enlightenment ideals that color the entire speech with the bright future promised by the progress of science.

### ***Opisanie zemli Kamchatki (1755)***

By far the most important of Krasheninnikov's written works is his *Opisanie zemli Kamchatki* [*Description of the land of Kamchatka*] published in two volumes by the St. Petersburg Academy of sciences in 1755.<sup>24</sup> Krasheninnikov began drafting his *Opisanie* as early 1750. As previously noted, Krasheninnikov had been given Georg Wilhelm Steller's papers to edit and translate after the young German naturalist's death in 1746. Among Steller's papers were many of Krasheninnikov's own notes and observations. Steller had asserted upon his arrival in Kamchatka that Krasheninnikov was to submit reports of all his work to Steller, writing rather dictatorially: "upon the receipt of this letter you are under my orders and must make a report to me of everything you have done and observed from your arrival in Kamchatka to this time."<sup>25</sup> Later, a list of Steller's papers compiled by Krasheninnikov in St. Petersburg included two items: "Latin observations, pertaining to natural history...24 pages" and "Russian

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<sup>24</sup> For the following discussion of Krasheninnikov's *Opisanie zemli Kamchatki* I will be using E. A. P. Crownhart-Vaughan's capable and eminently translation, entitled *Explorations of Kamchatka, 1735 – 1741* (Portland: Oregon Historical Society Press, 1972). While Crownhart-Vaughan's translations will be used in this discussion, I have had constant recourse to a digitized version of the original 1755 edition, available online at <http://frontiers.loc.gov>. Short hand references to the work will continue as *Opisanie* and translations (my own, Crownhart-Vaughan's, or others) will be noted as they are used.

<sup>25</sup> This letter quoted by Leonhard Stejneger, *Georg Wilhelm Steller: The Pioneer of Alaskan Natural History* (Cambridge: Harvard University Press, 1936), 229.

geographical description of Kamchatka and other places...33 pages” both written by Krasheninnikov.<sup>26</sup> So as Krasheninnikov compiled Steller’s papers he found himself working with some that were originally his own.

Krasheninnikov worked on the *Opisanie* for five years while remaining employed both with the Botanical Garden and as the rector of the Academy’s University. As Krasheninnikov’s career blossomed, it proved to an equally fecund time in the development of the Russian language. Krasheninnikov was coming into his own professionally as a scientist and as a writer during a time when the Russian language was growing daily with words (especially scientific ones) introduced from other languages. Individuals such as M. V. Lomonosov and V. K. Trediakovsky were working with the recently developed ‘civil script’ to write treatises on Russian literary language that were actively trying to develop a new literary style. Historian James Cracraft reports that scholars have identified some “4,500 individual loan words that entered Russian in the Petrine period (ca. 1695-1725).”<sup>27</sup> In Cracraft’s summation, “the single most important function of the St. Petersburg Academy of Science...was to serve ... as the institutional heart of the onrushing effort to naturalize in Russian the concepts and terms of modern European science.”<sup>28</sup> Early literary geniuses like Lomonosov and Trediakovsky had scientific training and knew Latin as well as several modern European

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<sup>26</sup> Peter Pekarskii, *Istoria Imperatorskoi Akademii Nayk v Peterburge* [History of the Imperial Academy of Sciences in St. Petersburg] vol. 1 (Sanktpeterburg: Imp. Akademii Nauk, 1870), 613.

<sup>27</sup> James Cracraft, *The Revolution of Peter the Great* (Cambridge: Harvard University Press, 2003), 104.

<sup>28</sup> Cracraft 2003, 112.

languages. Their stated aim was to tap the warmth and the wealth of spoken Russian (as opposed to more traditional, but less elastic Old Church Slavonic) and with it create a new literary and scientific language fit for the emerging culturally enlightened Russia. With a full knowledge of Latin and likely German as well, Krasheninnikov it seems became increasingly a part of this development of his native language into a literary and scientific vehicle.

The *Opisanie zemli Kamchatki* stands as the crowning literary achievement of Krasheninnikov's life and academic career. Published in 1755 just after Krasheninnikov's death at the age of 43, the *Opisanie* attempts the encyclopedic dream of the eighteenth century: to encompass all the information on a given topic open to investigation. The work offers a broad but detailed treatment of the geography, the natural history, and the people of Kamchatka. Unlike the highly philosophical speech that preceded it five years earlier, the *Opisanie* is a thoroughly empirical work, resting almost exclusively on observation while actively eschewing speculation.

Krasheninnikov's *Opisanie* is divided into two parts. Part One, entitled "Kamchatka and neighboring countries" begins by locating Kamchatka physically and historically. First and foremost Krasheninnikov points out that there has long been some information regarding the land, but very little accurate knowledge. "Until now," Krasheninnikov reminds us, "Kamchatka has only been vaguely indicated on maps through conjecture," and though "there has long been some knowledge of Kamchatka ... for the most part this has consisted only in the

certainty that a country of this name existed...Even the Russians...did not begin to know Kamchatka until they had conquered it.”<sup>29</sup>

Then in the first chapter entitled “The Location of Kamchatka, Its Boundaries and Terrain,” Krasheninnikov affixes Kamchatka on the globe by giving astronomically determined latitudes and longitudes for the peninsula’s northern, southern, eastern, and western extremities. Krasheninnikov admits the relatively subjective nature of the delineation of a ‘northern’ extreme for a peninsula that is connected to the mainland at that end. He considers his language carefully, writing “I consider the beginning of this peninsula to be at the Pustaia and Anapka rivers, located in approximates 59° 30’ latitude.” His reasons for concluding that this is the ‘beginning’ of Kamchatka include the narrowness of the land at that point (some 80 miles wide) and “the government of this province ends here.” However, taking a tone that is to follow throughout the work, Krasheninnikov remains open to the possible suggestions that “the beginning of this great cape [could be] between the Penzhina River and the Anadyr.”<sup>30</sup> Krasheninnikov immediately admits both the certainty of fact (in the astronomical determination of latitude and longitude) and the ambivalence of interpretation in this opening passage. Ultimately Krasheninnikov places the most value on observation and experimentation, eschewing abstract theorizing and unfounded speculation.

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<sup>29</sup> Stephan Petrovich Krasheninnikov, *Explorations of Kamchatka, 1735 – 1741* trans. E. A. P. Crownhart-Vaughan (Portland: Oregon Historical Society, 1972), 1.

<sup>30</sup> *Ibid.*, 2.

Krasheninnikov's implicitly stated contribution to the scientific community, therefore, is not an entirely new discovery of a completely unknown land, but rather a more accurate, thorough, and objectively constructed account of a little known one. The overall scientific aim of this work is not to produce new knowledge, but better knowledge of Kamchatka. This decidedly humble approach might have made the *Opisanie* into a rather dull read, but under Krasheninnikov's pen, more thorough and detailed description often yields aesthetically pleasing results.

