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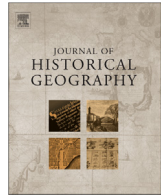
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A Russian geographical tradition? The contested canon of Russian and Soviet geography, 1884–1953



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Abstract

The paper defines a 'geographical canon' as those texts and authors which have been regarded as authoritative by geographers active at particular points in time. The focus is on the development of a geographical canon in Russia and the Soviet Union between the establishment of the first university geography departments in the 1880s and Stalin's death in 1953. A key 1949 meeting of the Academy of Sciences, held at a crisis point in Soviet history, is initially highlighted. The meeting's purpose was to define a canon or list of 'founding fathers' for each of the Soviet sciences, including geography, accenting the Russian provenance of each science. In geography's case, the 'founding father' selected was the eminent soil scientist, V. V. Dokuchaev (1846–1903). The paper discusses Dokuchaev's scientific achievements and questions why he was considered such an important figure by the geographers of the late Stalin era. It then analyzes some of the key works of a number of prominent geographers of the pre-revolutionary and Stalinist periods to discover how far Dokuchaev's work was emphasized. The main finding is that, although Dokuchaev and his school did have an indirect influence on geographical work from early on, only from about 1930 was his importance emphasized whilst that of the Germans was largely erased by Stalinism. The conclusion is that the geographical canon defined in 1949 was less a genuine attempt to describe the history of the discipline than a response to the priorities of the late Stalin era.

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Keywords: Russian geographical canon; Dokuchaev; Stalinism; Zhdanovshchina; History of science

'References to the authority of Great Scientists are a typical component of the professional culture of every scientific community.' Nikolai Krementsov, 1997.

Whilst widely used in literary studies, the idea of 'canon' appears to pose particular problems for the history of science. Aileen Fyfe has reminded us that there are two interrelated questions which need to be addressed with regard to 'the canonical'.¹ The first is: which texts, or other authorities, appear to be canonical to us who are alive today? Past histories of science, including geography, often sought to address this question, selecting from the mass of available historical material or evidence only those items or events which seem relevant to the science which exists now. The danger here, of course, is what David Livingstone calls 'presentism', divorcing historical ideas and events from their contexts and even of using them to justify our present scientific understanding, as if science developed in some purely progressive, teleological

fashion.² Changes in the historiography of science, however, have now focused scholarly attention on a second question posed by Fyfe: which texts, or other authorities, have been regarded as canonical by people living in the past? Over the recent period the historiography has increasingly emphasized the need to understand the history of science contextually, meaning that over time scientific development is shaped by a host of social, political, intellectual, personal and other factors, all of which themselves change through time.³ Given this revised understanding of the history of science, the idea of some stable canon which remains authoritative for practitioners and students of a discipline over an extended period seems problematical. Of course this is not to ignore the possibility of certain continuities or traditions (for example, the fieldwork tradition in geography, or key personalities like Darwin in biology) whose significance may persist. But disciplines evolve, and even 'classical' scientific texts may be interpreted

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¹ A. Fyfe, Publishing and the classics: Paley's *Natural Theology* and the nineteenth-century scientific canon, *Studies in History and Philosophy of Science* 33 (2002) 729–751 (730).

² D.N. Livingstone, *The Geographical Tradition: Episodes in the History of a Contested Enterprise*, Oxford, 1992, 4–12.

³ See, for example, Livingstone, *Geographical Tradition* (note 3); J. Golinski, *Making Natural Knowledge: Constructivism and the History of Science*, Cambridge, 1998; P. Dear, *The Intelligibility of Nature: How Science Makes Sense of the World*, Chicago, 2006.

differently over time. For these reasons, this paper will address the second of Fyfe's questions, recognizing therefore that canons must be understood contextually.

In analysing the issue of a Russian geographical canon the paper will focus initially on a significant meeting of the USSR Academy of Sciences which occurred in January, 1949. The purpose of this meeting, as shall be seen, was to establish a canon of authoritative scientific figures from the past for each of the Soviet sciences, including geography. In view of this, we first consider the reasons behind the selection of the particular geographical canon chosen at the January 1949 meeting. Second, we question whether that canon contained the names of the geographers who had a major influence on the way that Russian and Soviet geography had developed since its establishment as a university discipline in the 1880s or only those who were considered significant in the Stalinist context of the late 1940s. A key point here is to raise the possibility that much of our present-day understanding of the character of geography as it evolved in pre-revolutionary Russia and the USSR derives not from a study of the subject's actual history but from the process of canonization which occurred in the Stalin period, and in particular from the prominence given to the nineteenth-century soil scientist, Vasilii Vasilievich Dokuchaev (1846–1903). David Hooson and others have argued for the central importance of Dokuchaev and his school for the development of Russian and Soviet geography, albeit acknowledging other influences.⁴ The paper examines the utilization of Dokuchaev's work during the Stalin period and reflects on what this tells us about the process of canonization. Two key periods of geographical history will be examined. The first is that between geography's initial organization as a university subject in the 1880s and the 1917 revolution. This was a time when geographers were struggling to define and demarcate their science in the face of considerable scepticism about, and even outright opposition to, geography's new status in university circles. The second is the era between the Russian Revolution and Stalin's death in 1953, and in particular the period following Stalin's 'Great Break' around 1930. In this period geographers faced unprecedented ideological and political pressures, including pressures to demonstrate the relevance of their science to the construction of a socialist society. The latter point had particular poignancy at a time when the Soviet leadership was displaying ever greater environmental ambitions, amounting in the end to talk of a 'transformation of nature.' All this had inevitable consequences for the ways in which geographers defined their discipline and for the past scientific authorities to whom they could appeal.

