THE DEVELOPMENT OF GEOGRAPHY
IN PRE-SOVIE'ET RUSSIA

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ABSTRACT. This is an attempt to portray some of the more important currents of thought and personalities associated with the progress of geography in pre-Soviet Russia, with the chief aims of 1) indicating some of the roots of present Soviet geographical thinking, and 2) placing the Russian contribution as an integral yet distinctive part of the developments in world geography before 1920. The main part of the paper is organized chronologically and appraises the life and work of the more significant geographers of each period, their impact on the character of the subject, and their relation to their historical and intellectual milieu. Finally, the nature and extent of the carry-over to the Soviet period is suggested. The recent intense methodological debate is seen as, in good measure, inspired by the work of the pre-Revolutionary scholars, and by the awareness of a broken heritage. In conclusion, some continuities of thought in Russian geography, then and now, are postulated.

DURING the last half-century or so of Tsarist rule, Russia took its place as a fully-fledged participant in the creative endeavors of the intellectual and academic world of the day. The chauvinistic claims of certain Slavophile or Soviet advocates have not deterred the intellectual world of the West from acknowledging the outstanding Russian contributions on the world literary, philosophical, and even scientific scene of the nineteenth and early twentieth century.

Among this company of men were a number of prominent and original geographers, who stood up well in comparison with their contemporaries in other countries. This being so, it is not only unfortunate but surprising that to this day the Russian contribution to geography has not found its way into any of the general surveys of the development of the subject.1 This virtually complete silence about one of the most vigorous of the national schools of geography can, of course, partly be ascribed to the well-known Linguistic Curtain, but by no means entirely, since some of the best work appeared in Western languages.

In recent years, flowing from the spectacular successes of some Soviet scientists, there has been a quickening of interest amongst geomorphers, as in most other fields, in the kind of work their Soviet colleagues are doing. Apart from a number of general appraisals of contemporary trends in the content and method of Soviet geography by foreign commentators,2

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there has been a remarkable output of translations from the Soviet literature itself. Most noteworthy of these are in the continuing monthly translation journal, Soviet Geography: Review and Translation, and in a comprehensive inventory and appraisal by the Soviet geographers of their own work in the specialized branches, originally published in 1960. The monoglot English-speaking student of Soviet geography in the mid-sixties has almost a surfeit of current material at his disposal, whereas his counterpart at the end of the last decade was restricted to a few not very representative works.

However, Soviet geography today is just as much a product of its traditions as is that of any other country. Attitudes, methods, questions asked, and subjects emphasized all have important roots in the work of pre-Revolutionary scholars, as most Soviet geographers freely acknowledge. But the non-Russian student is still hard put to it to trace even the outlines of these roots, in marked contrast to the easy accessibility of adequate summaries of the historical development of virtually all the other national schools which are doing significant geographical work today.

In addition to this need to explore the foundations of modern Soviet geography, there is the need, perhaps even more important and certainly long overdue, to place the Russian contribution to geographical thought, not only in the context of Russian thought in general, but as an integral and distinctive part of the development of world geography. It is these varied purposes, then, which lie behind the following attempt to sketch the main currents of thought and some of the more notable personalities associated with the progress of geography in pre-Soviet Russia.


5 Monthly (except July and August) publication of the American Geographical Society, New York, edited by Theodore Shabad, 1960-


EIGHTEENTH CENTURY BEGINNINGS

As in many aspects of life and learning in Russia, the early eighteenth century, under the strong guidance of Peter the Great, marked the dawn of notable geographical work in Russia. Peter had an intense interest in geographical expeditions, appraisal of resources, and the making of maps, and it is probable that the achievements of geography outshone those of other sciences in Russia during his reign. The rapid expansion of the Russian Empire to the Pacific, into Europe, and to the borders of the southern deserts, brought in its wake some genuinely good regional description and a greatly broadened stage for comparative studies and the beginnings of a more scientific approach. This period saw the first sharp break with the medieval, introspective, church-dominated Muscovite ways of thought. This was symbolized by the opening of a "window on the West," with planting of the new capital on the Baltic, and put into practice by deliberately encouraging the influx of technicnicians, and some ideas, from Western Europe.

The alphabet modernized and Arabic numerals adopted, books began to be published in Russian, and among the early ones was a translation of Varenius' Geographia Generalia, originally published in Amsterdam nearly seventy years earlier. This event helped to stimulate and guide the many good geographical studies of Russia which were made in the following decades.

Some of the best of these eighteenth century studies were done by native Russian scholars, in spite of the undeniable fact that the country did depend heavily on foreigners, notably Germans, in staffing its new Academy and organizing its expeditions. The most prom-

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5 Geografija General'nye Nebesnye i Zemnoechnye
Krugi Kupno s Ish Soedineny v Dreves v Trekh Knigakh
5 Opisaninya Shchota, Bernarde Vareniyu. (General Geog-

4 raphy, the Celestial Land and Water Spheres, with their Properties and Movements, described in three books by Bernard Varenius). (St. Petersburg: 1718).