Following this discussion locating Kamchatka is a series of chapters detailing the rivers of Kamchatka. The Kamchatka, the Tigil, the Bolshaia, the Avacha, and the various rivers and estuaries on Kamchatka that run into the Sea of Okhotsk and the Pacific Ocean are treated from start to finish. Krasheninnikov follows their courses in his narrative just as he did in person, giving descriptions and histories of the settlements and people who have settled on them.

Krasheninnikov maintains the historical focus he established with his first words and briefly recalls the historical events (often native rebellions) associated with different settlements and tribes. He then details the Kurile Islands, a chain that leads from Kamchatka's southern tip to Japan. He notes evidence of the trade between the natives of these islands and Japan (a lacquered tray, a Japanese sword, and silver earring) which he assures the reader he collected and sent to the Kunstkammer (the royal cabinet of curiosities) in St. Petersburg.

Listing the names of the islands according to their inhabitants, Krasheninnikov takes the opportunity to weigh in on an old and persistent error

made by most mapmakers with respect to this region. He tells the reader that “the Japanese refer to all the people who live on the four islands [the last four in the chain, closest to Japan] by the general term of *ezo*,” a name familiar to any person who might have looked at a seventeenth- or eighteenth-century map of east Asia and the Pacific. Ezo is often depicted as a large island in between Asia and America. Krasheninnikov argues that the knowledge that Ezo is actually the name by which the Japanese refer to their four closest outlying island “may...serve to correct the error of the geographers who gave the name Ezo to a large land situated northeast of Japan.” This interpretation of Krasheninnikov’s has the fact that it “agrees with the accounts of the Dutch, who were sent in 1643 to explore the same land” to recommend it.<sup>31</sup> However, as historian John Harrison has persuasively shown, “until the middle of the nineteenth century, the state of Western cartography concerning the seas and islands north of [Japan]...was one of almost complete ignorance.”<sup>32</sup> Few cartographers took much notice of Krasheninnikov’s argument, and Ezo continued to appear on maps for the next century.

Chapter ten in Part One of the *Opisanie*, entitled “America” was perhaps one of the most anticipated parts of Krasheninnikov’s work. He opens with the statement that though the description of the land east of Kamchatka could be dispensed with in light of forthcoming works on the topic, “in order to follow our plan to give the reader some idea of all the lands near Kamchatka, we intend to

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<sup>31</sup> Ibid., 63.

<sup>32</sup> John A. Harrison, “Notes on the Discovery of Yezo,” *Annals of the Association of American Geographers* 40 (1950): 254.

make public certain materials taken from Steller's notes." In the interest of being thorough, therefore, Krasheninnikov gives a brief but thorough recapitulation of Steller's observations of the Aleutian island chain and the mainland of the American Pacific Coast. The American islands and mainland, Krasheninnikov reports, seem to have been covered by fine trees, indicative of good soil and mild weather. Aside from the mild weather, the American islands and Kamchatka seem to be otherwise very similar. Notwithstanding an "unknown variety of raspberry, which has berries of an unusual size and flavor," Steller found a host of fruit bearing plants in America that also grew on Kamchatka. America, like Kamchatka, also appeared to have a large number of wild animals, including the more valuable fur-bearing animals, and the natives seemed similar in appearance and ways of life to the natives on Kamchatka. In Krasheninnikov's retelling, not only had the sea-going contingent of the Second Kamchatka Expedition made landfall on an American island, but the territory bore a striking resemblance to Kamchatka and Russia's Far East. This brief section conveys a great deal of information about the islands east of Kamchatka, but makes a good bid for an unequivocal Russian claim to the territory as well.

The last section of Part one covers trails and distances throughout Kamchatka. Continuing a practice he began while traveling with Müller and Gmelin of keeping a 'Road Journal' ["дорожной журнал"], Krasheninnikov describes several main routes by which people traverse the peninsula including their total distance and the travel times involved. In this section, Krasheninnikov ceases to observe the land through a naturalist's lens, and becomes something



more like a government representative, gauging the potential of a land. This section communicates to the reader not simply how to traverse Kamchatka, but how traversable Kamchatka is, and therefore, how useful it could be as a port, as a trade hub, as a site of domestic colonization, or as a territory to defend from neighbors.

Part two, entitled “The Advantages and Disadvantages of Kamchatka” contains the relative evaluations one would expect from a man with his eye towards future use and possible colonization. However, as Krasheninnikov himself says, it is difficult generalize, for

on the one hand, the country has neither grain nor livestock. It is subject to frequent earthquakes, floods and storms. The only diversions are to gaze on towering mountains whose summits are eternally covered with snow, or, if one lives along the sea, to listen to the crashing of the waves and observe the different species of sea animals and consider their intelligence and constant battles with each other. If one considers only these things, it would seem more appropriate for this country to be inhabited by wild animals than by human beings.<sup>33</sup>

However, the region does have clean air, plentiful fish, as well as sable, fox and other fur bearing animals. The timber is nearly inexhaustible and the soil is not too poor. And, on an important economic note, “If ever trade is reestablished with the island of Ezo [Japan] or with the maritime provinces of the Empire of China, a trade which is most appropriate because of the location of this country, the people in Kamchatka would then be supplied with all the necessities of life.”<sup>34</sup> By people, Krasheninnikov means not those who are already well established on the

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<sup>33</sup> Krasheninnikov 1972, 86.

<sup>34</sup> Ibid., 86.

peninsula, the native Kamchadals, but rather the Russians who struggled at this time for the means of existence.

It is interesting to note that when Krasheninnikov tries to construct a general appraisal of Kamchatka, he almost immediately slips into a strangely ambivalent reverie that speaks of the beauty but also the isolation of the place. In general, Krasheninnikov inserts in Part two more references to himself and his personal experience on Kamchatka. His tale of the “frozen student” is characteristic. The Kamchadals assured him that

they have never experienced a cold as bitter as that which attended my visit to the country. Since I was a student, they had the absurd notion that I was the cause of the cold, because they call a student *shakainach*, which means frozen; but it is difficult for me to believe that the winters preceding were any milder, because during the four years, spent in Kamchatka, the temperature remained constantly cold.<sup>35</sup>

Having spent Part one establishing the physical parameters and character of Kamchatka, Krasheninnikov introduces more thematically organized chapters on various aspects of the peninsula. As usual he maintains a consistently historical point of view, while venturing to suggest that his theoretical opinions do not always match those of his academic superior, Georg Wilhelm Steller.