The paper opens with a description of the 1949 meeting and then moves on to survey the scientific achievements of Dokuchaev, the major authority to be identified at the meeting. The remainder of the paper reflects on the extent to which this championing of Dokuchaev was a fair reflection of the development of Russian geographical science following the establishment of Russia's first chair in geography in 1885. What emerges is a far from straightforward story. On the one hand, there is little doubt that Dokuchaev and his school exerted a strong, albeit at times indirect, influence

over the evolution of Russian geography and particularly with respect to general understandings and orderings of the physical environment. On the other hand, Russian geographers were heavily influenced by competing traditions, most notably those linked to the German school of thought and yet the latter were subjected to increasing levels of critique and censorship during the Soviet period. In conclusion, it is suggested that Russian geography was the product of varied influences and that the canon chosen at the 1949 General Assembly only very partially reflected the way the discipline had evolved over the intervening period.

Pre-1917 Russian geography has been researched by a number of scholars, whilst several have undertaken to examine the impact of Stalinism on other sciences, but not thus far on geography.⁵ This paper seeks to fill this gap in the existing scholarship and throw light on the nature of canon making. Its principal sources are the published materials of the time, especially books and journal articles, plus more recent work by Soviet and Russian scholars. The accent will be on physical rather than human ('economic') geography in accordance with the major focus of geographical study in the period.

The General Assembly of the USSR Academy of Sciences, 5–11 January, 1949

The General Assembly of the USSR Academy of Sciences which met for seven days in Moscow in January, 1949, was devoted to 'The History of our National Science.'⁶ The tone of this event was set by the customary greetings to Stalin with which it commenced:

Guided by your directions, the Academy of Sciences of the USSR has set itself the task of clarifying as fully as possible the history of science and technology from the only correct scientific position – from that of materialistic dialectics, of informing the people as broadly as possible about the scientific riches created by the progressive agents of science and culture from the past, of unmasking the falsifiers who misrepresent and denigrate the role of our country's science and technology in world culture.⁷

The greetings went on to assert that ever more evidence was being accumulated of 'the brilliant capacities of our people and of the valuable contribution which our national science has made to the fund of the most outstanding achievements of world science and technology.'

The greetings to Stalin were followed by an introductory address by Academician S.I. Vavilov, president of the Academy, in which he underlined the main purpose of the meeting: 'Among historians on the one hand', he asserted, 'and among specialists in different scientific disciplines on the other, there is no agreed point of view on the history of science. The aim of the General Assembly of the Academy is to secure such agreement.'⁸

The background to these extraordinary statements was the post-war period in Soviet history which goes by the name of the *Zhdanovshchina* (after Stalin's ideological henchman, Andrei Zhdanov), which lasted very roughly from 1946 to 7 until Stalin's

⁴ D.J.M. Hooson, The development of geography in pre-Soviet Russia, *Annals of the Association of American Geographers* 58 (1968) 250–272; D.J.M. Hooson, Some recent developments in the content and theory of Soviet geography, *Annals of the Association of American Geographers* 49 (1959) 73–82 (74); P.E. James and G.J. Martin, *All Possible Worlds: a History of Geographical Ideas*, Second Edition, New York, 1981, 223–244.

⁵ On geography see Hooson, *Development* (note 5); L. Mazurkiewicz, *Human Geography in Eastern Europe and the Former Soviet Union*, London, 1992; A.G. Isachenko, *Razvitie geograficheskikh idei*, Moscow, 1971; on science: L.R. Graham, *Science in Russia and the Soviet Union: A Short History*, New York, 1993; N. Kremensov, *Stalinist Science*, Princeton, 1997, 128–285; E. Pollock, *Stalin and the Soviet Science Wars*, Princeton, 2006.

⁶ *Akademiya nauk SSSR. Voprosy istorii otechestvennoi nauki: obshchee sobranie AN SSSR posvyashchennoi istorii otechestvennoi nauki, 5–11 yanvarya, 1949*, Moscow-Leningrad, 1949.

⁷ *Akademiya nauk* 5.

⁸ S. Vavilov, *Vstupitel'noe slovo*, in *Akademiya nauk* 9–14 (10).

