Shading, Lines, Colors:

Mapping Ethnographic Taxonomies of European Russia

CATHERINE GIBSON[1]

Doctoral Researcher

Department of History and Civilization, European University Institute

Villa Salviati, Via Bolognese 156, 50139, Florence, Italy

Email: catherine.gibson@eui.eu

ORCID: orcid.org/0000-0002-8564-1223

ABSTRACT: This article explores the role of maps in the construction and development of ethnographic taxonomies in the mid-nineteenth century Russian Empire. A close reading of two ethnographic maps of "European Russia" produced by members of the Imperial Russian Geographical Society, Petr Keppen (1851) and Aleksander Rittikh (1875), is used to shine a spotlight on the cartographical methods and techniques (lines, shading, color, hatching, legends, text etc.) employed to depict, construct, and communicate these taxonomies. In doing so, this article draws our attention to how maps impacted on visual and spatial thinking about the categories of ethnicity and nationality, and their application to specific contexts and political purposes within the Empire. Through an examination of Keppen's and Rittikh's maps, this article addresses the broader question of why cartography came to be regarded as such a powerful medium through which to communicate and consolidate particular visions of an ethnographic landscape.

Carl Linnaeus (1707-1778), a Swedish natural scientist, formally introduced a system of binomial nomenclature for naming organisms in *Species Plantarum* (1753). As the defining characteristic of the *mammalia* taxonomic group*,* which encompassed a diverse array of creatures, from narwhals, to fruit bats, and star-nosed moles, Linnaeus prioritized mammary glands over features such as the possession of hair, three middle ear bones, or a neocortex. For Linnaeus, the act of classification had important ramifications beyond the narrow group of scholars interested in zoological nomenclature and taxonomy (Koerner 1999). Linnaeus' decision was a deliberately political gesture in eighteenth-century Europe and closely linked to contemporary debates about breast-feeding. As a practicing physician, he was an outspoken advocate of the benefits of mothers' milk and active in the social reform movement to encourage middle and upper-class women to stop using wet nurses (Schiebinger 1993, 382-3). In this way, the category *mammalia* is an excellent illustration of how supposedly "scientific" taxonomies are embedded in institutionalized structures of knowledge (Foucault 2002). There is nothing natural about the labels and boxes into which knowledge is categorized to impose a sense of rational order onto our surroundings.

---

[1] The author thanks Stéphane Van Damme, Tomasz Kamusella, Christian Lotz, Vytautas Petronis, Ismay Milford, Mari Hauge Torsdotter, the members of the EUI Nationalism working group, and the two anonymous reviewers for their critical comments on earlier drafts on this article, which greatly enriched the text.

The same can also be said for national taxonomies and the division of the inhabitants of the western Russian Empire into Russians, Belarusians, Ukrainians, Poles, Jews, Latvians, Lithuanians, Estonians, and so on. Despite interpretations popularized by nationalist activists in the second half of the nineteenth century, which portrayed these groups as primordial and existing as identifiable entities throughout history, the classification of people into ethnic or national "types" needs to be historicized. Ways of classifying the region's inhabitants emerged in particular places and contexts, were formulated by specific individuals, and, the focus of the present article, constructed and communicated through certain media.

The gradual development of categories for dividing the Russian Empire's inhabitants according to ethnolinguistic or national criteria was intimately linked to the emergence of the modern state and growth in government bureaucracy. Administrative expansion necessitated the enumeration of the population through various means for practical purposes such as taxation and conscription (Labbé 2007). In the Holy Roman Empire and Habsburg hereditary lands, the concept of *Polizeiwissenschaft* (public policy) emerged in the first half of the eighteenth century as an umbrella term for public law, administrative science, public health, urban planning, and statistics (meaning "science of the state"), which were all orientated towards the study and calculation of the state's inhabitants (Stolleis 1988; Elden 2007; Foucault 2009). Substantial amounts of time and monetary resources were expended in surveying the population and dividing it into ostensibly mutually exclusive and exhaustive categories. These categories were shaped by techniques of observation and data collection, including individual documents such as birth certificates and passports, as well as other official forms (Franklin 2010; 2015). Population censuses drew borders between "peoples, regions, religions, languages" and organized them according to a "totalizing, classificatory grid" (Anderson 1991, 184).

The rise of "statistical thinking" (Porter 1986) in the nineteenth century was accompanied by developments in the graphical language of science for accessibly and succinctly analyzing and communicating findings (Rudwick 1976, 150). Academic art during this period sought to create self-consciously "reasoned images" of instruments and phenomena from natural science (Daston & Galison 2007, 42). Likewise, statisticians discovered that images could convey information much more easily and quickly than a list of numbers. The establishment of official state statistical offices and the growing importance of numerical information for administration and socio-economic planning ushered in an "age of enthusiasm" in the mid-nineteenth century for graphical forms of data visualization, such as diagrams, graphs, and tables (Friendly 2008, 3; Palsky 1984; 1991; 1999). These graphical elements not only had a communicative-representative dimension which enabled their creators to visualize data in a striking way, but they also functioned as "important tools of descriptive statistics, to summarize data, to demonstrate, persuade, and even discover new facts" (Palsky 2008, 6).

Within the wider context of the visualization of science, thematic cartography development as an important medium through which to measure and classify humanity. At the International Statistical Congress held in St. Petersburg in 1872, delegates discussed the "application of geographic method to statistics", especially cartography (*Report of the Delegates to the International Statistical Congress* 1875, 41-2). The participants also discussed how the process of transferring data from statistical table to map could lead to new

interpretations and conclusions. As Georg Mayr (1841-1925), a statistician and professor of statistics at the University of Munich, observed: "The map [*Kartogramm*] differs significantly from the diagram, in that it contains not merely a sensual illustration of the table provided as evidence, but also something new that the table cannot represent" (Mayr 1874: 15). Thus, cartography was adopted by statisticians not only to represent findings, but also played a key role in shaping the ideas about the taxonomization of ethnic and national groups.

Most literature on the development of ethnic and national taxonomies in Central and Eastern Europe has concentrated on textual sources, such as published scholarly works and encyclopedias (Kamusella 2005; Maxwell 2015) or censuses (Darrow 2002; Kertzer & Arel 2002; Cadiot 2007; Staliūnas 2009).[2] These studies focus on topics such as ethnic and national nomenclature, or the characteristics and variables, such as religion or language, used to subdivide and differentiate populations. There have only been several works dealing specifically with the role of ethnographic maps in proposing "ethnoschematizations"[3] in the Russian Empire (Psianchin 2004; Petronis 2007; Krasnikova 2011; Seegel 2012; cf. Hansen 2015 for German-speaking Central Europe), riding on the tide of the so-called spatial turn within New Imperial Histories of the Russian Empire (Gerasimov et al. 2005; Baron 2007, 2008; Turoma & Waldstein 2016). This article builds on the work of these authors by bringing cartographical sources into dialogue with the wider discussion about ethnic and national classification. Moreover, by shining a spotlight on the "graphic code" (lines, shading, color etc.) used to depict, construct, and communicate these taxonomies, it draws our attention how the materiality of maps shaped perceptions of ethnicity and nationality (Monmonier 1991, 18-20).[4]

Through a close reading and comparison of two case studies – the ethnographic maps of European Russia by Petr Keppen (1851) and Aleksandr Rittikh (1875) - I argue that there was an inherent paradox underlying ethnographic cartographical practices during the nineteenth century. On the one hand, cartographers such as Keppen and Rittikh sought to provide an overview of the "imperial situation" of the Russian Empire – the matrix of social, cultural, political, and economic roles and identifications that formed the "building blocks" of "coexisting and partially overlapping incongruent categories of difference" (Gerasimov et al. 2016, 28). Cartography provided them with a medium to investigate the distribution of ethnic and national groups, an aspect which was given less priority in statistical and textual works. On the other hand, the specificities of the cartographical medium could end up working against the very hybridity they sought to portray. Ethnographic maps often reinforced the idea that the inhabitants of the borderlands could be distinguished and essentialized into homogenously colored groups associated with specific territories.

---

[2] I do not mean to suggest that maps are not textual. Aside from containing many elements of text, maps can also be "read" as "cultural texts" (Harley and Laxton 2002, 33-35). Rather, I want to draw attention to role played by graphical modes of thinking in disseminating and legitimizing particular spatialized ways of categorizing the world.