Chapter two discusses the volcanoes on Kamchatka and the “Dangers they Pose for the Natives.”<sup>36</sup> Of course, what is dangerous to the natives is equally dangerous if not more so to the Russian newcomers. Krasheninnikov himself experienced a strong earthquake shortly after his arrival on the peninsula. “At times it was so violent,” he reports “that we could scarcely keep our footing.”

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<sup>35</sup> Ibid., 92.

<sup>36</sup> Ibid., 99.

Perhaps because of his intimate and no doubt traumatic personal experiences, Krasheninnikov feels that the persistent earthquakes pose a serious challenge to Russian settlement.

Following this is one of the most lyrical chapters in the book, Krasheninnikov's discussion of hot springs. One particularly evocative description concerns the "clay of various colors which the water washes along with that from the bottom of the crevasses." Sometimes these brightly colored earthen deposits will form a hill that is

round, very hard outside, but so soft inside that it can be powdered in the hands like clay. Thus there is every reason to suppose that the clay which comes out of the spring is nothing but stone, softened by moisture and heat; it is the same color as ordinary clay, and has an acid taste, and is gummy and doughy. When one breaks it apart, or when pieces break off, one can see a good deal of white mossy alum. The color is mottled blue, white, red, yellow and black, like marble; and all the colors are much more vivid when the clay has not been completely dried out.<sup>37</sup>

He covers a series of other hot springs in equally vivid detail as well as describes several experiments he conducted to determine temperature.

Hot springs, earthquakes, and the presence of metals and minerals in the ground are all connected for Krasheninnikov as they were for Steller. Steller, Krasheninnikov tells us, believes that Kamchatka experiences so many earthquakes because it is "honeycombed with caverns and caves, and with combustible material which is ignited by internal agitation...He attributes the cause of the enkindling of these combustible materials to the salt water of the ocean which forces its way through the subterranean caves, mixes with the

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<sup>37</sup> Ibid., 104 – 105.

inflammable substance and ignites it.” Though it cannot be explained both Krasheninnikov and Steller attest to the fact that “earthquakes generally occur at the time of the equinoxes.”<sup>38</sup>

After a long discussion of hot springs, followed by a chapter on metals and minerals, which Krasheninnikov connects in his book as he does in his own mind, there comes a chapter on trees and shrubs. Though we know Krasheninnikov was clearly capable of long botanical descriptions and ruminations on classification, we find none of that in this chapter. Krasheninnikov, taking liberally from Steller’s notes, describes mainly those plants that the natives either eat or use as medication or clothing. The descriptions, like those of the mineral rich clay of the hot springs, are vivid and detailed. They are also practically oriented, spending a good deal of time discussing the identification and processing of wild garlic, which is “as effective a remedy against scurvy as cedar buds.”<sup>39</sup>

Part Two also contains relatively sympathetic descriptions of the native peoples. While in part One they were mentioned mainly in so far as they had settlements on the major rivers and that they took part in periodic insurrections against the Russians. In Part Two, however, the native people are noted for their knowledge of the fauna, “even Steller was astonished.”<sup>40</sup> Notwithstanding the ‘coquetry’ of the women, they are also an admirable people for the “order and

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<sup>38</sup> Ibid., 107.

<sup>39</sup> Ibid., 115.

<sup>40</sup> Ibid., 116.

unity they observe” in their yearly migrations, and for “the foresight they display in choosing a favorable time to set out.”<sup>41</sup>

Getting back to more colonial concerns, Krasheninnikov includes a chapter which describes a sable hunt in the Vitim region. Although Krasheninnikov himself admits that a sable hunt in the Vitim regions “bears no relation to a description of Kamchatka, it is worthwhile to make some mention of it here, so that one can learn of the different methods various hunters use to trap them, and also so that one can see all the difficulties that must be surmounted in various places.”<sup>42</sup> A chapter on marine mammals is taken almost exclusively from the notes Steller made during his year long stay on Bering Island. This chapter is followed by chapters, equally detailed and thorough, on fish, on birds, on insects, and on reptiles. Part three focuses exclusively on the people of Kamchatka, including their culture, their religion and shamans, their styles of dress, their food and drink, conjectures on their possible origins, and their relations with the Russian.

In conclusion, it is apparent that Krasheninnikov’s *Opisanie* reveals his ability to deal in exhaustive, scientific detail with an overwhelmingly large topic. Krasheninnikov repeatedly stresses the reliability of empirical observation, treating theorization and speculation gingerly. His discussion of soil types and potential trade reveal his commitment to Russian colonial politics and his unstated aim of evaluating the land for potential Russian settlement. The *Opisanie*,

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<sup>41</sup> Ibid., 127.

<sup>42</sup> Ibid., 131.

however, is just one of several written works by Stepan Petrovich Krasheninnikov. Written to showcase not just his own research, but the accomplishments of the Second Kamchatka Expeditions, the *Opisanie* is impressive for the breadth and the depth with which it treats its titular topic. In contrast with the *Opisanie*, Krasheninnikov's speech "On the Uses of the Sciences and the Arts" clearly shows Krasheninnikov's philosophical concerns about the role of science in the growing Russian state. A firm believer of the power and the progress of science and supporter of enlightenment ideals, Krasheninnikov sought to help make manifest Russia's truly blessed state by promoting the use of naturalistic, empirical investigations into nature that were meant not to supplant the truth granted humanity by revelation, but to corroborate it.

In a certain sense, Krasheninnikov's published material forms a surprisingly unified narrative. At risk of making Krasheninnikov's existence sound unaccountably teleological, his writing reflects a progression from student to fully formed academic in a surprisingly tidy manner. It must not be forgotten, however, that the collection of published writings this picture is based on have been selected and edited by mid-twentieth century Russian historians who were themselves not uninterested observers of history. Similarly, Krasheninnikov's academic career parallels certain developments within Russian intellectual life in general. An increasingly russified science meant new conflicts and tensions for the Academy, but also new perspectives for the disciplines themselves. The publication of Krasheninnikov's *Opisanie* challenged European readers to consider their own views of a Russian science. Though it cannot be claimed that

Krasheninnikov's work sparked any major revisions of scientific disciplines or practices, it did force his readers (and his translators) to choose what they valued most from his narrative and decide if it was scientific enough.

*Comm. Nov. Ac. Sc. Petr. Tom. II. Tab. XIII.*



Figure 1. Illustration accompanying Krasheninnikov's first article in the St. Petersburg Academy's *Novi Commentarii* vol. 2 (1749), Table XIII. [Image courtesy of the Göttingen State and University Library. The Georg von Asch Collection. Available at <http://frontiers.loc.gov>.]