death in 1953 and coincided with the outbreak of the Cold War. After a period of repression and international isolation in the 1930s, Soviet scientists had enjoyed a time of relative freedom during the Second World War since they had become vital to the Soviet war effort.⁹ Soviet victory in 1945, however, far from leading to a period of greater relaxation, was quickly followed by a breakdown in the alliance with the Western powers and the outbreak of the Cold War. The resulting tensions were exacerbated by the advent of nuclear weapons. Within the USSR these events signalled the revival of old Soviet fears about the Western threat and the possibility of another war. This sparked a Party-led campaign for a tightening up of political control including the reimposition of international isolation for scientists and new demands for ideological conformity. While ideology was a central element of the campaign, Werner Hahn highlights the political aspect, and in particular the ambitions of Zhdanov, as an influential factor in shaping the initial clamp-down on foreign scientific connections.¹⁰ Furthermore, in Hahn's analysis, the 'worst excesses' of the campaign emerged only after the death of Zhdanov in August 1948.¹¹ In its early manifestation, the *Zhdanovshchina* focused its attention on prominent branches of science including philosophy, economics and most notably biology. Indeed, the latter was characterized by arguably the most extraordinary, and certainly the best-known event of the time, with the official approbation of the scientific theories of Trofim Lysenko, an episode which led to the eclipse of Soviet genetics with reverberations across the sciences, including geography.¹² To date, much scholarly attention has been devoted to the resultant crises in disciplines such as philosophy, agriculture and physics. However, as will be highlighted below, geography was also caught up in the highly-charged atmosphere that coalesced during the late 1940s.

With the hardening of the *Zhdanovshchina* campaign from 1949, much of the ideological zeal crystalized into a crusade against 'anti-cosmopolitanism.' Harboured an anti-Semitic element, this drive associated openness to the West in science and other activities with lack of patriotism and led to the demand for a whole new approach to the history of science celebrating the achievements of the Soviet sciences.¹³ Since the Communist regime was markedly pro-science, the history of science was seen as a significant element in its self-identity. This also resonated with the increasingly nationalistic tendencies among the country's leaders, tendencies which had been greatly encouraged by the Second World War.

It was in this febrile atmosphere that the noted General Assembly took place. The event incorporated a range of papers delivered by Soviet academics covering various disciplinary areas.

For the purposes of the present paper, it is important to note the contributions of several paper-givers rooted in the geographical and cognate sciences including the soil scientist and geochemist B.B. Polynov (1877–1952), biogeographer V.N. Sukachev (1880–1967), and geographer L.S. Berg (1876–1950). Furthermore, a key presentation was delivered on 'Geographical science in the USSR' by Academician Andrei A. Grigor'ev (1883–1968), director of the Academy of Sciences Institute of Geography.¹⁴ Here Grigor'ev described the many expeditions and scientific achievements of Russian naturalists dating back to Peter the Great (reigned 1682–1725) if not before, culminating in a long discussion of the activities of the Soviet geographers since 1917. In one of the most noteworthy passages in the speech Grigor'ev described Soviet approaches to regional physical geography (*stranovedenie*). Here he noted the differences between his own approach, focusing on the formation and development of types of geographical environment, and the approach of Academician Berg of Leningrad, based on a concept of 'landscape.'¹⁵ Both approaches, he asserted, were equally progressive, deriving from the science of Dokuchaev as well as, in his own case, the work of other Russian scholars like A.I. Voeikov (1842–1916) and D.N. Anuchin (1843–1923). Grigor'ev thus skated over the sharp disputes between Berg and himself which had marked Soviet geography since the early 1930s and which will be alluded to below.¹⁶ In conclusion, Grigor'ev argued that the theoretical reconstruction of geography along lines dictated by dialectical materialism had become especially important in the light of the need to regulate the environment in the interests of the socialist economy and the demands now being placed on the geographers by the recently-published decree proclaiming the inauguration of the 'Great Stalin Plan for the Transformation of Nature.'¹⁷ Thus emphasis was placed on the practicality of geographical science.

A tone somewhat reminiscent of that adopted by Grigor'ev was to be seen in Lev Berg's presentation entitled 'Early geographical researches in Russia.'¹⁸ In other papers, like that by the aforementioned Sukachev, on 'The history of the struggle for the afforestation of our steppes', and that by Polynov on 'The role of Dokuchaev and Vil'yams in natural science and agriculture', the name of Dokuchaev looms large.¹⁹ Polynov, for example, pointed to the decree of 20 October, 1948 which inaugurated the Stalin Plan as signalling the official approbation of the great soil scientist.²⁰ It was also significant that, in its final resolution, the Assembly ordered the publication of the works of 'outstanding national and foreign scholars' including those of Dokuchaev.²¹

It is important to note that, even before the 1949 meeting, geographers had been keen to promote their connections with Dokuchaev. Thus in 1946, before the onset of the *Zhdanovshchina*, the

⁹ D.J.B. Shaw and J.D. Oldfield, Soviet geographers and the Great Patriotic War, 1941–1945: Lev Berg and Andrei Grigor'ev, *Journal of Historical Geography* 47 (2015) 40–49.

¹⁰ W.G. Hahn, *Postwar Soviet Politics: The Fall of Zhdanov and the Defeat of Moderation*, 1946–53, Ithaca, 1982.

¹¹ Hahn, *Postwar Soviet Politics* (note 11), 114.

¹² For more on the *Zhdanovshchina*, see Kremmentsov, *Stalinist Science* (note 6), 1997, 128–285, and Pollock, *Stalin* (note 6).

¹³ Hahn, *Postwar Soviet Politics* (note 11), 118–119; A. Vucinich, *Empire of Knowledge: The Academy of Sciences of the USSR (1917–1970)*, Berkeley, 1984, 227.

¹⁴ A.A. Grigor'ev, *Geograficheskaya nauka v SSSR*, in *Akademiya nauk*, 335–352.