[3] The term "ethnoschematization" is a coinage by Seegel (2012).

[4] In the 1990s and 2000s, the historiography on cartography was dominated by Foucauldian readings of maps in terms of discourse and power relations (Harley and Laxton 2002). As the articles in the journal of the history of cartography, *Imago Mundi*, testify however, there has been a conceptual shift in recent years to thinking about maps as discursive instruments in light of their materiality.

Background: Early Ethnographic Cartography in the Russian Empire

The term *etnografiia* in Russian originates from the Greek *ethnos* ("folk" or "people") and *grapho* ("I write"). As such, the activities associated with this field were, from their inception, specifically orientated towards the graphical representation of peoples and cultures, whether through texts, pictures, or other methods of visual expression. The majority of ethnographic scholarship in the Russian Empire prior to the mid-nineteenth century consisted of textual population description (*Völkerbeschreibung*). Where illustrations were featured alongside ethnographic descriptions, they usually consisted of engraving of peasants wearing ethnographic costumes and served as examples of different racial and physiognomic "types" (Knight 2010; Sach 2013; Mogilner 2013). Often, this sort of ethnographic engraving was published in dedicated collections, such as the multi-volume collection *Peoples of Russia: Ethnographic Essays (Narody Rossii. Etnograficheskye ocherki*, 1878-1880). Since the Renaissance, Russian maps had also contained small ethnographic vignettes, yet these were often inserted for illustrative purposes and not intended to be comprehensive inventories of ethnographic "types" (Kivelson 2006).

Some of the earliest examples of ethnographic maps were produced in the Habsburg Empire, such as Constant Desjardins' *Ethnographische Karte von Europe* (1837) and Pavel Jozef Šafárik's (Pavol Jozef Šafárik) map of the Slavic-settled territories (*Slovanský Zeměvid*, 1842). These were followed in the late 1840s and 1850s by Heinrich Berghaus' linguistic map in his *Physikalischer Atlas* (1847) and Karl von Czoernig's *Ethnographie der Österreichischen Monarchie* (1855-1857), amongst others (Labbé 2004). In the late 1840s, scholars were also applying the same concepts to classify and map the inhabitants of the Russian Empire. These cartographers entitled their works "ethnographic map" (*etnograficheskaia karta*) so as to specifically position themselves within the emerging genre and to set up cultural expectations about the maps' form and content. Tacit rules and conventions governing the practices of imperial and colonial mapping were developed at international statistical congresses held between 1853 and 1876, in which common standards of measurement and notation were discussed with the aim of bringing about a scientific universalism (Palsky 1999; Randeraad 2011).[5]

Petr Keppen (Peter von Köppen) (1793-1864) was the one of the first experts on statistical demography in the Russian Empire.[6] Born in Kharkov into a German-speaking and Lutheran family, he went on to pursue a stellar career in the civil service and scientific community of mid-nineteenth century Russia, simultaneously serving as an academician of the Imperial Academy of Science and holding positions in the Ministry of Internal Affairs and Ministry of State Domains.[7] In the 1830s and 1840s Keppen systematically collected

---

[5] The literature on imperial and colonial mapping activities is vast. Some classic works on the British Empire include Edney (1997) and Driver (2001).

[6] Another important figure in the development of demographic statistics in the Russian Empire was Konstantin Arsen'ev (1789-1865) (see Smith-Peter 2007). For a full account of Keppen's life, see Sukhova (1993) and the biography written by one of his sons (Keppen 1911).

[7] As Marina Loskutova has argued, Keppen was representative of a "particular group of ministerial 'experts', who occupied a liminal position between a very small circle of academic scholars (affiliated

data on the population of the Empire, which he used to produce the first large-scale ethnographic maps of the inhabitants of "European Russia". As the first head of the Statistical Section of the Imperial Russian Geographical Society (IRGO) established in St. Petersburg in 1845, Keppen worked closely with his colleague and head of the Ethnographic Section Karl Ernst von Baer (1792-1876).[8] Together, they saw the task of ethnography as to document the diversity of the Empire's inhabitants in relation to the natural landscape, particularly those small "primitive" peoples in danger of disappearing (Semenov 1896: 37; Knight 1998; 2009). In 1848 Keppen published the *Ethnographic Atlas of European Russia* (*Etnograficheskii atlas evropeiskoi Rossii*, 1848), shortly followed in 1851 by the first large-scale ethnographic map of the western Russian Empire, *Ethnographic Map of European Russia* (*Etnograficheskaia karta evropeiskoi Rossii,* see Figure 1).[9] Keppen's map projected an image of the Empire as a composite of distinct ethnic groups. At the same time, the map also made a powerful statement about the collective nature of the imperial territory by depicting different ethnicities alongside one another as equivalent forms of group identification and by emphasizing the unifying structure of the Empire that ruled all these peoples.

Looking back on the activities of the IRGO at the end of the nineteenth century, Petr Semenov-Tian-Shanski considered Keppen's map to be one of the major achievements of the early years of the IRGO. The map was reprinted in a second (1852) and third edition (1855), and the second edition alone had a print-run of 300 copies. Keppen was awarded the prestigious Constantine medal and Zhukovskii prize by the IRGO (Semenov 1896, 111). Nevertheless, Keppen's map was criticized by some of his colleagues for focusing too much on the *inorodtsy* (aliens, on ethnoreligious or ethnocultural grounds)[10] and for failing to take into account peoples who have "forgotten" their native language and now use Russian, but who continue to be known by another name, as well as Russian (or Slavophone Orthodox) communities in Siberia and outside the borders of the Russian Empire (Sreznevskii 1851, 8-9). By the time that Keppen's map had been published in 1851, the Ethnographic Section had already begun to

---

mostly with the Imperial Academy of Sciences in St. Petersburg and much less with universities, medical academies and other institutions of higher learning) and a rapidly expanding civil service." (Loskutova 2014, 24).

[8] Between 1845 and 1849 the society was named the Russian Geographical Society.

[9] A common issue for historians using cartographical sources is that the cartouches usually attribute authorship to a single person (in this case Keppen, the member of IRGO who was responsible for the project), when we know that map-making was an intensely collaborative process. The publication of a map of this scale combined the labors of those involved in the gathering and aggregation of the data, designers, draftsmen, colorists, and printers. The input and creativity of these people is lost as one of the "silences" embodied in the map (Harley 1988). Nevertheless, for the sake of clarity, in this article I refer to the maps by the names of their titular authors.

[10] A legal category established in 1822 to designate a set of minorities – mostly eastern nomadic or semi-nomadic peoples - within the Russian Empire who were allowed to preserve their local customs and had certain privileges, such as exemption from military service. In 1835, this category was extended to Jews and thereafter gradually came to be used to refer (often in a pejorative sense) to all the non-Russian inhabitants of the Empire (Slocum 1998). Keppen used the term in the latter sense in the title of his index of the ethnic groups of western Russia (Keppen 1861).
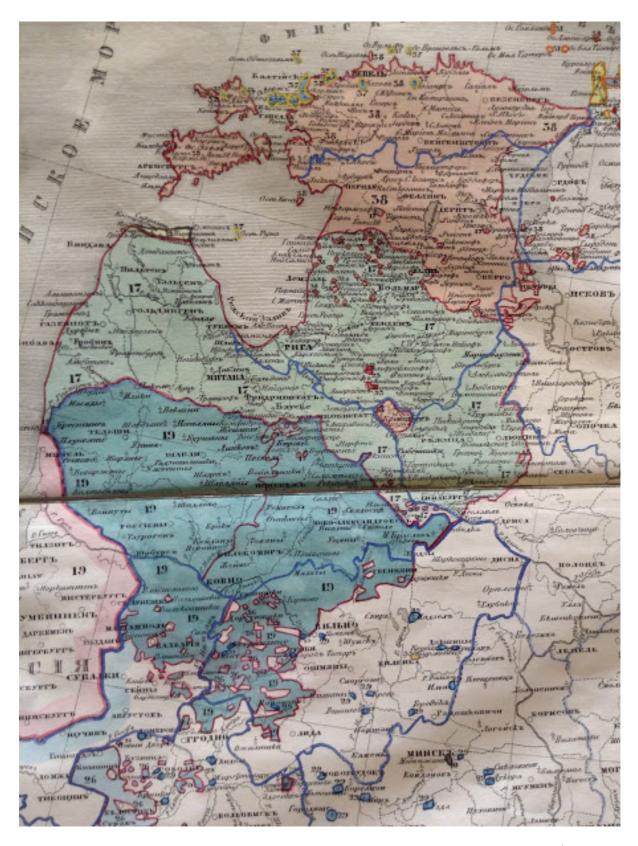
Figure 1. Petr Keppen, 1851. *Etnograficheskaia karta evropeiskoi Rossii.* 2nd ed. St. Petersburg. Detail showing the distribution of ethnographic groups in the Baltic and North-West provinces. Estonians (no. 38 – orange), Latvians (no. 17 – light green), and Lithuanians (no. 19 – dark green). The uncolored areas denote the by Slavs (here, Great Russians and