6 V. V. Pokhabishvskiy in N. N. Baranovskiy, N. P.
Nikitin, V. V. Pokhabishvskiy and Yu. G. Saushkin
(Editors), Ekonomicheskaya Geografija v S.S.S.R.
[ Economic Geography in the U.S.S.R.] (Moscow: Izd-vo "Prosveshchenie", 1965), p. 216. This section, and some other parts of this valuable book, were translated in Soviet Geography: Review and Translation, Vol. 7, No. 9 (November, 1966), after the present paper had been submitted, so that references made here are to the original Russian.
inent of these Russians in the early eighteenth century were Kirilov and Tatischev, who between them laid the foundations—cartographic and methodological—both for the practical achievements of Peter’s modernization of the country and the geographical investigations later on in the century. Kirilov (birth year unknown—died 1737) was actively concerned in the building of the first Russian towns and factories in the southern Urals, compiled the first systematic description of the Empire, and organized numerous expeditions. But his most notable achievement was the production of the first Atlas of Russia. Before the eighteenth century Russian maps had been little more than crude sketches and one of the major achievements of Peter’s reign was the establishment of good cartographic standards and coverage. A remarkable collection of maps of newly explored Siberia had been produced by Remezov in 1701, but it was Kirilov who was the moving spirit and organizer of the comprehensive mapping achievements of the age. His Atlas comprised three volumes of 120 maps each, organized by regions and covering even the most outlying parts of the Empire and its borderlands, and including historical and economic maps and plans of certain cities.

Tatischev (1686–1750) was a historian as well as a geographer (in addition to being a man of action), and in his geographical work he emphasized the need for historical depth in the study of human settlements and in regional geography generally. For two decades in the prime of his life he was sent to the Urals to organize factories, as well as to the Astrakhan region, and he was deeply involved in the modernization of Russia. Thus his geographical works, published mainly in the last decade or so of his life, were not only soundly based on field experience but imbued with a desire to plan a better distribution of population and economic activities. He was intensely interested in the regional division of labor, and began the first scientific questionnaire project in Russia. His geographies of Siberia and Russia contained much detail on mineral resources, rivers, climate, and peoples, but he paid more attention to theoretical matters, organization, and explanation than had been done hitherto. He was the first Russian to formulate his views on the general theoretical position of geography, which bear a rather close resemblance to those of Varenicus, though with a rather greater emphasis on the historical approach and on the significance of geography for the economic and political organization of the state.

According to a contemporary American historian, Peter the Great “chose geography to be the mirror of Russia’s scientific achievements.” If this is so, the chief personalities upon whom these achievements actually reflect are Kirilov and Tatischev, and their geographical and cartographic work provided a framework—factual and methodological—for that of many of their successors.

Although Kirilov and Tatischev were thoroughly Russian, as were some of the best of their successors in the later eighteenth century, many talented foreigners, especially Germans, were successfully attracted to work on a long-term basis in Russia. The Academy of Sciences was staffed mainly by Germans in its early stages and one of its major functions was to promote expeditions to survey the country’s natural resources (it had a strong Geographical Department). Thus several excellent scientist-explorers and natural-historians were enlisted, such as the Danes, D. Messerschmidt and V. J. Bering and the Germans, J. G. Gmelin, G. W. Steller, G. F. Muller and, above all, P. S. Pallais. They helped

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1 L. E. Yofa in Baranskiy, et al., op. cit., footnote 6, p. 244.
greatly to put Russia (and Siberia) "on the map," as far as the rest of Europe was concerned, and also to form the character of Russian natural (physical) geography. However, the contributions to geography of several talented native Russian scholars in the middle and late eighteenth century must be mentioned. The best known of these persons is Lomonosov (1711-1765), a many-sided, encyclopaedic scholar and scientist who, among other things, founded Moscow University in 1755 (and after whom it is now named). The poet Pushkin is reported to have referred to him as "the first Russian university," indicating his encompassing of so many fields. He was head of the Academy of Sciences' Geographical Department from 1758, and is said to have coined the terms "Economic Geography" and "Economic Cartography." He shared Tatischev's interest in the regional division of labor and viewed his scientific work as primarily concerned with practical application and national betterment—"science should penetrate into the very farthest places, and investigate the land, desert, steppe and deep forest." But his most important geographical work was on the far North (he grew up in Archangel) and particularly on the possibility of the Northern Sea Route and comparisons of northern North America and Siberia. He was, in some ways, set apart from most of the other scientists of the eighteenth and most of the nineteenth century, by being basically more interested in the dynamics of natural phenomena, as distinct from the collecting proclivities of the natural historians and the social and governmental purposes of the regional geographers.

In the second half of the eighteenth century, to some extent following contact with the West European "Enlightenment," several institutions were set up in Russia which created a broader base for rounded geographical studies, and a steady growth of a Russian intelligentsia. Apart from the foundation of Moscow University and the growth of the Academy of Sciences, the Free Economic Societies, particularly designed to improve agriculture, and the Russian Academy, concerned with modernizing the language to facilitate non-religious scholarship, were founded. The secretary of the latter was the geographer and natural historian Lepeshkin (1740-1802) whose work was characterized by thorough and perceptive observations on villages as well as natural conditions, and who translated Buffon's famous *Histoire Naturelle* into Russian.

Two original Russians of the mid-eighteenth century who produced regional descriptions which were comparable in scope and spirit to the best of other lands, such as J. R. Forster, were Rychkov and Krasheninnikov. Rychkov (1712-1777), a pupil of Tatischev, made such a reputation that he was elected as the first native Russian corresponding member of the St. Petersburg Academy of Sciences. His chief contribution was a model regional survey of the Orenburg region, a substantial work in which he gave a balanced treatment of relative location, population, environment, resources, economy, and towns, with internal regional characterizations. A later work on Astrakhan had about half of its space devoted to the historical geography of the region "before the Russian monarchy," indicating the continuation of the Tatischev tradition and also Rychkov's original interests in local history.