¹⁵ D.J.B. Shaw and J.D. Oldfield, Landscape science: a Russian geographical tradition, *Annals of the Association of American Geographers* 97 (2007) 111–126.

¹⁶ See: D.J.B. Shaw and J.D. Oldfield, Scientific, institutional and personal rivalries among Soviet geographers in the late Stalin era, *Europe-Asia Studies* 60 (2008), 1397–1418; D.J.B. Shaw and J.D. Oldfield, Totalitarianism and geography: L.S. Berg and the defence of an academic discipline in the age of Stalin, *Political Geography* 27 (2008) 96–112.

¹⁷ Grigor'ev, *Geograficheskaya* (note 15), 351; on the Stalin Plan, see S. Brain, *Song of the Forest: Russian Forestry and Stalinist Environmentalism, 1905–1953*, Pittsburgh, 2011, 140–167, and D.J.B. Shaw, Mastering nature through science: Soviet geographers and the Great Stalin Plan for the Transformation of Nature, 1948–1953, *Slavonic and East European Review*, 93 (2015) 120–146.

¹⁸ L.S. Berg, *Rannie geograficheskie issledovaniya v Rossii*, in *Akademiya nauk*, 353–364.

¹⁹ V.N. Sukachev, *Istoriya bor'by za oblesenie nashikh stepei*, in *Akademiya nauk*, 407–423; B.B. Polynov, *Rol' Dokuchaeva i Vil'yamsa v estestvoznani i sel'skim khoziaistvom*, in *Akademiya nauk*, 465–483.

²⁰ Polynov, *Rol' Dokuchaeva* (note 20), 466.

²¹ *Postanovlenie obshchego sobraniya Akademii nauk SSSR*, 11 yanvarya, 1949, in *Akademiya nauk*, 881–884.

Institute of Geography had published a set of essays, co-edited by Grigor'ev, entitled *V. V. Dokuchaev and Geography*.²² This publication, which marked the centenary of Dokuchaev's birth, lauded the work of the soil scientist in various ways and underlined its significance for geography. Grigor'ev concluded his opening essay, for example, with these words: 'A great innovator, [Dokuchaev] not only created the science of soils and raised it to unaccustomed heights but enriched numerous neighbouring disciplines with his ideas, particularly geography.'²³ In similar vein, two years later the geography publishing house Geografiz republished a set of essays by Dokuchaev entitled *The Study of the Zones of Nature* with an introductory essay by the Moscow University economic geographer, Yu. G. Saushkin.²⁴

In concluding the meeting, the General Assembly adopted a decree designed to shape future work on the history of Russian and Soviet natural science and technology. This emphasized the need to reflect more deeply on the linkages between such scholarship and the central tenets of Marxism-Leninism as well as the contributions of nineteenth-century Russian philosophers to the development of natural science in the country.²⁵ Nikolai Kremmentsov has argued that the Academy of Sciences General Assembly meeting was aimed at identifying a single 'Great Scientist' or 'founding father' for each Soviet science. All the 'founding fathers' identified were Russian, male, and dead.²⁶ For geography, discussion centred on pre-revolutionary Russian scholars. But the name which shines forth is that of Dokuchaev. In other words, Dokuchaev certainly occupied a prominent position in the Soviet geographical canon in 1949. This prompts at least two questions: why was this so? And, to what extent was this championing of Dokuchaev artificially rendered? The next section will begin to address these questions by examining Dokuchaev's work and suggesting what aspects of that work might have appealed to the Soviet geographers of 1949.

V. V. Dokuchaev's soil science and its appeal for Soviet geographers in the Stalin era

Vasilii Dokuchaev, professor of natural sciences at St. Petersburg University from 1883, is described by Konstantin Glinka as 'the founder of soil science in Russia.'²⁷ Following a series of field expeditions in central and southern European Russia and Ukraine focusing initially on geology, quaternary studies and geomorphology, and then on soils, Dokuchaev published his first major work, *The Russian Chernozem*, in 1883, followed by a series of other important contributions.²⁸ Two facets of Dokuchaev's soil science particularly fascinated future geographers. One was his emphasis on the 'geographicity' of soils, which is to say that different soil types are distributed latitudinally across the East European plain (a result of the interplay of a series of 'soil-forming factors', notably climate, parent rock, relief and vegetation). The second was that soil types come into being as a result of the interplay between such factors over long periods of time. In other words, his understanding of soils was genetic. The principle of 'geographicity' led to the

conclusion that soils are an independent, natural body in their own right, to be distinguished, for example, from the underlying parent rock and its residual surface materials (which, unlike soils, do not vary latitudinally in accordance with climate). The recognition that there is a correlation between soil types and other factors (notably climate, vegetation and fauna) meant that the north-south succession of soils accords with the sequence of what Dokuchaev termed 'natural-historical zones' (or what would now be termed 'biomes'). The existence of such zones is one of the most striking features of the East European plain, long noted by scientific travellers and others. Towards the end of his life, Dokuchaev recognized the 'natural-historical zones' as global phenomena.²⁹