White Russians). Reproduced with permission from the National Library of Finland, Helsinki.

move in another direction. Baer stepped down from leading the Ethnographic Section in 1848 to be replaced by Nikolai Nadezhdin (1804-1856), who had a much more practical and utilitarian approach to the discipline. Nadezhdin placed nationality (*narodnost'*) at the heart of his conception of ethnography, whose principle goal he saw as being to demonstrate Russian distinctiveness (*samobytnost'*) rather than as a part of a universalist discourse (Pypin 1892, 270-272; Semenov 1896, 38; Knight 1998; 2009). The shift in understanding of ethnography was encapsulated in the speech made by the linguist Izmail Sreznevskii (1812-1880) to the IRGO in January 1851. Sreznevskii emphasized the urgent need to create a "map of languages, dialects and speeches, a map on which instead of the political, religious and all other borders, are the borders of the linguistic diversity of the peoples" (Sreznevskii 1851, 6). Sreznevskii stressed, however, that the focus should be on the "geography of the Russian language" and "questions of the borders and space of languages and dialects" (*Ibid,* 6). He also argued that as ethnolinguistic boundaries did not stop at state borders, cartographers should incorporate Russian-speakers outside of the Russian Empire too (*Ibid*, 9).

It was some time before the IRGO published a new ethnographic map reflecting the changes in political and scientific outlook within the society. Following the Polish-Lithuanian uprising in the western provinces in 1863-1864, the imperial administration intensified policies aimed at the political and cultural integration of the western borderlands. A ban was introduced on printing in the Latin script (*Latinka*) for texts in Belarusian, Lithuanian, Samogitian (*Zhmudskii*), and Latgalian. Property belonging to the insurgents was confiscated, efforts were made to strengthen the influence of the Orthodox Church, and Russian officials were appointed to administrative posts which had been previously occupied by Poles (Weeks 1996; Rodkiewicz 1998; Staliūnas 2007). A regional branch of the IRGO was opened in Vil'na to coordinate the collection of statistical data throughout the North-Western provinces (*Severo-zapadnyi krai*) with a new sense of geopolitical importance (Petronis 2007, 145-153).

In the early 1870s, members of the IRGO in St. Petersburg decided that it was time to commission a revised and updated version of Keppen's map. While the Statistical Committees in each province conducted local fieldwork and published annual data books (*Pamiatnaia knizhka*) in the second half of the nineteenth century, the information gathered remained at the scale of the province. For local authorities, specific knowledge of the inhabitants in their locality was more important than universalizing scientific claims. Ethnographic maps thus performed an important role in combining local observations into an overview of all the Empire's territory and inhabitants.

Aleksandr Fyodorovich Rittikh (Alexander Rittich, 1831-1914?), a former military general turned map-maker, was chosen to lead the team. His previous cartographical publications included a confessional-cum-ethnographic atlas of the North-Western provinces (Rittikh & Batiushkov 1864) and confessional and ethnographic maps of the Baltic provinces and Caucasus (Rittikh 1873). Rittikh embarked on the task with great vigor between 1873-74 and the result was the impressive six-sheet *Ethnographic Map of European Russia* (*Etnograficheskaia karta evropeiskoi Rossii*, 1875, Figure 2). An ardent advocate of Pan-Slavism, Rittikh was mainly interested in using cartography to visualize the ethnic Russian

Figure 2. Aleksandr Rittikh, 1875. *Etnograficheskaia karta evropeiskoi Rossii*. St. Petersburg. Detail depicting the distribution of ethnographic groups in the Baltic and North-West

provinces. See Figure 3 for the legend. Reproduced with permission from the National Library of Finland, Helsinki.

presence within the Empire.[11] Rittikh's completed map was printed in 1500 copies for sale in Russia and abroad, and was widely admired in scientific circles across Europe.[12] While Rittikh acknowledged his indebtedness to Keppen's map, he felt that there were many inaccuracies, especially regarding the ethnographic depiction of the Baltic provinces where Keppen had experienced trouble accessing data (Rittikh 1873, 2).[13]

Thus, having presented a brief overview of the first large-format ethnographic maps of European Russia, the remainder of the article focuses on a close reading and comparison of the cartographical techniques employed by Keppen and Rittikh to classify ethnicity and nationality in spatial terms.

Areas: Spatializing Nationality

The political geographer Stuart Elden, through his readings of Foucault, argues that we often limit our understanding of territoriality to thinking about frontiers and borders, when actually area is equally, if not more, important (Elden 2013). The significance of area is clearly visible in ethnographic cartography, where the most visually prominent aspects are the shaded zones denoting the distribution of ethnographic groups.[14] These colored expanses extrapolate information gathered from different sources about the number and "nationality" (*narodnost'*) of inhabitants in a village, town, parish, or city in order to make claims about the distribution of a particular ethnic group. The method of representing ethnographic groups using block shading was borrowed from topographical and geological maps, which also depict information about a variable covering the earth's surface (Rudwick 1976). The technique of block shading denoted an implicit belief that a particular ethnographic group inhabited the whole extent of the shaded area and did not share this space with any other groups. Even when small pockets of other ethnographic groups were depicted within a larger "geo-body", as occurred in several places on Keppen's and Rittikh's respective maps, the two groups were depicted as inhabiting separate spaces (cf. Winichakul 1994).

Keppen was acutely aware of the problems related to projecting ethnographic groups onto a flat surface. As an expert on statistics who had travelled widely throughout the western part of the Empire, he was familiar with the diversity of the Empire's inhabitants. In his booklet accompanying the map, Keppen provided a detailed commentary on his methodology

---

[11] Rittikh continued to develop this idea in his later publications, especially his book *Slavic World* (*Slavianskii mir*), where he argued for the unification of all Slavs under the umbrella of the Russian Empire (Rittikh 1885).

[12] In his address to the British Royal Geographical Society in May 1875, Sir Henry Rawlison referred to Rittikh's map as "the most important and best executed work" (Rawlison 1874: 424). Rittikh's map also won first prize for his contributions to anthropology and ethnography at the International Congress of Geographical Sciences in Paris in August 1875 (*Société de géographie* 1875: 311-313).

[13] Rittikh cited this as his motivation for publishing of a detailed confessional and ethnographic map of the Baltic provinces in 1873.

[14] Keppen also shaded the sea in light grey, but it is far less visually prominent that the brightly-colored areas denoting the distribution of different ethnographic groups.

for a more specialist audience, highlighting the compromises he made between incorporating details and maintaining the map's readability. Keppen included his source statistical data and elaborated on nuances that he was unable to bring into his map. For example, Keppen explained how when Germans and Jews lived in separate villages, he shaded them in the corresponding color. However, in instances where they lived with other nationalities "and did not consist of the majority population, it was inconvenient to show them". Likewise, "Gypsies" (*tsigany,* Roma) who are "scattered throughout all Russia in small numbers" were mostly not shown (Keppen 1852, 25). Whereas Germans, Jews, and Gypsies were included in the statistical description and data tables in Keppen's booklet, they disappeared in the process of transferring the information from data table to map.[15] Accordingly, the task of creating an ethnographic map involved not merely representing a synthesis of assembled numerical data, but a translation of these numbers into areal terms.[16] In this way, the ethnographic map as a medium for taxonomizing ethnographic groups inherently privileged regions inhabited by settled and more ethnically homogenous populations rather than nomadic or dispersed groups, or those living in ethnographically mixed regions, who often disappeared and became part of the maps' "silences" (Harley 1988). The result, whether intentional or not, was "to reduce the uneven heterogeneity of imperial experience to a more manageable, one-dimensional diversity of nationalities, regions of empire, or confessions" (Gerasimov et al. 2005, 24).[17]

Grappling with the technical challenges of how to represent ethnographically mixed areas using the conventional method of solid block shading, Keppen assigned each ethnic group a number according to the alphabetical list of ethnographic groups in the map's legend. These numbers were added as another layer to the map, which allowed Keppen to indicate the presence of an ethnographic group outside of its shaded "geo-body" (Winichakul 1994). The numbering system also provided viewers with a means to identify ethnographic groups, since the positioning of the numbers usually corresponded to the background color. This is an example of where Keppen was experimenting with cartographical techniques to depict mixed ethnographic regions and convey a sense of overlapping and hybrid forms of identification. At the same time, the fact that these tiny numbers require a keen eye to make out indicates how his attempt at mapping the "imperial situation" was overshadowed to a large extent by the convention of block shading in thematic mapping at the time.[18]

Another statistical variable that did not translate into ethnographic maps was population density. Consequently, both Keppen's and Rittikh's maps visually extenuated the presence of ethnic groups inhabiting a wide geographical area in a low density, and diminished the graphical impact of ethnic groups concentrated in a more compact territory.