Krasheninnikov (1711-1755) was one of the first Russian products of the Academy of Sciences, specifically designed to improve agriculture, and the Russian Academy, concerned with modernizing the language to facilitate non-religious scholarship, were founded. The secretary of the latter was the geographer and natural historian Lepeshkin (1740-1802) whose work was characterized by thorough and perceptive observations on villages as well as natural conditions, and who translated Buffon's famous *Histoire Naturelle* into Russian.
Reformers and the Quest for Human Regions

The West European influence was intensified in the late eighteenth and early nineteenth centuries, alongside a growing national consciousness and a gradual replacement of foreigners by Russians in the various scientific and educational institutions. The ideas of the Enlightenment and the Romantic revival were eagerly received by the growing body of intellectuals and their implications for the Russian situation passionately discussed, as far as political authority permitted, or sometimes further. Many Russians studied at German universities and the influence of Kant, Herder, Schelling, Hegel, Rousseau, Bacon, and Adam Smith was particularly strong. In fact the German influence increased to a point where governmental reaction to it set in and about 1820 no Russian citizen who had studied at a German university was allowed to teach in a Russian university.  

In this changing climate of reforming ideas and reaction to them, geography, especially regional and economic geography, was regarded as an important instrument for progress and, as such, many of the leading thinkers and reformers paid particular attention to the subject. Amongst them the chief personalities in this period were Radishchev and, later, Ogarëv.

Radishchev (1749–1802) had an immense impact on liberal intellectual opinion with his scathing exposure of the conditions of serfdom in his book, Journey from St. Petersburg to Moscow in 1790. His geographical interests, particularly his concern for resource development, scientific notions of regionalization, and problems of distance stemmed from this journey.  

One consequence of the publication of the account of this journey was another—involuntary—journey to Eastern Siberia for Radishchev which eventually yielded two more descriptions of journeys to, and from, Siberia, containing, among other things, much factual material on the natural conditions and economy of the area.  

He published what amounted to geographical descriptions of the St. Petersburg and Tobolsk regions, and stressed the need for a rounded view of the natural and human conditions for the better understanding and improvement of the latter. He naturally kept the population and its economy in the forefront of his interests and he was one of the first to suggest the idea of drawing up a rational system of human regions.  

His industrious surveys and his evident dedication to human betterment were to become a recurring combination in Russian geography. Since Radishchev's journeys influenced liberal reformers such as the "Decemberists," in the early nineteenth century, a geographical component tended to enter into the schemes for

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the reform and reorganization of the country which were discussed. However, it seems likely that Soviet geographers have tended, because of his political role, to exaggerate somewhat his importance in the general history of Russian geographical ideas. The reformer Ogarëv (1813–1877), made a special plea for the study of particular regional characteristics, i.e., economic specialization. In this he was influenced partly by some German works, such as the translation of Büsching’s work on Europe and Russia which, for the first time, suggested a three-fold latitudinal division of Russia, using vegetation and agriculture as combined criteria, a division which was later actually adopted for certain governmental purposes in Russia. Büsching lived for a number of years in Russia, but not as long as K. F. German (1767–1838) who, though brought up and educated in Germany, migrated to Russia in adult life. German became, with Arsenyev, very active in promoting schemes of economic regions, was associated with the Decembrists and other groups, and directed the first Russian Statistical Journal, which had considerable influence. These people constantly stimulated each other to produce more rational regional schemes, for the purpose of understanding and improving the country’s economy; at the same time they formed a receptive group for ideas from abroad.

THE CRYSTALLIZING OF GEOGRAPHY

AS A SUBJECT

The decade of the 1840’s may be said to mark the beginning of a period of some three decades during which Russian geography came-of-age and built the philosophical independence and the institutional breadth to make possible the remarkably vital growth of the last forty years of the Tsarist era.

This transitional period was one during

which Russia ran the gamut politically from repressive and suspicious tyranny to the release of a ferment of reforming ideas, bearing some resemblance to the years since the World War II in the U.S.S.R. A great national awakening was under way; in the words of one of the foremost American historians of Russia, “the intellectual emancipation of the celebrated 1840’s was to have a great impact on the intellectual evolution of Russia, and indeed on Russian history to 1917 and beyond.” There had been a move away from German idealist romanticism and towards realism, system-building, and a preoccupation with the pressing issues of the day, and the kind of geography which had developed was well suited to these movements. Above all the philosophy of Hegel came to dominate the intellectuals (apart from some of the Slavophiles) especially ideas of change and development in both nature and culture, an increased emphasis on the state, the need for social criticism and social action, and a monistic view of the world. Herzen, who was a dominant figure in these trends, took a ferociously monistic position, supposedly from Hegel, and felt that “the only reality was the life of nature and the dialectical unity of man’s consciousness with it.” Dualism he equated with dilettantism and saw it at the root of the troubles of Russia, which strikes an interesting note in connection with the recent controversies in Soviet academic geography. As far as geography is concerned, the two most significant “link” figures in this crucial transitional period were Arsenyev and P. P. Semënov—the former in the earlier phase, holding the threads of the past and the latter, much younger, guiding them through to the following prolific period. The Imperial Geographical Society, which was started and became a powerful force during this period, and in which both these men played key roles, at once reflected and stimulated the growth of the subject, and must always be kept in mind.