A feature of Dokuchaev's work which was to prove particularly attractive to the geographers was his insistence that soils, as inter-linking the inorganic and organic parts of nature, should be seen as central to what Glinka later called 'the grand synthesis of Natural Science.' The idea that their science was a science of synthesis (that is, not merely synthesis between human society and nature as a whole, but between the different facets of nature individually) was to become central to the self-identity of Russian geographers. Thus they took to heart Dokuchaev's words, written in 1898, that 'the greatest and highest charm of natural history', 'the kernel of natural philosophy' consists in the 'existence of an eternal, genetic and ever orderly connection between the vegetable, animal and mineral kingdoms on the one side and man (*sic.*), his life and even his spiritual world on the other.' Evidently influenced to some degree by the environmental determinism which was so common in his day, Dokuchaev went on to state that 'it seems to us — that soil science, taken in the Russian sense, must be placed in the centre of the theory of the interrelation between living beings and inanimate Nature, between man and the rest of the world, that is, its organic and mineral parts.'³⁰

The idea that the new soil science should be regarded as central to 'the grand synthesis of Natural Science' had ready appeal for the geographers of the Stalin era who were seeking to establish their own science as the science of synthesis *par excellence*. By claiming Dokuchaev's mantle as their own, they could argue that Soviet geography was quintessentially Dokuchaevian. As Berg argued in 1939, 'Dokuchaev did not suspect that the new science, the basic characteristics of which he outlined in his sketch, is in actual fact geography.'³¹ Two other facets of Dokuchaev's life and work were also to appeal to the later geographers. One was his unambiguous Russianness, never having lived or studied abroad. Though he was certainly aware of the work of foreign scientists, Dokuchaev's science derived largely from his own field studies in Russian environments. This Russian aspect made Dokuchaev eminently suitable for the role of heroic scientist in the context of late Stalinist chauvinism. For the later geographers Dokuchaev's other attractive feature was the applied character of his science, since, as Pollock has pointed out, under Stalin 'science for science's sake was not good enough; all science had to play a role in socialist construction.'³² Dokuchaev's work began in the 1870s and 1880s when he

²² V. V. Dokuchaev *i geografiya*, Moscow, 1946.

²³ A.A. Grigor'ev, *Geografiya i V. V. Dokuchaev*, in V. V. Dokuchaev, 7–12 (12).

²⁴ V.V. Dokuchaev, *Uchenie o zonakh prirody*, Moscow, 1948.

²⁵ Postanovlenie obshchego sobraniya Akademii nauk SSSR ot 11 yanvarya 1949 goda: 'O razvitiu nauchno-issledovatel'skikh rabot v oblasti istorii otechestvennogo estestvoznaniya i tekhniki', *Vestnik Akademii nauk* 19, 126–129 (127).

²⁶ Kremmentsov, *Stalinist Science* (note 6), 221–225.

²⁷ K.D. Glinka, *Dokuchaev's Ideas in the Development of Pedology and Cognate Sciences*, in *Russian Pedological Investigations*, Leningrad, 1927, 1–20 (1).

²⁸ V.V. Dokuchaev, *Russkii chernozem*, St. Petersburg, 1883. For more on Dokuchaev, see: David Moon, *The Plough that Broke the Steppes: Agriculture and Environment on Russia's Grasslands, 1700–1914*, Oxford, 2013, 53–56, 76–88; V.A. Esakov, Vasilii Vasilievich Dokuchaev, 1846–1903, in *Tvortsy otechestvennoi nauki: geograf*, Moscow, 1996, 259–271; S.V. Zonn, V. V. Dokuchaev, 1846–1903, Moscow, 1991.

²⁹ L.S. Berg, *Ocherki istorii russkoi geograficheskoi nauki (vplot' do 1923 goda)*, Leningrad, 1929, 6.

³⁰ Quoted in Glinka, *Dokuchaev's ideas* (note 28), 16–17.

³¹ L.S. Berg, V. V. Dokuchaev kak geograf, *Pochvovedenie* (1939) no 2 14–19 (17).

³² Pollock, *Stalin* (note 6), 59.

was commissioned by bodies like the Free Economic Society and local *zemstva* (local governments) to undertake studies into soil fertility in the face of frequent droughts and to assess land quality for taxation and other purposes. At a time when many Russian peasants lived in extreme poverty and the government was faced with the task of feeding a growing population in conditions of industrialization, Dokuchaev's work had major social and political significance. Of course it can be argued that there had long been a practical side to much Russian geography. But the practical character of Dokuchaev's science, and above all its relevance to the Stalinist accent on agricultural improvement and 'nature transformation' (it was this that was to find recognition in the 1948 Stalin Plan decree) had obvious importance for the geographers and their cognate scientists of the late Stalin period.

Dokuchaev and the geographical canon in the pre-revolutionary period (1884–1917)

For the geographers of the Stalin era, therefore, it was the practicality of Dokuchaev's science, linked to its synthetic character and indigenous provenance, which made him particularly suitable to be regarded as a, if not the 'founding father' of their science. There was, however, one problem – Dokuchaev had not himself been a geographer and in fact showed scant sympathy for the geography which was beginning to arise as a fully professional discipline in his day. Thus, in his already-cited 1898 article 'The place and role of contemporary soil science in science and life', he had argued that up to that time the natural sciences had each studied one aspect of nature but now there was the need for a new synthetic science to study 'those complex and multi-faceted relationships and interlinkages, and equally the laws governing the age-old changes in the same, which exist between living and dead nature' and that such a science should stand 'at the very centre of all the most important branches of contemporary natural science.' He warned, however, that this new science should not be confused either with any of the existing branches of natural science 'or, above all, with geography, which is spreading itself in all directions.'³³ This was the point which was to be taken up by Berg in 1939, agreeing with Dokuchaev's assessment of the way geography was developing in his own day but asserting that the Soviet geography which had appeared since 1917 was in fact the new synthetic science which Dokuchaev had wished for.³⁴ But before turning to the latter point, it is important to reflect on the character of the pre-revolutionary geography which Dokuchaev so strongly deprecated and to ponder the extent to which Dokuchaev himself was considered to be central to the evolving discipline at the time.