---

[15] The way in which a single author could present different images of an ethnographic landscape across various media and directed towards different audiences has been noted by Jutta Faehndrich and Sophie Perthus (2013, 61) and Christian Lotz (2017, 10).

[16] Importantly, the process of translating data from one medium to another does not stop with the map. For instance, information about distance and elevation can be obtained from maps and then used to produce text or data tables.

[17] In the case of maps, it is perhaps more helpful to think in terms of *two-dimensional diversity*.

[18] Topographical maps from the period, such as Carl Gottlieb Rücker's *Specialcharte von Livland in 6 Blättern* (1839), often included dots, points, and symbols to indicate variations in types of arable land, but this iconographic practice was not widely adopted in ethnographic mapping in the mid-nineteenth century.

The so-called choropleth map, which depicted intervals of statistical variables in various shades to denote their concentration, had been developed by the French mathematician Pierre Charles Dupin (1784-1873) in 1826 to depict the distribution of illiteracy in France (Palsky 2008). Dupin's approach was subsequently widely adopted as a method of visualizing statistical data. There are also instances of this technique being applied to ethnographic cartography in the nineteenth century, such as in the ethnographic atlas of the western Russian Empire published by Roderich von Erkert (Erckert) in 1863 in Russian and French editions (Erkert 1863; d'Erkert 1863). In the atlas, in addition to an ethnographic overview map, Erkert included five separate plates depicting the relative density of Poles, Russians, Germans, Lithuanians and Latvians (mapped together), and Jews in varying shades of a single tone. Erkert, however, was criticized by members of the IRGO for taking the district (*uezd*) as the area for statistical comparison; the area over which the demographical data was interpolated was too large and thus obscured the considerable ethnographic diversity within districts (Galkin 1871, 157). Erckert's atlas nevertheless remained rather exceptional in the context of the nineteenth century and the majority ethnographic maps did not incorporate population density as a variable.

Lines: Bordering Nationality

Map-makers were not only interested in portraying the distribution of ethnographic groups, but also in demarcating the borders between them. The ethnographic maps by Keppen and Rittikh had in common that they attributed an artificial definition and fixity to ethnographic borders in several ways. Firstly, solid lines were drawn to divide the shaded areas, which "flattened and enclosed" ethnic groups and obscured the fact that inhabitants often spoke a continuum of dialects which gradually changed from village to village as one travelled in a certain direction (Appadurai 1993, 334). The impermeability of ethnolinguistic borders was enhanced by the use of contrasting colors for adjacent groups. Secondly, the use of the same technique – line – to depict ethnographic boundaries as state and administrative borders, rivers, roads, and railways (in the case of Rittikh's map) on the base map, conveyed the impression that the frontiers between ethnographic groups were a physical phenomenon that could be observed. Finally, the lines depicted on the maps have been "smoothed" as a result of the resolution and technique of printing used (Monmonier 1991, 29). In doing so, the maps struggled to convey the messiness of the process of gathering ethnographic data and ambiguities of classification, especially in ethnographically mixed areas. Christian Lotz has shown how a similar disjunction occurred in the depiction of forest borders as "continuous lines" on topographical maps and cartographers' experiences in the field, where they observed that there were "many slow transitions from wooded to non-wooded land" and that the precise border of a forest was hard to determine (Lotz 2017, 10).

A comparison of Keppen's and Rittikh's maps illuminates how the methods of bordering reflected their divergent political views. Keppen surrounded each ethnographic territory with a thick line in a contrasting color to emphasize the uniqueness of each small "primitive" or near-extinct ethnic group and, by extension, their value as part of the collective

ethnographic heritage of the Empire. Rittikh, by contrast, took great care to depict tiny islands of Russian inhabitants, at the scale of single villages or parishes, which penetrated non-Russian ethnic regions. The result was to present a more maximalist vision of the ethnographic spread of Russians and create a "wide" or "thick" border zone of ethnographically mixed inhabitants which fringed the Russian ethnic "core".[19]

Chromatic Rendering of Values and Emotions

Color played an important role in both Keppen's and Rittikh's maps as a functional and technical means of differentiating ethnographic groups. In this respect, ethnographic maps were influenced by earlier cartographical uses of color washes to denote administrative and political divisions, as well as a tool to communicate information on topographical and geological maps. Keppen's 38 colors and Rittikh's 46 colors or shading combinations functioned as ethnographic inventories of imperial subjects. Color also had an important esthetic function and projected a sense of the magnificence of the Russian Empire that ruled over such a vast territory and mosaic of peoples. Unlike the *Atlases* printed as books by both cartographers (Keppen 1848; Rittikh & Batiushkov 1864), their large-format sheet maps were designed to be wall-mounted for display.

Moving beyond the esthetic qualities of maps, however, Dorothea Schäfer-Weiss and Jens Versemann (2005) have argued that the color theories of Johann Wolfgang von Goethe (1749-1832) influenced decisions about how to communicate information on early nineteenth-century geological maps. Most famous today as a writer, Goethe was also keenly interested in natural science, including chromatics. In *Zur Farbenlehre* (1810), he developed a psychological theory of how humans perceive colors and the meanings associated with colors. Moving beyond literal descriptive associations – such as blue areas represent water and green for vegetation – Goethe was interested in the moral characteristics and subconscious values communicated by certain colors: purple and red (beauty), orange (nobility), yellow (good), green (useful), blue (mean, common), and violet (unnecessary).

Goethe's chromatic theories resonated in the art world and in contemporary discussions about scientific modes of visualization, especially the coloring of geological maps. The geologist and mineralogist Christian Keferstein (1784-1866), for example, collaborated with Goethe for advice on how to color his geological atlas of Central Europe, *General Charte von Teutschland* (1821). Schäfer-Weiss and Versemann, writing about Keferstein and Goethe's collaboration, reveal how:

> The chief colour of the chromatic circle – "the purest most beautiful red", "this highest of all appearances of colour", which "conveys an impression of gravity and dignity" – was assigned to the chief formation containing granite (along with gneiss and mica) to reflect the "dignity of this rock". Goethe considered granite to be "the highest and deepest", at once the archetype and foundation for all younger strata. (Schäfer-Weiss & Versemann 2005, 170)

---

[19] On the concept of "wide" or "thick" frontiers, see Dullin (2014).