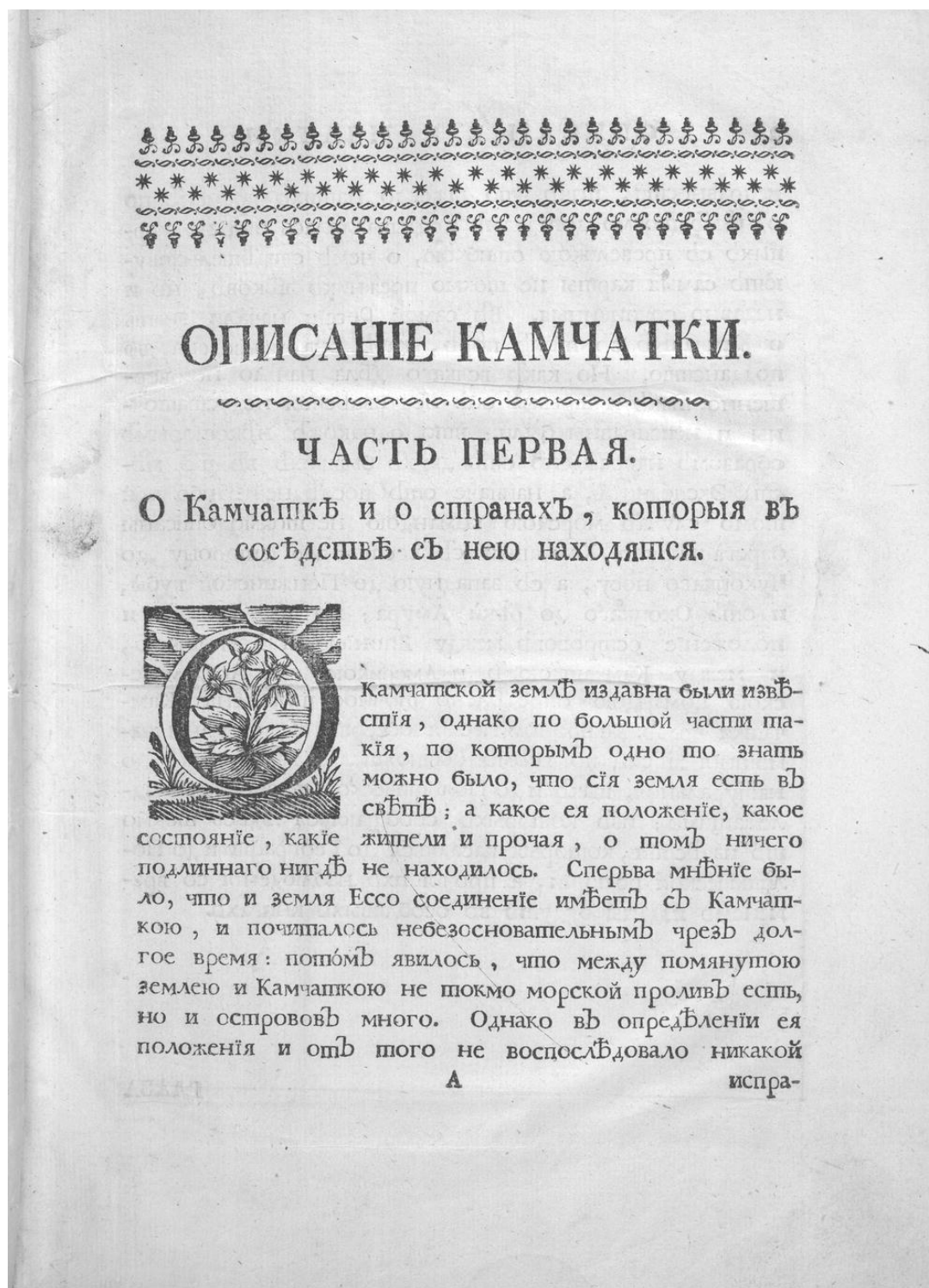


Figure 2. First page of the first chapter of Krasheninnikov's 1755 *Opisanie zemli Kamchatki*. [Image courtesy of the Russian State Library. Rare Books Department. Available at <http://frontiers.loc.gov>]



## CHAPTER SIX

## RECEPTION

The publication of Krasheninnikov's *Opisanie zemli Kamchatki* sparked a range of responses, from truly favorable to deeply ambivalent. In general the reception was warm, but the Russian language of the original proved to be a hindrance for the European scientific reading public. The *Opisanie Zemli Kamchatki* was, nevertheless, an important book to both European and Russian eighteenth-century audiences because it clearly and accurately presented information about an obscure but potentially vital part of the world. The entrance of Krasheninnikov's work into the realm of European science would reveal Europe's hunger for information about the north Pacific Rim, but also its reticence to accept a definitively scientific answer from a Russian speaker.

Very little was known in the eighteenth century about the general geography of the northern Pacific Rim. It was a remote place, bounded by vast Pacific Ocean and the wild hinterlands of North America to the east and by two significant world powers to the west and south west. The Academy of Sciences in St. Petersburg and the Russian senate, therefore, were extremely jealous of the information that had been collected on this vaguely known territory that seemed to stand in tantalizingly close proximity to China and the Spanish Galleon trade. Members of the Expedition were compelled to keep the strictest confidentiality in their work, and were not allowed to share their discoveries with anyone outside of Russia. The attempt to control the flow of information, however, met with

relatively little success. The conflict between Daniel Messerschmidt and the Academy in the 1720s and 30s is evidence not only the Academy's desire to control the dissemination of information about Siberia, but also the extent of their inability to do so. Krasheninnikov's book was one of the first works that resulted from the Second Kamchatka Expedition and that officially sanctioned by the St. Petersburg Academy and the Russian government. It appeared as the first official Russian announcement of the country's scientific successes in Siberia.

The earliest maps and descriptions of Siberia are those of the various ambassadors who traveled through the region on their way to China's capital of Peking. Philip John von Strahlenberg's map of Siberia that accompanied his *Nova description geographica Tattariae Magnae...* (1730) provided the most accurate visual rendition of eastern Siberia and the peninsula of Kamchatka in the beginning of the eighteenth century in so far as it depicted Kamchatka as a peninsula off Russia's Pacific coast (Figure 4).<sup>1</sup> Previously mapmakers had avoided depicting Russia's Far East, by simply allowing it to fall beyond the borders of their maps. Those who did try and include it, left the contours vague and uniform, or admitted their own lack of information on which to base an accurate depiction. Friedrich Christian Weber, a German in the court of Peter the

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<sup>1</sup> Philipp J. von Strahlenberg, *Nova descriptio geographica Tattariae magnae* (Gottingen, 1730). Digitized copies of this work and Strahlenberg's map are both available on the Library of Congress website: <http://frontiers.loc.gov>.