It was by its decree of 23 August, 1884 (associated with the new University Statute) that the tsarist government first ordered the establishment of departments (*kafedry*) of geography in the imperial Russian universities. Over the following years geography

departments appeared in the universities of Moscow (1885), St. Petersburg (1887), Kazan' (1888), Khar'kov (1889), Odessa (1905) and Kiev (1913). Since Russia had no trained specialists in geography at the time, individuals with a variety of backgrounds were appointed to take the new chairs. This no doubt contributed to the eclectic, not to say kaleidoscopic character of the geography which began to be taught. Disputes quickly arose over how the new discipline was to be defined, or even over whether it had the right to an independent existence in universities at all. Not surprisingly, in these circumstances the new professors inevitably felt obliged to defend their science by trying to define it precisely and to find unimpeachable scientific authorities to whom they could appeal.³⁵ A selection of their publications will now be examined.

One of the most influential of the pre-revolutionary geographers was the already-mentioned Dmitrii Nikolaevich Anuchin who headed the department of geography and ethnography at Moscow University from its foundation in 1885 until 1919. In terms of his approach to geography, Anuchin took a catholic view, teaching that geography was a conglomerate of sciences dealing with the earth and its inhabitants. In his article on geography written for the 1892 edition of the *Brokgauz and Efron Encyclopedia*, for example, he wrote that 'Geography, in its contemporary development, is not a strictly demarcated discipline, but is a complex of a whole series of sciences, each capable of self-development.'³⁶ Following the teaching of the German geographer, Ferdinand von Richthofen, Anuchin believed that what brought this array of sciences together was the fact that they all dealt with interlinked phenomena and processes occurring on the earth's surface, broadly conceived, such as atmosphere, lithosphere, and hydrosphere as well as human society. In the publications we have consulted, Anuchin cites an array of foreign, mainly German geographers, including Humboldt, Ritter, Ratzel, Gerland, Peschel and also Richthofen. Others cited by him include the French geographers Réclus and Brunhes, and the British Keltie and Mackinder.³⁷ Although we know that Anuchin was in correspondence with Dokuchaev, no references to the latter's work appear in his two encyclopedia articles devoted to geography, even though Dokuchaev is briefly mentioned in the introduction Anuchin wrote for the Russian edition of Alexander Supan's *Basics of Physical Geography*, published in 1914.³⁸

One of Anuchin's many services to Russian geography was his sponsorship of the translation and publication of a number of foreign geographical works. This is perhaps a good indicator of which authors might have been regarded by the pre-revolutionary geographers as 'canonical' (though many Russian geographers read German as a matter of course). In this case, translated works included books by Supan, Philippson, Nansen, O. Nordenskjöld, and Herbertson.³⁹

Anuchin's eventual successor as head of geography at Moscow University was his student Alexander Alexandrovich Kruber (1871–1941).⁴⁰ Part one of Kruber's textbook, *General Earth Science*⁴¹

³³ Quoted in Berg, V. V. Dokuchaev (note 32), 146.

³⁴ Berg, V. V. Dokuchaev (note 32), 146.

³⁵ N.M. Dronin, *Evolutsiya landshaftnoi kontseptsii v russkoi i sovetskoi fizicheskoi geografii*, Moscow, 1999, 27–44.

³⁶ D.N. Anuchin, *Geografiya*, in *Geograficheskie raboty*, Moscow, 1954, 261–290 (286).

³⁷ Anuchin, in *Geograficheskie raboty* (note 37), 261–290; Anuchin, *Geografiya*, in *Geograficheskie raboty* (note 37), 306–320; D.N. Anuchin, O prepodavanii geografii i o voprosakh s nim svyazannykh, in *Geograficheskie raboty*, 291–305.

³⁸ For the correspondence with Dokuchaev, see V.A. Esakov, D. N. Anuchin i sozdanie russkoi universitetskoi geograficheskoi shkoly, Moscow, 1955, 27–28. For the encyclopedia articles see Anuchin, in *Geograficheskie raboty* (note 37), 261–290, 306–320. For Supan, see D.N. Anuchin, *Zemlevedenie v Rossii*, in: A. Supan, *Osnovy fizicheskoi geografii*, St. Petersburg, 1914, 26–40.