Schäfer-Weiss and Versemann's description bears a striking similarity to Rittikh's use of shades of red and pink to depict the Slavic presence within the Empire. It is not known whether Rittikh was familiar with the moral connotations of red described by Goethe, or whether his decision to use red and pink shades was linked to the fact that they are the most visible colors on the color spectrum and stand out boldly against the other ethnographic groups on the map, or whether he was simply influenced by the use of color on other maps he had seen. In any case, Rittikh used shades of red and pink to enhance the visibility of the Slavic ethnographic group and made a strong statement about their power in the Russian Empire. A similar strategy was used on maps of the British Empire, in which imperial domains were usually shaded in pink.[20]

Keppen spend a week visiting Goethe in Weimar in early 1824; however, in his explanatory booklet, he gave no indication that he was aware of Goethe's ideas on chromatics (Keppen 1911: 87-9). Instead, Keppen wrote that he chose the colors arbitrarily:

> Concerning color, I could not follow any system; that is why I decided to just choose three main colors as representatives of peoples: green for Finns, blue for Tatars, red for Germans. However, as on the map one must show no less than 38 differences, I only resorted to bordering the colored areas, so that from the combined use of two colors, it was possible to determine where people inhabit. (Keppen 1852, 24)

A closer examination of Keppen's map, however, suggests that his choices of color were less haphazard than he made out and reinforced certain ways of categorizing people. For instance, Keppen's decision to render Finns, Tatars, and Germans in contrasting colors strengthened the perception of them as three separate ethnic "families" based on their geographical location and linguistic distinctiveness. In this way, Keppen anticipated the concept of the *Stammbaum,* a model of comparative linguistics popularized by the German linguist August Schleicher (1821-1868), where relationships between languages (and their corresponding ethnic groups) are represented by branches on a genealogical family tree (Schleicher 1863). Moreover, Keppen left Russians – who in his view consisted of Great Russians, White Russians (Belarusians), and Little Russians (Ukrainians) – blank as they were not *inorodtsy*, and thus not the main object of his interest on the map. Thus, even in instances where colors appeared random, they could be used to convey information about taxonomies, hierarchies, and relationships between ethnographic groups.

Hatching Hierarchies: Constructing Similarity and Difference

Rittikh used a combination of color and hatching to construct a spectrum of Slavdom stretching outwards from Moscow, which was positioned in the center of the map. White Russians and Little Russians were indicated on Rittikh's map using hatching overlaying a similar shade of pink as Great Russians, which suggested that they were a subgroup of Great Russians. The use of varying hatched shades of pink to depict these groups augmented the Russian presence in the Empire, as large shaded areas on maps look more saturated than

---

[20] That the British Empire was often shaded in pink or red on maps has been widely observed, but there is no consensus among historians as to how or why this came to be the norm.

smaller patches of the same color (Monmonier 1991, 155). Moreover, the other Slavs marked on the map, Bulgarians and Poles, were shaded in dark red and pink, which also conveyed a message about their familial affinity. The overall effect was to create an impression of "concentric circles" of Russianness, "extending from the innermost circle of the Russians outward to ever more alien peoples" (Kappeler 2009, 70).[21] Rittikh's map demonstrates how the dynamics of similarity and difference were closely intertwined: on the one hand, Rittikh used hatching to render a large portion of European Russia as a Pan-Slavic space; on the other hand, his use of different hatching and color combinations highlighted the internal diversity within Slavdom (cf. Maxwell 2015).

Rittikh applied the same method of using proximate colors and hatching to depict related ethnic groups in the Caucasus and among the Finno-Ugric peoples. Great care was taken when designing the map to ensure that contrasting colors were used to distinguish between neighboring groups perceived to be ethnolinguistically unrelated, as in the case of "Finnic Estonians" and "Lithuanian (*Litovskaia*) Latvians". During the map's review process prior to publication, changes were made to use more distinctive colors to contrast these two groups based on their language (Semenov 1896, 957-8). As a result, Estonians, Latvians, and Lithuanians were represented as clearly differentiated ethnolinguistic groups, where 10 years earlier, on Rittikh and Batiushkov's confessional map of the North-Western provinces, no distinction had been made between Lutheran Latvians and Germans or between Roman Catholic Poles, Lithuanians, Belarusians, and Latvians (Latgalians). Decisions Rittikh made about the visualization of statistical data minimized the presence of certain politically threatening groups in the 1870s, such as Poles, by sub-dividing the socio-political noble estate (*szlachta*) into the ethnolinguistic (or national) categories of Lithuanians, Belarusians, and Latvians (Latgalians).[22]

Legends and Text: Naming Nationalities

Legends are an important tool for reading a map and function as a key to help viewers decipher the cartographical code. Both Keppen's and Rittikh's maps contained two legends. The smaller detailed the symbols which appeared on the base map (topographical features, roads, railway lines, towns, etc.) and the larger displayed a list of ethnonyms, each associated with a unique color. In the case of Keppen's map, the legend simply listed the ethnonyms alphabetically and assigned them each a number from 1 to 38. In Rittikh's map, however, the legend also communicated specific genealogical relationships between ethnic groups. Using the same technique as the *Stammbaum* theorist August Schleicher, Rittikh used curly brackets (or braces) to combine ethnographic groups into families (Schleicher 1863). According to Rittikh's taxonomy, Great Russians, White Russians, Little Russians, Bulgarians, and Poles

---

[21] For a more in-depth discussion of the concept of the "great circle of interior Russia", see Gorizontov (2007).

[22] While this may have been Rittikh's intention, it arguably had the opposite effect of maximizing nationality in the region by graphically depicting the ethnographic threat.

were nested under the category of "Slavs", and Lithuanians (*Litva*)[23] and Latvians (*Latyshi*) were positioned under the overarching heading "Lithuanians" (*Litovskaia*). Rittikh continued in a similar vein with subgroups for Greco-Romanian, Germanic, Iranian, Caucasus-Caspian, Caucasus-Black Sea, Finno-Baltic, Finno-Volga, North Finnic, Turkic, Mongolian, and Semitic peoples (Figure 3). Thus, the design and layout of the legend constructed relationships between different ethnographic groups.

Keppen included a similar genealogical taxonomy in his booklet accompanying the publication of his map, which included Yugra (Iugra), Finns, Perm peoples, Volga peoples, Tatars, Mongols, Lithuanians, Slavs, and Jews. In the case of certain ethnic "families," Keppen included several more layers of branches, as in the case of the Finns (*Finny – Chud' – Esty* [*Chukhny*] *– dvukh narechii*) (Keppen 1852, 15-17) (Figure 4). In the process of translating numerical data to the map, however, Keppen simplified his classificatory schema and only included what he considered to be the major groups.

---

[23] Rittikh unusually uses the term *litva* (meaning space and state-territory) as opposed to Russian-language ethnographic term *litovtsy* (Lithuanians in the ethno-cultural sense). This is the only instance where he defines a group in terms of a historical region instead of the ethnolinguistic character of the population.

Figure 3. Detail from the legend of Aleksandr Rittikh, 1875. *Etnograficheskaia karta evropeiskoi Rossii*. St. Petersburg. Reproduced with permission from the National Library of Finland, Helsinki.
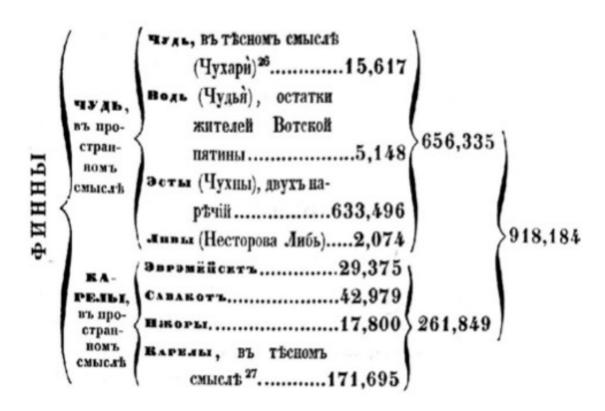

Figure 4. Taxonomy of Finnish peoples. Petr Keppen, 1852. *Ob etnograficheskoi karte evropeiskoi Rossii*. St. Petersburg: Izdannoi imperatorskim russkim geograficheskim obschestvom, 16. Reproduced with permission from the National Library of Finland, Helsinki.

As Alexander Maxwell has demonstrated, nomenclature played an important role in shaping perceptions of the subdivision of the Slavic peoples (Maxwell 2015). By examining the work of the two cartographers in parallel, a change can be observed between the 1850s and 1870s. While language was an important variable for Keppen in determining his taxonomization of *inorodtsy,* it was not the sole factor and he incorporated ethnic, linguistic, religious, and geographical (e.g. Perm, Volga, Karelia, Caucasus) terminology into his list of ethnonyms. In his booklet, Keppen also discussed the case of two groups, Tepteri and Bobyli, whom he defined as lying in the murky taxonomic no-man's land between socio-economic and ethnic group (Keppen 1852, 20-21).[24] Rittikh, by contrast, specifically defined

---

[24] Keppen's expertise in imperial statistics accounts for his cognizance of specialized legal-administrative categories. Keppen defines Tepteri (Teptiari) as a "sort of cross between" (*nichto srednee mezhdu*) peasants and "Bashkir-Mishar Tatar troops". He describes how they were "outlaws" (*begletsov*) of Tatar origin who arrived in Bashir after the destruction of Kazan in the sixteenth century. Elsewhere, they are classified as a separate "nationality" (*narodnost'*) (Brokgaus & Efron 1901, vol. 64). Keppen uses the term Bobyli to describe a social class-cum-ethnic group of "outlaws" (*begletsov*) of Finnic origin. In a legal context, this term was used to denote a landless peasant in the western provinces in the Empire (Brokgaus & Efron 1891, vol. 4).

ethnographic groups by their "dialects" (*narechiia*). By elevating "language" to the status of the principle determiner of nationality, Rittikh's map was responding to the decision at the 1872 meeting in St. Petersburg of the International Statistical Congress to adopt spoken language as the principle factor for classifying ethnographic groups (*Report of the Delegates to the International Statistical Congress* 1875, 41).