Great, represented Kamchatka in his work, *The Present State of Russia* (1723) as a point on a long and fairly featureless coastline not far from Yakutsk (Figure 5).<sup>2</sup>

More troubling was the fact that European and Russian audiences did not know whether the Russian Far East was physically contiguous with North America. At times there was supposition of a strait separating the two, but images of a stretch of land, bridging the two, was not uncommon in eighteenth-century maps. Either way, connected or not, Russia was, by the end of the seventeenth century, coming perilously close to Spanish, British, and French colonial interests in North America. Anxiety over the rapid expansion of the Russians eastwards prompted the publishing of books such as Frau Jose Torrubia's *The Muscovites in California*, a strident tract written by a Franciscan monk in New Spain, who sought to make the colonial administration of his country aware of the threat the Russians could potentially pose.<sup>3</sup> Krasheninnikov's *Opisanie* sought definitively and on firm empirical grounds to end the confusing debate around the constitution, situation, and character of the peninsula of Kamchatka and Russia's physical connection with North America.

Krasheninnikov's *Opisanie*... entered into a welter not just of ignorance, but, more perniciously, of misinformation as well. The Academy and the Russian Senate tried hard to guard the scientific results of the Second Kamchatka

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<sup>2</sup> Friedrich Christian Weber, *The Present State of Russia* (London: W. Taylor, 1723), originally published as: *Das Veraenderte Russland* (Frankfurt, 1721).

<sup>3</sup> Jose Torrubia, *The Muscovites in California, or rather, Demonstration of the passage from North America...* (Fairfield, WA: Ye Galleon Press, 1996); originally published as: Jose Torrubia, *I Moscoviti Nella California O Sia Dimostrazione Della Verita Del Passo...* (Rome: Generoso Salomoni, 1759).

Expedition, but the ‘republic of letters’ had very porous boundaries and leaks became apparent almost as soon as the Expedition was over. Johann Georg Gmelin published the first volume of his *Flora Sibirica* by 1747 through the proper Academy channels.<sup>4</sup> Four years later, however, he published his *Reise durch Sibieren* without Academy sanction.<sup>5</sup> This latter work, by far more popular than the former, included what the Senate considered to be damaging descriptions and details the filth and violence of life in Siberia. As a central member of the academic contingent of the Second Kamchatka Expedition, Gmelin’s work was highly respected and widely read. John Fothergill read sections of the *Flora Sibirica*’s before the Royal society as early as 1748 while the *Reise* was printed numerous times in various collections of travels.<sup>6</sup>

In that same year rumors began to circulate about the death of Georg Wilhelm Steller in 1746. Steller’s older brother, Augustin Stöller, wrote an essay in 1747 that seemed to imply foul play in the death of his brother of ‘fever’ in Tiumen as he returned to St. Petersburg from Kamchatka.<sup>7</sup> The Academy, the

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<sup>4</sup> Johann Georg Gmelin, *Flora Sibirica: sive Historia plantarum Sibiriae* (Petropoli: Acad. Scientiarum, 1747). A digitized copy of all four volumes (1747 – 1769) are available online at: <http://frontiers.loc.gov>.

<sup>5</sup> Johann Georg Gmelin, *Reise durch Sibieren, von dem Jahr 1733. bis 1743* (Göttingen: Abram Vandenhoecks seel, 1751 – 1752). A digitized version of this work is available at <http://frontiers.loc.gov>.

<sup>6</sup> Johann Georg Gmelin, “An Account of some Observations and Experiments made in Siberia...” *Philosophical Transactions* 45 (1748): 248 – 262. Gmelin’s *Reise* appeared in abridged form in *Allgemeine Historie der Reisen zu Wasser und Lande* 19 (1769): 71 – 472.

<sup>7</sup> Augustin Stöller, “Zuverlässige Nachricht von dem merkwürdiigen Leben und Reisen Herrn Georg Wilhelm Stöllers, der Russisch kaiserl. Adakemie der Wissenschaften Ajiuncti und Mitglieds,” *Ergetzungen der vernünftigen Seele aus der Sittenlehre und der Gelehrsamkeit überhaupt* 5 (1747), 362 – 384. This

Senate, and the Second Kamchatka Expedition were finding themselves increasingly depicted in a decidedly negative light.

In 1750 Joseph Nicholas Delisle (brother to the famous French cartographer, Gillaume Delisle) and Phillipe Buache presented a memoir and a map before the Paris Academy of Sciences that claimed to be based on the observations of Delisle's younger brother, Louise Delisle de la Croyère, who had been an Academician with Second Kamchatka Expedition. Implying that they had had access to the writings of both Captain Vitus Bering and his second-in-command, Sven Waxell, Delisle and Buache presented an account of Bering's voyage that was inaccurate and misleading. Most galling to the Russians, the two Frenchmen asserted that Bering had never made it to the coast of America, had never made it, in fact, further than Bering Island just off the coast of Kamchatka.

These publications scared and infuriated the Russian Senate. If the truly tenuous nature of the Russian presence in the Far East and Kamchatka was known to Europe, it might tempt stronger colonial powers to challenge Russia's claims of possession. However, if accusations that the Russians had never reached America at all (and indeed they had), then Russia's claims of possession could again be challenged. The Russian Senate had to walk a fine line between releasing enough information to solidify Russian claims to the territory, but not enough to reveal the weakness of the Russian presence in it.

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reference as well as the contents of the article have been provided by Leonhard Stejneger 1936, 489 – 495. Stöller's original essay was not available for consultation in this work.

Gerhard Friedrich Müller, historian and professor of the Academy and long time participant on the Second Kamchatka Expedition was appointed to write the official refutation of Delisle's publication. Almost certainly he was behind the refutation of Stöller's piece as well. In 1748 Müller, possibly in association with Gmelin, wrote and published a biography of Steller to compete with the earlier version released by his older brother. Claiming Steller as more Russian than German, the anonymous author of this work argues that if Steller had stayed in Europe "he would have been able to set in motion very little for himself, due to his own meager circumstances, and because the number of sponsors, when it is a question of large sums, is not particularly great." Therefore, the author continues, one should realize that his significant work in natural history, like his name change (from Stöller to Steller) occurred because of Russia, suggesting that we should "combine a feeling for him with a feeling for the country itself."<sup>8</sup> Steller's honor and fame, therefore, should be conferred upon Russian science, the science of the country of his adoption, not of his birth. Müller was attempting with this piece to clear the name and defend the honor of Russian science by embracing and russifying its largely European actors.