Arsenyev (1789–1865) seems to have been the dominant influence in geography for most

31 A. Büsching, O Geografii vostochnogo i v Zapadnoy i o Rossiskoi Imperii [On Geography in general, on Europe and the Russian Empire] (Moscow: 1786).
of the first half of the nineteenth century—the period of Humboldt and Ritter. In fact, to speak of an "Arseniev School" of Geography, as Sauskin has done, may well be justified. Its essence could best be characterized as a rounded regional approach with a distinct economic focus and a concern for the improvement of the lot of the people. This latter concern brought him fully into the liberal groups of the time, including poets like Pushkin and Zhukovskii as well as social thinkers and reformers like Herzen, Ogarëv, Belinsky, and German; but it also alienated him from Zyablovskii, under whom he first studied and whose assistant he became, but whose views on serfdom and autocracy, as well as economic regionalization, were quite incompatible.

While still in his twenties, Arseniev published a Short Universal Geography which went into twenty editions over the following three decades and had a considerable influence; and also a two volume survey of ten chosen regions of Russia, with the theme of tying together their natural and economic geography and "way of life." He took particular interest in the connection between rivers and the location of cities and in 1832 wrote a monograph on the historical geography of Russian cities, which was constantly asking questions about the reasons for growth or non-growth of particular cities, and the beginnings of classification of cities by functions and origins.

Arseniev's culminating and most complete work was his 1848 regional geography of Russia, the first full survey of the country to use an economic focus and such statistical materials as were becoming available. He possessed sound intuition and breadth in his selection, both of the regional outlines themselves and the material treated within them, and can bear comparison with his contemporary, Ritter, in this respect (although much more specifically economic in his focus). His work is also well-balanced with regard to man-nature relationships and, all in all, his main contribution was to express economic geography, with all its ramifications, in regional form. Thus one can easily understand his significance, not only for his contemporaries but also for the continued resiliency of a regional school of geography in both the later Tsarist and Soviet periods.

The somewhat different stream of expeditions with a natural history character, with emphasis on natural resources, also continued in this period. Just as social reformers merged with the economic geographers, so biological and physical scientists joined with geologists and physical geographers in the continuing momentum of scientific expeditions to Siberia and Central Asia, following upon the expansion of the Empire. Humboldt visited the Urals and the Altay in 1829 and both his writings and those of Ritter on Eurasia attracted considerable interest. The German or Baltic-German component among these explorer-scientists, two of the more eminent being A. F. Middendorf and Ber, (in German: K. E. von Baer), was still very noticeable in the 1840's and 1850's; some of their publications, even through the Academy of Sciences, were still in German, but they played

a great part in Russia's discovery (in the widest sense) and, generally speaking, identified with the country. Ber in particular made a considerable impact in several different directions. He is probably best known for his law of the relation between the earth's rotation and the asymmetrical banks of Russian rivers, but on the other hand, his somewhat environmentalist view of history apparently influenced later Russian historians like Mechnikov. He had an important role in the launching of the Russian Geographical Society, and also did fundamental work in physical anthropology and in zoology. A further powerful influence on the whole development of Russian natural (especially bio-) geography was exerted by the eminent zoologist, pre-Darwinian evolutionist, and founder of ecology in Russia, K. F. Rul'ye (sometimes written Rouiller) (1814-1858) who taught, and established a great reputation, at Moscow University.

Another vigorous intellectual movement which got under way in the 1840's, largely under the stimulus of Hegel, involved history. The chief exponent of this new look, in which the idea of dynamic stages of development replaced formal periods and the role of the natural environment in Russian history was emphasized, was S. M. Solov'yev, who taught at Moscow University from the 1840's to the 1870's and had a strong influence on the subsequent development of the subject. The notion of "universal history" was also coming into vogue in Moscow University and elsewhere at this time.

Thus many disparate currents of thought, represented by different types of people—social reformers, explorers, natural scientists, and historians—converged, amongst other places, on geography. The 1830's and 1840's saw considerable discussion among these groups, and particularly by Arsenyev and his circle about the need for integration and common foundations for geographical studies.

The Geographical Society

The need for an institutional forum for people with such converging interests resulted in the founding of the Imperial Russian Geographical Society in 1845, and its extremely rapid and many-faceted growth demonstrates just how pressing that need was. In fact the Society quickly acquired a prominent active role in Russian life of the mid-nineteenth century, and kept it until the end of the Tsarist era. It has been described as "most successful and popular of the learned societies," and obviously struck many chord in tune with the current national aspiration and ways of thought. In spite of the fact that its founding spirits were, apart from Arsenyev, at least nominally, foreigners (a though some of them, such as Wrangel and Lüttke, were born in Russia and were basically Russians) it was a very patriotic society. But here again there were naturally sharp differences of interpretation; the more conservativ patriots (among whom the foreign scholars were usually included), defended Russia political and social status quo and support explorations and the study of natural resources at least partly from the point of view of Imperial expansion. The liberal reformers, on the other hand, formed an important faction in the Society. They insisted that geographers should not only concern themselves with learning and exploration, but also prepare the ground for social reforms, and especially towards the emancipation of the serfs. Partly to this end, many surveys of an economic social, and ethnographic character—quantitative and qualitative—were undertaken with considerable energy, and all over the country. In addition, of course, the long tradition of expeditions primarily concerned with natural phenomena continued apace, while the Society was also concerned to discuss its own aims in those early years and the definition of the various branches of its activities. The Society initially assumed responsibility for geology, meteorology, anthropology, and archaeology and quickly established regional branches even

44 Vucinich, op. cit., footnote 14, p. 299.
46 Pertzik, op. cit., footnote 39, p. 83.
47 Vucinich, op. cit., footnote 14, p. 361. This book provides the most readable and perceptive brief account of the Society available in English.
48 Vucinich, op. cit., footnote 14, p. 355; see also S. V. Kalemnik in C. D. Harris (Ed.), op. cit., footnote 4, p. 399.
in out-of-the-way regions like the Far East and the Caucasus, which issued their own serials. Some 400 volumes were published in all, including special reports and regional serials. In the first fifty years of the Society’s existence and, as in its vitality and range of interests, this record compares favorably with the contemporary equivalents of any other country.