Toponyms were also a tricky issue for map-makers, especially in the western borderlands of the Russian Empire where many places were known by different names (cf. Monmonier 2006). While the vowel changes distinguishing Vil'no/Vilna/Vil'na and Kovno/Kovna may seem minor, they held very real political and emotional significance for the local inhabitants. The change of an /o/ to an /a/ observable between Keppen's map in the 1850s and Rittikh's maps in the 1870s, in the case of Vil'no and Kovno, meant that the Polish names for the cities (*Kowno* and *Wilno*, spelt in Cyrillic as *Kovno* and *Vilno*) become Russified (*Kovna* and *Vil'na*) as part of initiatives following the 1863-4 Uprising to reduce the Polish influence in the western borderlands (Weeks 1996; Staliūnas 2007; Dolbilov 2010). As Karsten Brüggemann has argued with regard to the Baltic provinces, "this imperialisation of the topographical terminology reflects the broader spatial appropriation of the region during this period, which sought to portray it as an integral, and even natural, part of the Russian Empire" (Brüggemann 2012, 113).

The decision to use a particular version of a place name also made subtle claims about the ethnographic character of the surrounding region. Both maps used symbols of varying sizes to signify capitals (shaded areas), cities, provincial cities, district and port cities, an "unrecognized or non-legal town" (*zashtatnyi gorod*), a "non-district town" (*bezuezdnyi gorod*), or village. Keppen's map also included symbols to designate "*posad* or small place" and "village, settlement or *pogost*." These urban centers functioned as "population points" (*naselennie punkty*) and were used as indicators of the religious and ethnographic character of the surrounding population, despite the fact that there were often considerable differences between the ethnographic composition of urban and rural inhabitants in a particular region (Mastianitsa 2015, 199).[25] Contemporaries were well-aware of the historical and political baggage attached to toponyms, with the result that reviewers frequently pointed out what they saw as errors in cartographers' uses of place names. Nikolai N. Galkin, in his commentary on Rittikh's 1864 *Atlas,* faulted Rittikh's use of the Polish form of place names for Uniate parishes, "rather than the more Russian names, which have lately been adopted in Russian villages and hamlets under Greek-Uniate management" (Galkin 1871, 163).[26]

Conclusion

At the International Congress of Geographical Sciences in Paris in 1875, Rittikh's map received special mention for its contribution to knowledge about the geography of human

[25] Nineteenth-century Vil'na, for instance, was mostly inhabited by Jews and Poles (Catholics and nobles), whereas the surrounding countryside was inhabited by a Belarusian-speaking majority (Orthodox Christians and serfs-turned-peasants) (Weeks 2015).
[26] On the Uniate issue in the western provinces, see Weeks (1996).

races. The technical aspects of Rittikh's map were singled out: his use of color and hatching to distinguish populations, and the way in which different shades communicated relationships between groups (*Société de géographie* 1875, 333-4). That Russian geographers, statisticians, ethnographers, and cartographers were some of the most active and prolific contributors to the field in this period is hardly surprising. The great expanse of the Russian imperial territory provided inspiration and vast amounts of material to be studied. The diversity of the Empire's inhabitants meant that Russian scientists felt that all humanity could be studied without leaving the imperial territory (Mogilner 2013). However, the creative flourishing of cartography not only concerned the subject of the maps, but also technical and methodological aspects too. The maps by Keppen and Rittikh demonstrate how the Russian Empire functioned as a testing-ground for experimenting with different graphical techniques for visualizing ethnic and national groups.

Keppen's and Rittikh's main motivation was not to advance original proposals for taxonomizing the inhabitants of the western Russian Empire. Instead, they produced maps primarily as a practical tool through which to synthesize different sources (census data, population statistics, ethnographic reports etc.). Each type of source constructed different ways of seeing and thinking about the same phenomenon, but the context of production and particularities of the medium meant that these generalizations occurred in different forms. In the case of cartography, the medium's close ties with geography brought the spatial dimensions of ethnicity and nationality to the fore. At the same time, Keppen's reflections on the process of making his ethnographic map reveal how he was highly conscious of how maps struggled to convey patterns of identification and nested collectivities. Hence why he included the source statistical tables in an appended booklet to provide readers with an additional medium through to gain information, enabling them to compare different sources and draw conclusions for themselves. Rittikh, by contrast, was less self-reflective about the map-making process and used maps in many of his publications as authoritative representations of "reality" and to bolster his Pan-Slavist arguments (cf. Rittikh 1885).

In both Keppen's and Rittikh's mapping projects, the Russian Empire firmly remained the administrative and territorial frame of reference. In later decades, the ethnographic regions they carved out provided fuel for nationally-oriented individuals and political groups to mobilize under the banner of making national claims to territories and their inhabitants. Thus, ethnic and nationality categories "begun as the artificial inventions of cadastral surveyors, census-takers […] can end up by becoming categories that organize people's daily experiences precisely because they are embedded in state-created institutions that structure that experience" (Scott 1998: 81-83). Polish, Lithuanian, Ukrainian, and Belarusian intellectuals, amongst others, responded to depictions of "their" national group in the maps by Keppen and Rittikh with maps of their own which sought to correct or refute the relationship between inhabitants, territory, and borders (Eberhardt 2004; Petronis 2007; Seegel 2013; Mastianitsa 2015; Nenartovič 2016; Staliūnas 2016). The nationalist engagement with Keppen's and Rittikh's maps continues to this day; a simple internet search throws up dozens of social network posts, blogs, and forums discussing the maps from the perspective of the current geopolitical borders.

That said, we must be careful not to get ahead of ourselves. The fact that these ethnographic maps were later re-appropriated by national movements in no way subscribes to

a teleological narrative of the Russian Empire as an outmoded form of territorial organization that was in decline and doomed to collapse. Instead, the maps created by Keppen and Rittikh constructed visions of the imperial space as a montage of ethnographic regions, integrating the diverse and far-flung realms into a rationalized, totalizing, and meaningful "imagined community" that survived for another forty years within the Empire and also laid the foundation for Soviet nationality policy (Hirsch 2005).

References

Anderson, Benedict. 1991. *Imagined Communities: Reflections on the Origin and Spread of Nationalism.* London; New York: Verso.

Appadurai, Arjun. 1993. "Number in the Colonial Imagination." In *Orientalism and the Postcolonial Predicament*, edited by Carol A. Breckenridge and Peter van der Veer, 314–39. Philadelphia: University of Pennsylvania Press.

Baron, Nick. 2007. "New Spatial Histories of Twentieth Century Russia and the Soviet History: Surveying the Landscape." *Jahrbücher für Geschichte Osteuropas* 55 (3): 374–400.

Baron, Nick. 2008. "New Spatial Histories of 20th-Century Russia and the Soviet Union: Exploring the Terrain." *Kritika: Explorations in Russian and Eurasian History* 9 (2): 433–47.

Brokgaus, F. A., and Efron", I. A. (eds.). 1890-1907. *Entsiklopedicheskii Slovar'*. 86 vols. St. Petersburg: Tipo-litografiia I. A. Efrona.

Brüggemann, Karsten. "The Baltic Provinces and Russian Perceptions." In *Russland an Der Ostsee: Imperiale Strategien der Macht und Kulturelle Wahrnehmungsmuster (16. Bis 20. Jahrhundert) = Russia on the Baltic: Imperial Strategies of Power and Cultural Patterns of Perception (16th-20th Centuries)*, edited by Karsten Brüggemann and Bradley. D. Woodworth, 111–41. Vienna: Böhlau Verlag.