The rebuttal to Augustin Stöller's essay appeared just one year after Stöller's. The response to Delisle and Buache's work, however, took slightly longer. Müller prepared and published his *Lettre d'un Officier de la Marine russe a un seigneur da lacour...* in 1753. Translated into English in 1754,

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<sup>8</sup> O. W. Frost, ed., *The First Official Report from Russian Sources Concerning Bering's Voyages or 'Life of Mr. Georg Wilhelm Steller' Frankfurt, 1748*, trans. Olga M. Griminger (Anchorage: Anchorage Geographical Society, 1986).



Müller's *Letter of a Russian Sea-Officer* directly addressed the egregious mistakes and misinterpretations that formed the basis of Delisle's memoir, simultaneously reasserting Russia's claim to any new lands that might have been discovered.<sup>9</sup>

Müller complains of Delisle de la Croyère's laziness, implying that he was often so drunk as to have to rely on his Russian student assistants (in this case, a certain Mr. Krasilnikov) to make his most crucial astronomical observations for him.<sup>10</sup>

Müller was able to use this rebuttal as a platform to address Russia's colonial anxieties, suggesting that the discoveries made by Bering and his fellow captain, Alexei Chirikov, might just as well be called "New-Russia" as America, "in imitation of other nations, who have called Countries *New-England*, *New-Spain*, *New-France*, *New-Holland*, &c." He concedes that Russia may well have had a wavering political hold on its far-flung eastern territories, arguing that though "it may be said we are not in possession of them; but as to this, it is purely at our discretion, for, at least, it is certain, that these vast countries belong to no power able to dispute the possession with us."<sup>11</sup>

Skillful though they may have been Müller's work on this matter remained fundamental flawed. In a time of increasing russification of the government and the Academy, Müller's voice was a European one. A Russian voice had yet to make a claim, scientific or otherwise, to the Far East and the botanical, geological, and geographical information to be mined there. Appearing in the

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<sup>9</sup> Gerhard Friedrich Müller, *A Letter from a Russian Sea-Officer* (London: A Linde et al., 1754)

<sup>10</sup> Ibid., 11.

<sup>11</sup> Ibid., 30.

midst of this conflict then, Krasheninnikov's *Opisanie zemli Kamchatki* provided an unassailably empirical and thorough study of Kamchatka, assuming and implying, though never overtly arguing, for the strength of the Russian military presence there.

It seems that the European scientific reading audience was certainly ready for a Russian voice to weigh in on the matter, but they were unprepared for a Russian-language volume on the topic. Originally published in Russian the first translation of a short section of Krasheninnikov's work appeared around 1760, and was read before the Royal Society. The short piece entitled "An Account of That Part of America, which is Nearest to the Land of Kamchatka..." was translated by Daniel Dumaesque, a chaplain of the English Factory (or, trading post) in Moscow.<sup>12</sup> Dumaesq had been living in Russia since 1748 and by the summer of that year had apparently "struck up good relations with members of the Academy of Sciences and the university recently founded at St Petersburg."<sup>13</sup> Given that Krasheninnikov was rector of the university in St. Petersburg by 1748 it is likely that he knew Dumaesq. This in combination with the fact that Dumaesq was also friendly with G. F. Müller suggests that Dumaesq most likely had special access to Krasheninnikov's *Opisanie*.

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<sup>12</sup> Stepan Petrovich Krasheninnikov, "An Account of That Part of America, Which is Nearest to the Land of Kamchatka," trans. D. Dumaesque, *Philosophical Transactions* 51 (1759 – 60): 477 – 497.

<sup>13</sup> John H. Appleby, "Daniel Dumaesque, D.D., F.R.S. (1712 – 1805) as a Promoter of Anglo-Russian Science and Culture," *Notes and Records of the Royal Society of London* 44 (1990): 26.

The section Dumaresque chose to translate and present to the royal society was taken from the chapter entitled “on America.” Detailing the exploits of Captain Vitus Bering and his ill-fated trip to the Aleutian Island chain, Krasheninnikov was able to present an accurate and closely observed account of this portion of the Second Kamchatka Expedition based on Georg Wilhelm Steller’s notes and journals.

Dumaresq continued to play a decisive role in how European reading audiences were to encounter Krasheninnikov’s work. Historian John Appleby suggests that Dumaresq was instrumental in obtaining for Scottish physician James Grieve, the original Russian edition of Krasheninnikov’s *Opisanie* for subsequent English translation.<sup>14</sup> Abridged, edited and introduced by Grieve, *The History of Kamchatka and the Kurilski Islands* became the most popular manifestation of Krasheninnikov’s work in the eighteenth century.<sup>15</sup> That subsequent translations of Krasheninnikov’s work were largely based on Grieve’s abridgement indicates that Europe’s curiosity about Siberia and Russia’s Far East was hindered by the barrier that the Russian language posed. A German translation in 1766, French translations in 1767 and 1768, and a Dutch translation in 1770 were all translations of Grieve’s 1764 English translation. The only translation from the original to compete with Grieve’s interpretation was a French retranslation ordered by M. l’abbe Chappe d’Auteroche, who had himself been in

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<sup>14</sup> Ibid., 33.

<sup>15</sup> Krasheninnikov, Stepan Petrovich. *The History of Kamtschatka and the Kurilski Islands with the countries adjacent*, trans. James Grieve (London: T. Jefferys, 1764).

Tobolsk to view the transit of Venus and was impressed by Krasheninnikov's work.

Grieve's editorial hand stands out clearly to those readers who have something to compare it with. Krasheninnikov's name does not even appear on the title page of the work. The introduction of Krasheninnikov as the author of this work appears only in the following preface, which was a translated version of Müller's introduction to the second volume of the Russian original. Müller recommends this work, not because of the special skill or outstanding accomplishment of Krasheninnikov as a natural history, but for the fact that it reveals so much about such a little known land.

In both cases Krasheninnikov's identity is largely passed over, and in Grieve's case, his Russianness (symbolized by his Russian language) is a hindrance to the composition of a scientific work. Grieve's first words in the volume read: "The Russian language in which the Original of the following sheets was written, is rude and unpolished: other nations have with great care improved and refined their languages and genius, but that country literature has on the contrary, been 'till very lately rather discouraged.'"<sup>16</sup>

Grieve substantially slimmed the work down as well. Originally two volumes of approximately 319 pages, Grieve's translation fits into one volume of 280 similarly sized pages. Grieve's *History of Kamchatka* cuts out a great deal of the detail of Siberian topography, the course of rivers, and the history collected in

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<sup>16</sup> James Grieve, "Advertisement" in *The History of Kamtschatka and the Kurilski Islands with Countries Adjacent*, Stepan Petrovich Krasheninnikov (Glocester: R. Raikes, 1764).