P. P. Semënov Tian-Shanskiy (1827–1914)

When Arsenyev was in his sixties, in 1853–54, the young Peter Semënov was sitting at the feet of the aging Karl Ritter at the University of Berlin, and discussing with his contemporary, Friedrich von Richthofen, the expedition he was planning to the Tien Shan (which was to earn him the official suffix to his name, Tian-Shanskiy). He acknowledged Ritter as a formative influence, and one of his first self-appointed tasks on returning to Russia was to translate the part of Ritter’s Erdkunde dealing with Asia. He was imbued with Ritter’s methodology when he set out on his Tien Shan expedition, and yet this account also stands in the best natural historian-explorer tradition. Semënov was, in fact, a man of parts—ideally suited to the task of holding together the very diverse geographical interests—and with the organizing ability to exercise effective direction of the Society, which he did for over forty years. At the time when he was organizing his Tien Shan expedition he was also a member of the Committee for the Emancipation of the Peasants from the Bonds of SERFDOM. He was very much au fait with the spirit of the age around 1860. This was a time of great ferment and a heyday for reforming ideas (following the death of Tsar Nicholas I in 1855). Many students were again, like Semënov, attending foreign universities, where they often formed groups to discuss “what was to be done” with Russia; the emancipation of the serfs in 1861 coincided with a period of renewed libertarianism and expansion of the universities, with the imported scholar becoming a rarity and a truly home-grown and increasingly self-confident intelligentsia appearing. On the economic and political scene, too, the pace was quickening—in urbanization, division of labor, international trade, the beginnings of modern industry, and the imperial advances in the Far East and Central Asia, all of which features stimulated geographical thought.

This period was also the time of the first impact of Darwin’s Origin of Species and, in European academic geography immediately following the deaths of Humboldt and Ritter, a somewhat confused and beleaguered time. Semënov was the guiding and dominant figure in Russian geography during this period and probably exercised a steady influence on the subject similar to that by Reclus, another disciple of Ritter, in France. However that may be, there is little doubt that Russian geography, like French geography, did largely manage to avoid, in the decades of growth before the World War I, those consequences of misplaced Darwinist thought which so bedevilled geography in Germany and America, such as the obsession with evolutionary geomorphology, environmentalism, and the attendant schismatic tendencies in the subject.

Semënov Tian-Shanskiy was first and foremost an all-round regional geographer, with a poetic streak, as well as scientific and statistical rigor, and a concern that geography should contribute to the improvement of human welfare and be integrated with general knowledge. An impressive monument to his thoroughness is the five-volume Geographical-Statistical Dictionary of the Russian Empire, which was conceived by the “Statistical (i.e., economic-geographical) Division” of the Geographical Society in the 1850s—the first volume appeared in 1863 and the last in 1883.  

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49 See Semënov Tian-Shanskiy (Ed.), op. cit., footnote 41 (3 volumes and a supplement).
53 Vucinich, op. cit., footnote 14, p. 386.
54 Vucinich, op. cit., footnote 14, p. 360, et seq.
56 P. P. Semënov, Geograficheskii Slovary Rossiskoi Imperii, 5 volumes (St. Petersburg: Tip. V. Bezobrazova i ko., 1863–83).
In its comprehensiveness, combined with its perceptive blend of the natural, historical, and economic phenomena, it set exemplary standards for the subsequent Russian literature, his studies of cities being particularly well presented.57

Seménov was particularly concerned with the distribution of population; he wrote an article on the subject in 187158 and for three decades he was involved in preparing, on the Central Statistical Committee, for the first full Russian Census of 1897. This work, and his writings on regions and land ownership, were quoted favorably by Marx and Lenin, which fact is naturally mentioned on occasion today.59

Most of Seménov's activities revolved around the Geographical Society in one way or another; through the organization of a series of highly successful expeditions by N. M. Przhevalsky, N. N. Mikhailo-Maklay, and many others; through building up high standards of scholarship and public relevance among the Society's publications; and finally by his monumental history of the first fifty years of the Society itself (see footnote 49). Although his work was almost entirely concerned with Russia, it was quite well known abroad, partly because of his position in the Society, but also because some of his work appeared in Western languages.60

Seménov Tian-Shanskiy, thus, had a profound impact upon the fortunes and direction of geography in Russia, lending it coherence and unity both in his own work and through his institutional guidance. He was as “complete” a geographer as Ritter or Reclus, and may be said to be the figure linking the subject’s early history with the remarkable surge.