³⁹ Supan, *Osnovy* (first edition, 1899); A. Philippson, *Evropa*, St. Petersburg, 1909; A. Philippson, *Sredizem'e: ego geografiya i kul'turnaya kharakteristika*, Moscow, 1911; A. Philippson, *Evropeiskaya Rossiya*, Moscow, 1913; F. Nansen, *Sredi d'lov i vo mrake polyarnoi nochi*, vols. 1–2, Moscow, 1897–8; O. Nordenskjöld, *Polyarnyy mir i sosednye emu strany*, Moscow, 1913; A.J. Herbertson, *Zemlya i trud cheloveka*, second edition, Moscow, 1921.

⁴⁰ N.A. Gvozdet'skii, Aleksandr Aleksandrovich Kruber, 1871–1941, in *Tvortsy* 349–357.

⁴¹ A.A. Kruber, *Obshchee zemlevedenie*, Moscow 1917. The Russian term *zemlevedenie* has virtually the same meaning as *Erdkunde* in German. It can designate geography as a whole, but can often be used to refer to physical geography only.

was published in 1917 as a general introduction to a course mainly concerned with physical geography. It argues that geography is concerned with 'the description of the face of the earth and the interpretation of its particularities.' He notes the subject's lack of strict definition and describes the many different approaches to geography which have been taken by foreign and Russian geographers. Among the foreigners, Kruber mentions most of those discussed by Anuchin but there are also others: Hettner, Banse, de Martonne, Vidal de la Blache, W.M. Davis. He argues that geography needs to adopt both chorological (or place-based, as argued by Hettner) and also chronological methods, as advocated by de Martonne, Davis and others. Again, there is no mention of Dokuchaev.

The department of geography and anthropology at St. Petersburg University was organized in 1887. Somewhat surprisingly to many, the scholar appointed to head the new department was not the prominent meteorologist A.I. Voeikov who taught physical geography in the department of physics, but Eduard Yul'evich Petri (1854–1899) who had previously held a chair in the University of Berne. In two publications of 1887 and 1892, Petri outlined what he considered to be the aims of a scientific geography and the subject's role in university teaching.⁴² In the first, which was based on a lecture he gave at the university in April, 1887, Petri placed great emphasis on Richthofen's book, *The Tasks and Methods of Physical Geography* (1883).⁴³ Quite correctly, in Petri's view, Richthofen defined geography as a scientific discipline concerned with the study of the earth's surface (*Erdoberflächenkunde*) embracing all the spheres impinging on the latter (land surface, hydrosphere, atmosphere, life and humanity). Geography's task, says Petri, is to study the whole earth – to understand 'the essence and life of the earth', for which it takes its material from a range of ancillary natural and human sciences. Geography is thus a synthesizing science. Similar ideas are espoused in the 1892 publication which cites many of the foreign authors who have been mentioned already.⁴⁴ Again no mention is made of Dokuchaev.

Petr Ivanovich Brounov (1852–1927), a noted meteorologist, took the St. Petersburg headship after Petri's death in 1899. Brounov's textbook, *A Course on Physical Geography*, part 1, was published in 1910.⁴⁵ Unlike other textbooks, this was only ever intended to cover physical geography. Oddly enough, the author distinguishes between physical geography and biogeography and it is clear that he has no intention of dealing with the latter since, in his opinion, physical geography is related to physics rather than biology. In his introduction Brounov presents an extended discussion of physical geography as the science dealing with the earth's 'exterior envelope' or envelopes, namely the lithosphere, hydrosphere, atmosphere and biosphere. This is in fact the first extended discussion in the Russian geographical literature of the idea of 'geographical envelope.' The influence of Richthofen is very apparent. Throughout the book the work of many European geographers and other scientists is discussed as bearing upon the issues at hand but, since there is a distinct emphasis on Russia, the work of the Russians is also accented. The author devotes considerable space to a consideration of natural zonation which, as we have seen above, was very much part of Dokuchaev's contribution to science.

Brounov, however, prefers to relate zonal patterns (including vegetation patterns) to his own specialism in the spatial distributions of barometric pressure rather than to soils. Whilst he does not mention Dokuchaev by name, he discusses the work of his pupil, Gavril Tanfil'ev (who was appointed to the newly-organized chair of geography at Novorossiiskii University, Odessa, in 1905). Had Brounov been inclined to discuss biogeography, he might have considered Dokuchaev and his work on soils, but such is not the case here.

On Voeikov's death in 1916, Brounov replaced him in the department of meteorology and was himself replaced by Lev Semenovich Berg who until then had taught at the Moscow Agricultural Institute. Berg was a graduate of Anuchin's department in Moscow and became celebrated as an encyclopedist, working in many areas of physical geography.⁴⁶ He also took a major interest in the history and methodology of geography.

Just before the revolution Berg wrote two articles which were to have a major impact on geography.⁴⁷ One, entitled 'An attempt to divide Siberia and Turkestan into landscape and morphological regions', appeared in the 1913 *Festschrift* published to mark Anuchin's 70th birthday.⁴⁸ Berg defined 'natural landscapes' as 'regions which are similar in the predominant character of their relief, climate, vegetation and soil cover. In other words, landscapes are certain, regularly repeating complexes or associations of forms of relief.' He went on to distinguish between landscapes and 'landscape zones', the latter being 'regions with a predominant development of one and the same kinds of landscape. Such zones are naturally distributed in accordance with climatic and, consequently, with soil-vegetation zones.' Since his article concerns Russia, Berg cites mainly the work of Russian authors. Given the nature of the approach, it seems that he was indirectly influenced by Dokuchaev, especially as he cites Tanfil'ev and Glinka, both members of the Dokuchaev school, but he does not name Dokuchaev personally.