Krasheninnikov's *Opisanie*, instead focusing on the essentials of geography and the basic outline of Bering's voyage. Grieve maintains the structure of Krasheninnikov's work, but excises much of its bulk. Krasheninnikov's propensity, for example, to offer the native people's interpretations of and stories about certain natural phenomena are not included in Greive's translation, nor are more reflective moments where Krasheninnikov's voice resonates in the text. Greive instead offers a more streamlined and less illustrated (both visually and verbally) account of Krasheninnikov's time in Siberia.

Krasheninnikov's language is interesting to the historian, if not to James Grieve, for its beauty and simplicity. One must bear in mind that Krasheninnikov was helping to forge a new scientific Russian idiom, along with his colleagues at the Academy M. V. Lomonosov and V. K. Trediakovsky, Krasheninnikov had no scientific literary model to follow and a whole host of new scientific words of foreign origin to incorporate. The true measure of his accomplishment, therefore, cannot be gauged merely given the empirical content of his work, though it is decidedly impressive.

The French astronomer Chappe d'Auteroche published in 1768 a volume of his own travels to Siberia which he made to observe the 1761 transit of Venus. The second volume of this work contains the entirety of Krasheninnikov's *Opisanie*, retranslated from the original into French. D'Auteroche's reasoning for this retranslation, he writes, is that while a translation already exists in French, it is so abridged as to have excised interesting and important information about the geography of the land and the morals of the natives. Having given an imperfect

rendition of the ideas of the Russian voyager (“Voyageur Russe”), d’Auteroche has secured a new translation from a Monsieur le Prince.<sup>17</sup> This new translation, he stresses, was prepared in St. Petersburg with the consultation of G. F. Müller, the Russian editor and former member of the Second Kamchatka Expedition, who was able to clarify more obscure passages and helped ensure exactitude in the translation.<sup>18</sup>

D’Auteroche’s interest in Krasheninnikov’s work was not typical. Most readers, following Grieve’s, Müller’s, and even Krasheninnikov’s example site Georg Wilhelm Steller as the source of the information in the *Opisanie*. Before Krasheninnikov became a full professor at the Academy, he was called to compile and order the deceased Steller’s papers. In writing the *Opisanie*, Krasheninnikov corroborated his own experience with Steller’s whenever possible. From its inception, the *Opisanie* was meant to be a combination of Steller and Krasheninnikov’s work. Some European observers, however, took this to mean that Krasheninnikov’s *Opisanie* was little more than Steller’s in Russian translation. This impression may have been fueled by the fact of Steller’s fame, deriving from his work on the Second Kamchatka Expedition and the attribution

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<sup>17</sup> Abbé Chappe d’Auteroch, *Voyage en Sibérie fait par ordre du roi en 1761*, vol. 2 (Paris: Debure, 1768), ix. “En 1764, M. James Grieve traduisit en Anglois l’ouvrage de M. Krasheninnikow; mais il supprima presque tout ce qui concerne la Géographie & la plupart des Planches relatives à la description des moeurs; objects de plus utiles & des plus intéressants...mais parce qu’étant aussi mal dessinées que gravées, elles rendoient trop imparfaitement les idées du Voyageur Russe.”

<sup>18</sup> Ibid., x. “il l’a traduit à Saint-Petersbourg, où il étoit à portée de consulter M. Muller, alors Secrétaire perpétuel de l’Académie des Sciences de cette Ville....On s’étoit d’abord proposé de supprimer quelques détails un peu longs; mais on a préféré de représenter l’original avec exactitude.”

individuals like Krasheninnikov were assiduous in giving him. Of Steller's death, Linnaeus wrote to Gmelin: "I lament and shall never cease to lament the loss to botanical science of Steller, who during his great journey traversed so many hitherto untrodden lands...O merciful God, that you have taken away such a man!"<sup>19</sup> Krasheninnikov's 1755 *Opisanie* initially created "a sharp polemic, as [he] was accused by Scherer," publisher of Steller's *Beschreibung von dem Lande Kamtschakta* in 1775, "of intellectual theft of Steller's material." Jean-Benoit Scherer was obviously ill-informed and too rabid in his criticisms to demand much attention. In fact, in that same year, Anton Friedrich Büsching wrote "it is unseemly to praise our countrymen [i.e. Steller] by damaging this gifted Russian."<sup>20</sup>

When Krasheninnikov chose to write his account in Russian, he was not placing the European reading public foremost in his interest, but rather, the Russian reading public, which in his time, meant the tsar, the nobility and a few educated individuals who for the most part held positions of civil service in the government. Krasheninnikov's appeal to the small but growing segment of the Russian population that was literate can be seen in the posthumous publication of his translation of the life and times of Alexander the Great, published in St. Petersburg in 1809. Krasheninnikov was the product of a concerted effort and attempt to educate and 'civilize' the Russian population through literacy and

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<sup>19</sup> Linnaeus to Gmelin, February 17<sup>th</sup>, 1746. Cited by Stejneger 1936, 489.

<sup>20</sup> Folkwart Wendland, "Zur Edition der Texte," in *Die Große Nordische Expedition von 1733 bis 1743* [*The Great Northern Expedition from 1733 to 1743*], ed. Folkwart Wendland, 329 - 384 (Munich: C. H. Beck, 1990), 379.

education. It is no surprise that he saw as part of his responsibility as an educated Russian to encourage the education of other Russians by engaging them intellectually and scientifically in their own language.

In first quarter of the nineteenth century the Academia Nauk undertook a large project to publish the travel writings of three prominent Russian explorers in a multivolume set. From 1818 to 1825 it released seven volumes under the title *Polnoe sobranie uchenykh puteschestvii po Rossii*, the first volume was devoted to Krasheninnikov's *Opisanie*. The remaining volumes were given up to the letters and journals of Lepekhin and Falk, later eighteenth-century travelers. Krasheninnikov's *Opisanie* remained out of print for the next century. Though it is hard to say what may have been published in Russia if it did not circulate widely outside of that country, but the next publication of Krasheninnikov's *Opisanie* appears to have been in 1948 when the government press of geographical literature reprinted Krasheninnikov's *Opisanie* set in the new soviet typography.