58 P. P. Seménov, “Naselenie Yevropeiskoi Rossii v zavisimosti ot prichin, obuslovlivayushchikh raspredelenie naseleniya imperii” [The peopling of European Russia, in relation to the causes lying behind the distribution of population in the Empire.] Statisticheskiy Vremennik Rossiskoi Imperii, 1871. I have not been successful in obtaining this article in the United States, but it is frequently quoted in the Russian literature.
59 e.g., Yu. G. Saushkin “Rabota Karla Marksa nad trudami russkogo geografa P. P. Semënova Tian-Shanskogo” [Karl Marx on the works of the Russian geographer P. P. Semenov Tian-Shanskiy], Voprosy Geografii (31).
60 e.g., P. P. Semenov Tian-Shanskiy, La Russie Extra-Européenne et Polaire (Paris: P. Dupont, 1900).
A. I. Voeikov

The most wide-ranging of these geographers of the last decades of the Tsarist era, in respect of both research topics and world coverage and experience, was probably Voeikov (1842–1916). While still in his teens he had the opportunity to travel in Syria and Palestine, and then attended the Universities of Berlin, Göttingen, and Heidelberg, as well as St. Petersburg. His early work was mainly in climatology, a subject in which he maintained an abiding interest and in which he became a recognized world leader. His doctoral dissertation was on “Direct Insolation and Radiation in Various Parts of the World,” and when still in his twenties, he became secretary of the Meteorological Commission of the Russian Geographical Society. He initiated work on many systematic problems such as the effect of snow-cover on climate, and organized a network of observing stations throughout the country. However his most distinctive general achievement of that time was the establishment of a method of formulating climatological research in relation to practical, particularly agricultural, needs, and as part of an interacting natural environment as a whole. His early world view was greatly broadened during many years of travel in the Americas and Asia in the 1870’s.

In the process Voeikov quickly developed an international reputation. His book on Meteorology in Russia was published in Washington, D.C. as early as 1874 and he became a regular participant in the activities of the Smithsonian Institution. His great work on the Climates of the World was soon translated into Western languages and the extent of its authority even for non-Russian regions is indicated by the fact that a book on American health resorts devoted a third of its space to a translation of that part of Voeikov’s book which dealt with the climates of North America.

Voeikov’s world travels also further stimulated his work on agricultural climatology, which may be said to come close to the heart of his interests, both from a scientific viewpoint and because of his concern for agricultural improvements in Russia. Wherever applicable, he used his studies of climatic analogues in the New World or Asia to initiate and control the growing of tea in Georgia, cotton in Turkestan, corn in the Ukraine, and so on. Out of such specific problems developed the broader themes to which he devoted most of the last two prolific decades of his life—comparative regional geography, the distribution of population over the earth, and the action of man in transforming, and sometimes destroying, his own natural habitat.

An article on Canada may be taken as an example of Voeikov’s purposeful regional studies. After a brief historical introduction (What is Canada?) he sets the scene for his analysis by drawing attention to the population distribution. He makes thorough use of the most recent statistics on trade, production, and population, and discusses the impact of the United States. Naturally there are detailed climatic and agricultural comparisons with the relevant regions of Russia and Siberia and particularly in reference to the moving frontiers of settlement.

Later Voeikov published, in French, a full-scale regional geography of Russian Turkestan, based on extensive field work, and suggested by the work of Reclus and Vidal de la Blache. Detailed plans for irrigation, control of shifting sand, cotton-growing, and so on, were interwoven with the regional material with rather more conviction and sureness.

62 Berg, op. cit., footnote 50.
64 Harris (Ed.), op. cit., footnote 4, p. 63.
69 A. I. Voeikov, “Kanada, eye selskoe khozyaystvo i kolonizatsii” [Canada, its agriculture and colonization], Russkaya Mysl (1899), No. 4, pp. 71–102.
ness of touch than is evident in similar Soviet surveys today. Again, his foreign experience was freely drawn upon—for instance he held Idaho up as a model of what can be done with government irrigation projects and private farmers. He was also concerned to challenge the validity of the views of Kropotkin and others on the continuous post-glacial desiccation of Eurasia—he was particularly caustic about Ellsworth Huntington’s conclusions.

Voeikov’s world-view and broad scope are well demonstrated in his comprehensive monograph on the distribution of the earth’s population. In spite of his climatological background, a frequently underlined conclusion is that population distribution results as much from man himself as from his environment, and the growth of cities, as reflecting industrial and commercial expansion, is accorded proper emphasis. However, much attention is naturally given to the comparative course of colonization in North America, Russia, Australia, and elsewhere, with detailed agro-climatological observations, but a remarkable freedom from environmentalist reasoning. The work as a whole displays a discursive and expansive approach, with good historical as well as scientific foundations, and constantly raising questions of moment with regard to the future capacity and habitability of the planet. His shorter articles on such themes alternated between painstakingly detailed surveys of Russian villages and provocatively sweeping looks at the world, such as an assessment of the Pacific basin as a future trading area.

In a period when much was being made of the influence of nature on man, Voeikov took it upon himself to analyze and publicize the record of man’s impact on the earth, and thus, along with George P. Marsh in America, he may be regarded as a forerunner of the modern spirit of “conservation.” He wrote a great many articles on this theme, treating subjects ranging from irrigation and river control to drainage, afforestation, and the prevention of soil erosion, characteristically employing examples from all over the world. His attention was focussed in particular on what he called the “movable bodies” of the surface of the earth, i.e., those which can be disturbed and transformed by man. He was particularly concerned with the serious, man-accelerated gullies (oeragi) in the fertile blackearth of Southern European Russia, and admonished von Richthofen, “le savant géologue de Berlin” for neglecting the influence of man in his studies of the loess of China. In general, he was cautiously optimistic about the capacity of man to put into practice the preventive measures which he advocated to achieve a tolerable harmony between man and nature. However, he did voice certain misgivings about the consequences of the growing urbanization—particularly in regard to retention of a proper understanding of nature—and sometimes in familiar terms such as “One knows that the second or third generation Londoner is an inferior being, physically and morally, self-satisfied, and prone to corruption.”