Cadiot, Juliette. 2007. *Le laboratoire impérial: Russie-URSS, 1860-1940*. Mondes Russes et Est-Européens. Paris: CNRS éditions.

Darrow, David. W. 2002. "Census as a Technology of Empire." *Ab Imperio* (4): 145–76.

Daston, Lorraine, and Peter Galison. 2007. *Objectivity*. New York: Zone Books.

Dolbilov, Mikhail. 2010. *Russkii krai, chuzhaia vera: Ethnokonfessional'naia politika imperii v Litve i Belorussii pri Aleksandre II*. Historica Rossica. Moscow: Novoe literaturnoe obozrenie.

Driver, Felix. 2001. *Geography Militant: Cultures of Exploration and Empire*. Oxford, UK; Malden, Mass., USA: Blackwell Publishers.

Dullin, Sabine. 2014. *La frontière épaisse: aux origines des politiques soviétiques, 1920-1940*. Paris: Éd. de l'École des hautes études en sciences sociales.

Eberhardt, Piotr. 2004. *Polska i jej granice: z historii polskiej geografii politycznej.* Lublin: Wydawn. Uniwersytetu Marii Curie-Skłodowskiej.

Edney, Matthew. H. 1997. *Mapping an Empire: The Geographical Construction of British India, 1765-1843*. Chicago: University of Chicago Press.

Elden, Stuart. 2007. "Governmentality, Calculation, Territory." *Environment and Planning D: Society and Space* 25: 562-580.

Elden, Stuart. 2013. *The Birth of Territory.* Chicago: University of Chicago Press.

Erkert, Roderich F. 1863. *Etnograficheskii atlas zapadno russkikh gubernii i sosednikh oblastei.* St. Petersburg.

d'Erkert, Roderich. F. 1863. *Atlas ethnographique des provinces habitées en totalité ou en partie par les polonais.* St. Petersburg.

Faehndrich, Jutta, and Sophie Perthus. "Visualizing the map-making process. Studying 19th century Holy Land cartography with MapAnalyst." *e-Perimetron* 8 (2013): 60-84.

Foucault, Michel. 2002 *Order of Things: An Archeology of the Human Sciences*. London; New York: Routledge.

Foucault, Michel. 2009. *Security, Territory, Population. Lectures at the Collège de France, 1977-78.* New York: Palgrave Macmillan.

Franklin, Simon. 2010. "Printing and Social Control in Russia 1: Passports." *Russian History* 37 (3): 208–37.

Franklin, Simon. 2015. "Printing Social Control in Russia 3: Blank Forms." *Russian History* 42 (1): 114–35.

Friendly, Michael. 2008. "The Golden Age of Statistical Graphics." *Statistical Science* 23 (4): 502–35.

Galkin, N. N. 1871. "Obiasnite'naia zapiska k ethnograficheskoi karte Tsarstva Pol'skago." *Zapiski IRGO po otdeleniyu etnografii* 4: 155–220.

Gerasimov, Ilya, Serguei Glebov, Alexander Kaplunovski, Marina Mogilner, and Alexander Semyonov. 2005. "In Search of a New Imperial History." *Ab Imperio* (1): 33–56.

Gerasimov, Ilya, Serguei Glebov, and Marina Mogilner. 2016. "Hybridity: Marrism and the Problems of Language of the Imperial Situation". *Ab Imperio* (1): 27-68.

Goethe, Johann Wolfgang von. 1810. *Zur Fahbenlehre.* Tübingen: J.G. Cotta'schen Buchhandlung

Gorizontov, Leonid. 2007. "The Great Circle of Interior Russia: Representations of the Imperior Center in the Nineteenth and Early Twentieth Centuries." In *Russian Empire: Space, People, Power, 1700-1930,* edited by Jane Burbank, Mark von Hagen, and Anatolyi Remnev, 67-93. Bloomington, IN: Indiana University Press.

Hansen, Jason. D. 2015. *Mapping the Germans: Statistical Science, Cartography and the Visualization of the German Nation, 1848-1914.* Oxford: Oxford University Press.

Harley, John Brian. 1988. "Silences and Secrecy: The Hidden Agenda of Cartography in Early Modern Europe." *Imago Mundi* 40: 57–76.

Harley, John Brian, and Paul Laxton. 2002. *The New Nature of Maps: Essays in the History of Cartography.* Baltimore, Md.: John Hopkins University Press.

Hirsch, Francine. 2005. *Empire of Nations: Ethnographic Knowledge and the Making of the Soviet Union.* Ithaca; London: Cornell University Press.

Kamusella, Tomasz. 2005 "The Triple Division of the Slavic Languages: A Linguistic Finding, a Product of Politics, or an Accident?" *IWM Working Paper* 1. Vienna.

Kappeler, Andreas. 2009 "Russia as a Multi-Ethnic Empire. Classifying People by Estate, Religion and Ethnicity, 1760-1855. In *Defining Self: Essays on Emergent Identities in Russia Seventeenth to Nineteenth Centuries*, edited by Michael Branch, 59–74. Helsinki: Finnish Literature Society.

Keppen, Petr. 1848. *Etnograficheskii atlas evropeiskoi Rossii.* St. Petersburg.

Keppen, Peter. 1851. *Etnograficheskaia karta evropeiskoi Rossii.* St. Petersburg.

Keppen, Petr. 1852. *Ob etnograficheskoi karte evropeiskoi Rossii.* St. Petersburg: Izdannoi imperatorskim russkim geograficheskim obschestvom.

Keppen, Petr. 1861. *Khronologicheskii ukazatel' materialov dlia istorii inorodtsev evropeiskoi Rossii.* St. Petersburg: Imperatorskaia Akademia Nauk.

Keppen, Fedor Petrovich. 1911. "Biografiia P. I. Keppena." *Sbornik otdeleniia russkago iazyka i slovesnosti imperatorskoi akademii nauk* 89 (5): 1-170.

Kertzer, David. I., and Dominique Arel. 2002. *Census and Identity: The Politics of Race, Ethnicity, and Language in National Census.* New York: Cambridge University Press

Kivelson, Valerie. 2006. *Cartographies of Tsardom: The Land and its Meanings in Seventeenth-Century Russia.* Ithaca, N.Y.: Cornell University Press.

Knight, Nathaniel. 1998. "Science, Empire, and Nationality Ethnography in the Russian Geographical Society, 1845–1855." In *Imperial Russia: New Histories for the Empire*, edited by Jane. Burbank and David L. Ransel, 108–141. Bloomington, IN: Indiana University Press.

Knight, Nathaniel. 2009. "Seeking the Self in the Other: Ethnographic Studies of Non-Russians in the Russian-Geographical Society, 1845-1860." In *Defining Self: Essays on*

Emergent Identities in Russia Seventeenth to Nineteenth Centuries, edited by Michael Branch, 117–38. Helsinki: Finnish Literature Society.

Knight, Nathaniel. 2010. "Russian Ethnography and the Visual Arts in the 1840s and 1850s." In *Visualising Russia: Fedor Solntsev and Crafting a National Past,* edited by Cynthia Hyla Whittaker, 127-44. Leiden; Boston: Brill.

Koerner, Lisbet. 1999. *Linnaeus: Nature and Nation.* Cambridge, Mass.: Harvard University Press, 1999.

Krasnikova, Ol'ga. 2011. "Osnovnye napravleniia razvitiia etnicheskogo kartografirovaniia v Rossii XIX – nachale XX vv." *Proniknovenie I primenenie diskursa natsional'nosti v Rossii i SSSR v kontse XVIII – pervoi polovine XX vv,* edited by Jaats, Indrek and Erki Tammiksaar, 29-60. Tartu: Estonskii natsional'nyi myzeipp.

Labbé, Morgane. 2004. "La carte ethnographique de l'empire autrichien: la multinationalité dans 'l'ordre des choses.'" *CFC* 180: 71–84.

Labbé, Morgane. 2007. "Institutionalizing the Statistics of Nationality in Prussia in the 19th Century (from Local Bureaucracy to State-Level Census of Population)." *Centaurus* 49 (4): 289–306.

Lotz, Christian. 2017. "The International Union of Forestry Organizations (IUFRO) and Debates About Forest-Water Relations During the Late 19th Century." *History Research* 7 (1): 1-19.

Loskutova, Marina. 2014. "Early Research on Insect Pests in the Russian Empire: Bureaucracy, Academic community and Local Knowledge in the 1830s-1840s." *Centaurus* 56 (4): 229-253.