Figure 4. Detail of a map featuring the peninsula of Kamchatka. Johann Phillip Strahlenberg, 1730. [The Göttingen State and University Library. Georg von Asch Collection. Available at <http://frontiers.loc.gov>]

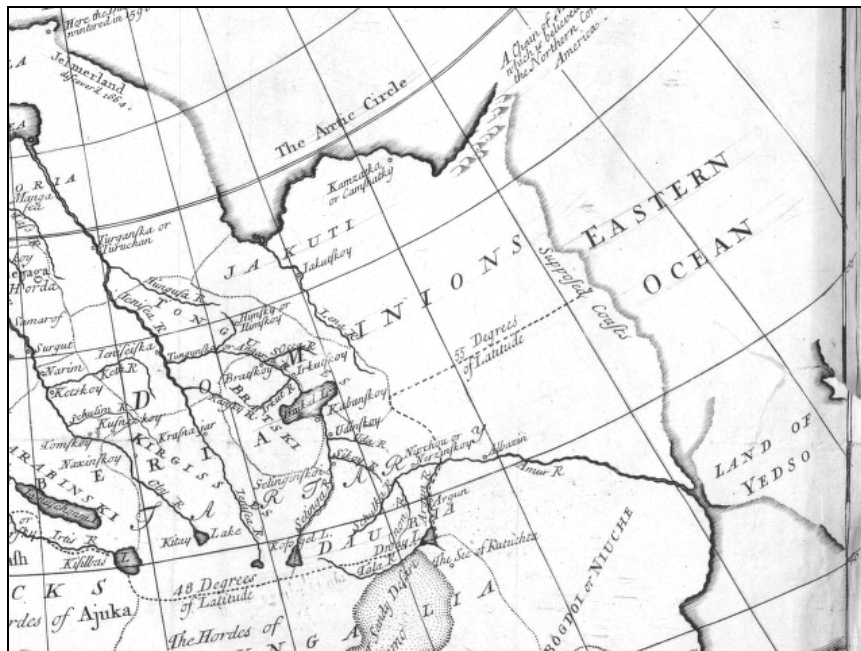


Figure 5. Detail of the Pacific coast of Russia. Friedrich Christian Weber, 1723. [Library of Congress. Available at <http://frontiers.loc.gov>]

## CONCLUSION

This work set out with the very broad goal of discussing the life and work of Stepan Petrovich Krasheninnikov as a bridge between traditions, both historical and historiographical. It has tried to demonstrate that while a body of literature exists on the individual topics of Russian eighteenth-century political history, Russian expansion, the history of Russian science – a distinctive history of eighteenth-century Russian science, society, and culture has yet to appear. Such a study would focus primarily if not exclusively on the development of a scientific society within the Russian elite and would use the language of ‘appropriation’ over ‘importation’ to stress the agency not of the reformers but of the reformed. Such a study would no doubt provide the historian of science with valuable information on the process of the adoption of scientific practice in the eighteenth century and might help to illuminate hitherto unexplored aspects of eighteenth-century science.

Russian historians and historians of Russian science have contributed greatly to the work thus far on eighteenth-century Russia. But their studies could, nonetheless, benefit from a shared project in the cultural history of eighteenth-century Russian science. Krasheninnikov has served as the focus for such an attempt here, but there are numerous other early Russian patrons and practitioners who would serve essentially the same purpose. For the Russian historian, Krasheninnikov’s story calls into question the already admittedly stale, yet surprisingly persistent, notions of eighteenth-century Russian reform as

‘westernizing’ or ‘modernizing.’ For the historian of science, Krasheninnikov’s story demonstrates the continuing importance of natural history in enlightenment era science, and suggests that scientific practice offered, at least to some, not just a new way of looking at and ordering the world, but of placing oneself in it.

That men like Krasheninnikov, who entered the eighteenth-century European scientific community from the outside, had to defend their scientific and academic identities against western critics was real enough. But the atmosphere was not entirely aggressive. He was not dismissed out of hand, quite possibly because he had trained with known European academics, or possibly because he offered information his European counterparts wanted. Though western readers and translators may have thought the Russian language ‘rough,’ by and large European scientific readers recognized Krasheninnikov’s work as astonishingly broad, well-informed, and important.

Krasheninnikov’s own special challenge of having to create a scientific linguistic style as he wrote his *Opisanie* was unique perhaps to Russia at this time. But still, it brings to the fore issues of scientific communication, reminding the reader that no language is universal (though in Krasheninnikov’s time Latin came close) and that every eighteenth-century practitioner faced his own translations problems whenever he attempted to put experience to paper. Krasheninnikov’s own struggle with and resolution of this problem may well inform other studies of the development of early scientific communication and the adoption of common scientific styles.

Like other European naturalist explorers before him, Krasheninnikov displayed a great interest in the natural world, but remained all the while practically grounded in the dilemmas of future Russian colonization of Siberia. Krasheninnikov's work was directly rooted in the Western European naturalist tradition in its approach to nature and the kinds of questions it asked, and yet was heir to the long Russian tradition of military expansion. His success as a Russian academic in St. Petersburg not only suggests the importance and power of natural history and scientific practice in Russia at that time, but it attests to his ability to take a westernizing phenomenon and turn it towards his own distinctly Russian ends.

Krasheninnikov's life, education, and career speak to the broader question of the nature of the adoption of scientific practice in Russia. Even if acquiring the foundations of a scientific culture clearly comprised an unbalanced exchange between Russia and the West, it was nevertheless a dynamic one in which Russia was not necessarily trading at a deficit. If Russia lacked a native intelligentsia in the eighteenth century to lead its own scientific revolution, it had the enticing promise of opportunity. Unexamined territory coupled with royal patronage attracted a good deal of rising young scholars from Europe who came to Russia and Siberia not so much with notions of intellectual colonization on their minds, but rather with the very practical needs of finding employment and advancing their careers.

Aside from adding a new and interesting perspective to already well-supported arguments, the development of Russian natural history as seen through

the work of Stepan Petrovich Krasheninnikov suggests the importance and the power of the construction of identity in scientific development. The professional and cultural role Krasheninnikov assumed had not been created in the time of his father, and whether or not Krasheninnikov was able to grasp the fundamentally different nature of the path of his life than that of his father's is not known. The social, cultural, and political changes that so helped to create Krasheninnikov as a professional naturalist were part of a broader change in the position of the elite vis-à-vis the state in the eighteenth century. It is still an open question whether the nobility of the eighteenth century, those elite individuals and families who were at times by dint of force compelled to take advantage of Peter's reforms, conceived of their new relationship to the state as indeed 'new.' The life and work of Krasheninnikov seems to suggest that he still conceived of his service to the state in much in the same vein as what his father did before him.

The examination of identity in turn poses a number of interesting and salient questions as to the nature of westernization in Russian culture, the character of the relationship between Russia and the West, and the intriguing adoption of scientific practice, community and culture in Russia. Ultimately, Krasheninnikov's life and career provide fertile ground for the development of these ideas because he himself was a hybrid of a number of different cultures: of European and Russian cultures, and of science and service to the state. That Krasheninnikov was able to bridge the historical gaps between these numerous and overlapping cultures brings into question many of their assumed differences and underscores their potential similarities.

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