Voeikov, A. I. (op. cit.).
to the provincial, especially the Scots. . . . immigrants occupy the best-paid jobs. . . . what will happen to civilization if this continues? 79
This sort of sentiment is probably one of the few of Voeikov's to which Marx and his Soviet followers would take exception. By and large he embodied an exemplary and rare combination of scientific sureness of touch, erudition in the humanities, public spirit, and an international outlook, and his legacy to, and influence on, the Soviet geographers has been very large. With all this, and considering particularly the public appeal and relevance of much of his work, it is curious that Voeikov, although a professor at St. Petersburg, should not have been a success as a teacher. An eminent contemporary, in an obituary of Voeikov, after mentioning that he was the secretary of the St. Petersburg Vegetarian Society and a very great scholar with a wide scientific world-view, says "I cannot judge him as a lecturer. I have heard that his lectures did not attract many listeners. Voeikov himself told me that his subject was of little interest to students and that he had few pupils." 80 This is surely a sad and rather puzzling observation, bearing in mind the long reach of Voeikov's written words.

Dokuchaev and his Natural Zones

Much of the special character of contemporary Soviet physical geography may be said to derive from the related but distinct concepts of heat and water balance on the one hand and the so-called natural zones on the other. Whereas Voeikov is the acknowledged father of the former, it is Dokuchaev (1846-1903) who must receive credit for the latter. He did not range as widely as Voeikov over the globe or in contribution to human geography, but he was an original scientist whose theories were recognized as of fundamental significance in Russia and, later, abroad. His classic study of the Russian Blackearth was published in 1883, 81 setting forth the now familiar basic principles of soil classification, with climate recognized as the critical factor, and demonstrating that truly integrated approach to the study of the interacting processes of the natural environment, and the focus on bio-climatic, rather than geomorphic, features, which has set the dominant tone of Soviet physical geography.

Dokuchaev's full elaboration of his theory and system came only in 1899 with the publication of a collection of essays, 82 based on intensive studies of sample districts in the various soil-vegetation zones over two decades. 83 He not only demonstrated the connections between climate, soil, and vegetation but also between them and agriculture. He regarded the transition from one natural zone to another as fluctuating with the habits of mind and agricultural practices of the population. 84 He was, all the same, much more exclusively a natural scientist than Voeikov and his allusions to human activities were confined to agriculture. He did, however, like Voeikov, concern himself actively with practical measures to combat soil erosion and drought, 85 and has been called the "founder of the field of land use in Russia." 86

The most influential general contribution of Dokuchaev to the course of Russian geography was his synthetic approach to the natural landscape based on genetic understanding, but expressed in meaningful functional zones

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79 Voeikov, op. cit., footnote 77, p. 208.
80 Anuchin, op. cit., footnote 45, p. 143.
81 V. V. Dokuchaev, Russkii Chernozem v izbrannykh Sochineniyakh (Selected works), Vol. I (Moscow: Gos. izd-vo geog. literatury, 1948). This work of 450 pages was his doctoral dissertation and led to his appointment as Professor at the University of St. Petersburg in 1894.
82 V. V. Dokuchaev, Uchenie o zonakh prirody [Studies on natural zonation]. Reissued with an introduction by Yu. G. Sauskin (Moscow: Gos. izd-vo geog. literatury, 1948).
83 Some of these sample studies were published, partly in French, in Aperçu Scientifique Sommaire de la Collection des sols, Exposée à Paris en 1899, par le Professeur V. Dokuchatéf et ses élèves (St. Petersburg: Tip. E. Evdokimova, 1889).
84 Yu. G. Sauskin, Geograficheskie ocherki prirody i selskohozjatvstvennoi deyatelnosti nasedeniya v razlichnykh ratoakh Rossiiskogo Soyuza [Geographical essays on nature and the agricultural activities of the population in differentiating regions of the Soviet Union] (Moscow: Gos. izd-vo geog. literatury, 1947), p. 3.
85 Many of these were outlined in V. V. Dokuchaev, Nashi stepi prezhdie i teper' [Our steppe yesterday and today] (Moscow: 1892, reissued, Moscow: Sel'skhozgiz, 1938, Gos. izd-vo sel'khoz literatury, 1933); see also Harris (Ed.), op. cit., footnote 4, p. 282.
86 D. L. Armand in Harris (Ed.), op. cit., footnote 4, p. 292.
on the contemporary landscape. "Landscape science" (landshaftovedenie), which is the composite study of these natural zones, is a peculiarly Russian science at present, with little counterpart in the rest of the world. It has had some affinity with the German concept of landschaft and the regional schools generally, but stands, to an appreciable extent, as a monument to Dokuchaev, and to the prominent students such as Berg, V. N. Sukachev, and L. I. Prasolov who carried his ideas over into the Soviet period. He thus influenced the long-term character and emphasis of Soviet physical geography, providing it with molds and methods which may be more attuned to practical necessities and to human-geographical understanding than those more geomorphologically-determined molds developed in Germany or the United States. Further, through his emphasis on functional understanding of the interacting processes of the natural environment and his concern for improvements, he has had considerable influence, sometimes a restraining one, on the "transformers of nature" in the Soviet period.