Mastianitsa, Olga. 2015. "Proizvodstvo i representatsiia 'svoego' prostranstva belaruskim natsional'nym dvizheniem v nachale XX veke. *Ab Imperio* (1): 175–211.

Maxwell, Alexander. 2015. "Taxonomies of the Slavic World since the Enlightenment: Schematizing Perceptions of Slavic Ethnonyms in a Chart." *Language & History* 58 (1): 24–54.

Mayr, Georg von. 1874. *Gutachten über die Anwendung der graphischen und geographischen Methode in der Statistik*. Munich: J. Gottestwinter.

Mogilner, Marina. 2013. *Homo Imperii: A History of Physical Anthropology in Russia*. Lincoln & London: University of Nebraska Press.

Monmonier, Mark. 1991. *How to Lie with Maps*. Chicago: University of Chicago Press.

Monmonier, Mark. 2006. *From Squaw Tit to Whorehouse Meadow: How Maps Name, Claim and Inflame*. Chicago: University of Chicago Press.

Nenartovič, Tomaš. 2016. *Kaiserlich-russische, deutsche, polnische, litauische, belarussische und sowjetische kartographische Vorstellungen und territoriale Projekte zur Kontaktregion von Wilna 1795-1939. Munich: Collegium Carolinum e.V.

Palsky, Gilles. 1984. "La naissance de la démocartographie: analyse historique et sémiologique." *Espace, Populations, Sociétés* 2: 25–34.

Palsky, Gilles. 1991 "La cartographie statistique de la population au XIXe siècle." *Espace, Populations, Sociétés* 9: 451–58.

Palsky, Gilles. 1999. "The Debate on the Standardization of Statistical Maps and Diagrams (1857-1901). Elements for the History of Graphical Language." *Cybergo: European Journal of Geography* [Online]. Available at: http://cybergeo.revues.org/148 [accessed 10 October 2016].

Palsky, Gilles. 2008. "Connections and Exchanges in European Thematic Cartography. The Case of 19th Century Choropleth Maps." *Belgeo* 3–4: 2–14.

Petronis, Vytautas. 2007. *Constructing Lithuania: Ethnic Mapping in Tsarist Russia, ca. 1800-1914*. Stockholm Studies in History, 91; Södertörn Doctoral Dissertations, 21. Stockholm: Stockholm University.

Porter, Theodore. M. 1986. *The Rise of Statistical Thinking, 1820-1900*. Princeton, N.J: Princeton University Press.

Psianchin, Aibulat Valievich. 2004. *Istoriia etnicheskoi kartografii v Rossi (do 30-x gg. XX v.)*. Moscow: Rossiiskaia Akademiia Nauk. Institut istorii estestvoznaniia i tekhniki im. S. I. Vavilova.

Pypin, Aleksandr Nikolaevich. 1892. *Istoriia russkoi etnografii.* Tom 1. St. Petersburg: M. M. Stasyulevich.

Report of the Delegates to the International Statistical Congress held at St. Petersburg in August, 1872. Washington, Govt. print off, 1875. Available at: https://catalog.hathitrust.org/Record/011407923 [Accessed 10 October 2016].

Randeraad, Nico. 2011. "The International Statistical Congress (1853—1876): Knowledge Transfers and Their Limits." *European History Quarterly* 41 (1): 50–65.

Rawlison, Henry C. 1874. "Address to the Royal Geographical Society. Delivered at the Anniversary Meeting on the 24th May, 1875." *Proceedings of the Royal Geographical Society of London* 19 (6): 368-460.

Rittikh, Aleksandr F. and Pompei N. Batiushkov. 1864. *Atlas narodonaseleniia zapadno-russkago kraia po veroispovedaniiam*. St. Petersburg.

Rittikh, Aleksandr F. 1873. *Materialy dlia etnografii Rossii. Pribaltiiskii krai.* St. Petersburg: A. Il'in.

Rittikh, Aleksandr F. 1875. *Etnograficheskaia karta evropeiskoi Rossii*. St. Petersburg.

Rittikh, Aleksandr F. 1885. *Slavianskii Mir. Istoriko-geograficheskoe i etnograficheskoe izsledovanie.* Warsaw: V. M. Istomin.

Rodkiewicz, Witold. 1998. *Russian Nationality Policy in the Western Provinces of the Empire: 1863-1905*. Lublin: Scientific Society of Lublin.

Rudwick, M. J. S. 1976. "The Emergence of a Visual Language for Geological Science 1760-1840." *History of Science* 14: 149–95.

Sach, Maike. 2013. "Symbols, Conventions, and Practices: Visual Representation of Ethnographic Knowledge on Siberia in Early Modern Maps and Reports." In *An Empire of Others: Creating Ethnographic Knowledge in Imperial Russia and the USSR*, edited by Roland Cvetkovski and Alexis Hofmeister, 171–210. Budapest; New York: Central European University Press.

Schäfer-Weiss, Dorothea, and Jens Versemann. 2005. "The Influence of Goethe's Farbenlehre on Early Geological Map Colouring: Goethe's Contribution to Christian Keferstein's General Charte von Teutschland (1821)." *Imago Mundi* 57 (2): 164–84.

Schiebinger, Londa. 1993. "Why Mammals are Called Mammals: Gender Politics in Eighteenth-Century Natural History." *The American Historical Review* 98 (2): 382–411.

Schleicher, August. 1863. *Die Darwinsche Theorie und Sprachwissenschaft: offenes Sendschreiben an Herrn Dr. Ernst Häckel.* Weimar.

Scott, James. C. 1998. *Seeing Like a State*. New Haven: Yale University Press.

Seegel, Steven. 2012. *Mapping Europe's Borderlands: Russian Cartography in the Age of Empire*. Chicago: University of Chicago Press.

Semenov (-Tian-Shanski), Petr Petrovich. 1896. *Istoriia poluvekoboe deiatel'nosti imperatorskago russkago geograficheskago obschestva 1845-1895*. Chast' I-ia. Otdel IV. St.Petersburg.

Slocum, John W. 1998. "Who, and When, Were the Inorodtsy? The Evolution of the Category of 'Aliens' in Imperial Russia." *The Russian Review* 57 (2): 173–90.

Smith-Peter. 2007. "Defining the Russian People: Konstantin Arsen'ev and Russian Statistics before 1861." *History of Science* 45 (1): 47-64.

Société de géographie. Congrès international des sciences géographiques. Compte rendu des séances 2. Paris, 1875.

Staliūnas, Darius. 2007. *Making Russians: Meaning and Practice of Russification in Lithuania and Belarus after 1863*. On the Boundary of Two Worlds. Amsterdam; New York: Rodopi.

Staliūnas, Darius. 2009. "National Census in the Service of the Russian Empire: The Western Borderlands in the Mid-Nineteenth Century, 1830-1870." In *Defining Self: Essays on Emergent Identities in Russia Seventeenth to Nineteenth Centuries*, edited by Michael Branch, 435–448. Studia Fennica. Ethnologica. Helsinki: Finnish Literature Society.

Staliūnas, Darius, ed. 2016. *Spatial Concepts of Lithuania in the Long Nineteenth Century*. Brighton, MA: Academic Studies Press.

Stolleis, Michael. 1988. *Reichspublizistik und Policeywissenschaft: 1600-1800*. Munich: C. H. Beck.

Sukhova, Natalia. G. 1993. "Petr Ivanovich Keppen kak geograf: k 200-letiyu so dnia rozhdeniia." *Izvestiia RGO* 125 (5): 1-11.

Sreznevskii, Izmail. 1851. "Zamechaniia o materialiakh dlia geografii russkago iazyka." *Vestnik IRGO* 1: 1–24.

Turoma, Sanna, and Maxim Waldstein. 2016. *Empire De/Centred: New Spatial Histories of Russia and the Soviet Union*. London: Routledge.

Weeks, Theodore R. 1996. *Nation and State in Late Imperial Russia: Nationalism and Russification on the Western Frontier 1863-1914*. DeKalb, IL: Northern Illinois University Press.

Weeks, Theodore R. 2015. *Vilnius Between Nations, 1795-2000*. DeKalb, IL: NIU Press.

Winichakul, Thongchai. 1994. *Siam Mapped: A History of the Geo-Body of a Nation*. Honolulu: University of Hawaii Press.