D. N. Anuchin and University Geography

Although both Voelkow and Dokuchaev held university professorships, neither of them was primarily memorable as a teacher. The main credit for the building up of geography at Moscow University, which has since become the foremost Soviet educational institution, and for popularizing the subject with a broad section of the educated public, must go to Anuchin (1843–1923). He was a humane and liberal scholar, who was prominent in the general intellectual life of Russia, being, for instance, associated with one of the most influential newspapers, Russkie Vedomosti. Although he had considerable contacts at an early age with Western Europe (studying at Heidelberg and living in Italy), he was not the world traveller that Voelkow was, nor did he enunciate universal scientific laws, as did Dokuchaev. He was above all a national figure, never becoming as well-known internationally as the other two, but this did not mean that his interests were restricted or parochial. His first major work was on the bison, and his first article was on African flora, but he turned to anthropology in his early thirties, doing work on the Ainu people and on anomalies in the human skull, and conducting several archaeological expeditions. This subject was to persist as a life-long interest and became intertwined with his geography in a manner similar to that of H. J. Fleure or Carl Sauer. In fact a recent commentator has said that Anuchin, "who perhaps more than any other single thinker imposed his mark on the development of anthropology in Russia at the turn of the century, was at the same time an earth scientist," and a geographer might well make a similar, but reversed, statement. In fact Anuchin was head of the joint department (Katedra) of Geography and Ethnography at Moscow University from 1884 and exercised a powerful influence on both subjects, in the University and outside, for nearly forty years.

In his geographical work Anuchin hardly concerned himself with practical advice on measures to transform or conserve nature, in the manner of Voelkow or Dokuchaev, but concentrated his immense energies on education and dissemination. These efforts were, for the most part, channeled in three directions: training students at the University, organizing the production of semi-popular works on geography and related fields, and the founding and editing of a distinguished academic journal.

In university lecturing Anuchin made considerable use of the works of Ritter, Humboldt, and Reclus, as well as, later on, Peschel, Suman, von Richthofen, and Phillipson. He edited a translation of the latter's book on the Mediterranean, and Suman's on Physical Geography, amongst others. Although he also quoted a number of French and British geographers as well as some of his Russian colleagues, there is no doubt that, entering geography as he did in the 1880's, he fell mainly under the influence of German work in the new semi-Darwinian phase following the hiatus after the deaths of Humboldt and

88 Berg, op. cit., footnote 50.

Ritter. He paid more attention to geomorphology than had been customary in Russia, and wrote detailed analyses of the relief and drainage of European Russia, as well as a generalizing work on world orography. But he was at pains, in various surveys of the history of the field, to deplore the "deviations" of Gerlach in excluding the human aspects of the subject, and was concerned above all to assert the aim of "making possible the fullest and most complete portrait of a region, its nature, population, culture, position and significance among other regions." He also felt it necessary to affirm, in a lengthy encyclopedia article on "Geography" in 1892, that "No less, if no more, important a place (in the history of geography) is due to Ritter as to Humboldt." He regarded as crucial the fact that both these men concerned themselves with the totality of human and physical phenomena. He viewed Ritter's syntheses as derived to some extent from Hegel, and his, i.e., Ritter's, work is cited first in the list of methodological guides at the end of this article. Anuchin's stated emphasis was on regional geography with a human life focus, "as in the best synthetic works of foreign geographers." In the latter context he cited Reclus and Keltie, and even the young Mackinder, but apart from Voeikov (who was the geographical editor of the encyclopedia) no Russians are mentioned.

Anuchin's efforts to disseminate geographical knowledge beyond the university took many forms. He organized and edited a series of popular, but at the same time not un-scholarly, regional volumes on Russia, mainly written by his former students and profusely illustrated, as well as a multi-volume set on Moscow itself. He organized a "Geographical Exposition" in Moscow in 1892, mainly intended for the general public, but attracting considerable attention abroad as well, while he was constantly helping to promote geography in the schools.

Some notion of the scale of Anuchin's own scholarly work can be gained by leafing through the volumes of the geographical journal which he founded in 1894 and steered until his death in 1923. Apart from initiating and editing this most interesting and vigorous journal—comparable with its contemporary, the Annales de Géographie in scope, volume and quality—he managed to find time to write some 200 articles for it, often very substantial, and on an extraordinary range of subjects. Perceptive reviews, frequently of foreign works, and reports on congresses and obituaries (at which he was very accomplished) also appeared above his initials in virtually every issue.

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81 D. N. Anuchin, "Relief povrchnosti Yevropeiskoi Rossii v posledovatelyam razviti o nem predstavlenii" [The surface relief of European Russia in the successive development of its formation], Zemlevedenie, Vol. 2, No. 1 (1885), pp. 77-126, and No. 4 (1886), pp. 65-124. Also, see D. N. Anuchin, "Novoishche izuchenie ozer' v Yevrop i nekoelko novykh dannikh ob ozerrakh Tverskoi, Pavlovskoi i Smolenskoi gubernii" [New studies of lakes in Europe and some new findings on lakes of Tver, Pavlov and Smolensk governments], Zemlevedenie, Vol. 2, No. 1 (1885), pp. 137-63.


87 D. N. Anuchin (General Editor), Moskva-c yego proshlom i nashim sovremennikom [Moscow—its past and present], 12 vols. (Moscow: Moskovskoe knizhnoe tovarishchestvo "Obrazovanie," 1909-1914).

88 e.g., It was described as "perfectly conceived" in a lengthy article by E. Blanc, "L'exposition géographique de Moscou en 1892," Bulletin de la Société de Géographie (Paris: 1893), Vol. 14, No. 2, pp. 239-47.


100 Some of these obituaries are collected in Anuchin, op. cit., footnote 45. Also obituaries of foreigners like Richthofen, Reclus, and Ratzel in Zemlevedenie were mainly done by Anuchin.