Berg's second article, entitled 'The subject and tasks of geography', appeared in the proceedings of the Russian Geographical Society for 1915.⁴⁹ This was a more ambitious attempt to define and demarcate geography as a scientific discipline, placing his concept of landscape at the subject's centre. Thus Berg denounced definitions of geography advanced by such scholars as Davis, Petri and Richthofen as including too much and failing to endow geography with a distinctive subject matter and methodology. Rather he endorsed the neo-Kantian approach of Alfred Hettner which the latter had published as 'The nature and methods of geography' in 1905.⁵⁰ Following the thought of Ritter, Hettner taught that geography is a chorological science, a science of regions or places and the phenomena which fill them. Spatial distributions are thus at the core of geography. However, rather than being focused on the distribution of individual phenomena, both Hettner and Berg believed that geography should be principally concerned with the interrelations between phenomena, causal interrelationships which explain the distributions concerned. The main difference between Hettner and Berg was that, whereas the former talked of places or regions in general, the latter talked of natural landscapes.

⁴² E. Petri, *Zadachi nauchnoi geografii*, St. Petersburg, 1887; E. Petri, *Geografiya kak predmet universitetskogo prepodavaniya*, St. Petersburg, 1892.

⁴³ F. von Richthofen, *Aufgaben und Methoden der heutigen Geographie*, Leipzig, 1883.

⁴⁴ For anthropology, Petri recommends Oskar Peschel's book, *Narodovedenie*, St. Petersburg, 1890, the translation of which he himself had supervised.

⁴⁵ P.I. Brounov, *Kurs fizicheskoi geografii. Rukovodstvo dlya studentov i uchenikov starshikh klassov srednikh uchebnykh zavedenii*, St. Petersburg, 1910.

⁴⁶ E.M. Murzaev, Lev Semenovich Berg, 1876–1950, in Tvoritsy, 383–397; E.M. Murzaev, *Zhizn' est' deyaniya. K 100-letiyu so dnya rozhdeniya akademika L. S. Berga*, Moscow, 1976.

⁴⁷ See Dronin, *Evolutsiya* (note 36), 45–68.

⁴⁸ L.S. Berg, *Opyt razdeleniya Sibiri i Turkestana na landshaftnye i morfologicheskie zony*, in *Sbornik v chest' 70-letiyu professora D. N. Anuchina*, Moscow, 1913, 117–151.

⁴⁹ L.S. Berg, *Predmet i zadachi geografii*, *Izvestiya Russkogo Geograficheskogo obshchestva* 51 (1915) 463–475.

⁵⁰ A. Hettner, *Das Wesen und die Methoden der Geographie*, *Geographische Zeitschrift* XI (1905).

A landscape he now defines as 'an area within which the character of the relief, climate, vegetation and soil cover blend together into a single harmonious whole, typically repeated over a given zone of the earth.'⁵¹ The similarity with Dokuchaev's teaching on soils, formed from the interactions over time between bedrock, climate, vegetation and other soil-forming factors, is quite apparent. Landscape, Berg believed, provided the necessary basis to explain the spatial variability of the earth's surface. 'And thus', he concluded, 'geography is the science of landscapes.'⁵²

What is interesting is that whilst Berg's concept of landscape has clear affinities with Dokuchaev's soil science, and whilst at this stage he was obviously aware in general terms of the work of the Dokuchaev school, Dokuchaev's influence appears to have been indirect rather than direct. Indeed, in his 1915 article, Berg seemed anxious to position geography as the science of landscapes within the chorological framework of Hettner rather than within the naturalistic one of Dokuchaev. This is not, perhaps, what one might have anticipated from the ringing declarations of the 1949 Academy of Sciences meeting. Berg's concern at this stage, it seems, was to provide geography with its own distinctive subject matter and a distinctive approach. This was no doubt a response to geography's somewhat contentious status as a university discipline, a matter which will be referred to again.

Andrei Nikolaevich Krasnov (1862–1914) who, like Tanfil'ev, was a former student of Dokuchaev, headed the new department at Khar'kov from 1889,⁵³ and is regarded as a predecessor of Berg in formulating the idea of natural 'combinations' or complexes (landscapes).⁵⁴ In a series of publications beginning with his inaugural lecture delivered in 1889, Krasnov set out to define and defend the discipline which he was appointed to profess.⁵⁵ Lamenting the fact that geography was still a relatively underdeveloped science, especially in Russia, he states that the purpose of geography is to study the environmental conditions in which people are obliged to live today. Like others he suggests that this requires an accent on synthesis. What unites the discipline, in his view, is its focus on interlinkages and its explanatory, spatial and chronological approach. Krasnov cites an amazing variety of both Russian and foreign work (even extending to foreign-language material for the use of students) and, in the semi-popular journal *Nature [Priroda]*, briefly discusses the significance for geography of the soil science of Dokuchaev and his school.⁵⁶

This necessarily short survey of the general work of some of the principal geographers of the pre-revolutionary period, therefore, suggests that Dokuchaev's name did not figure prominently among the canonical authorities being deferred to at the time. For the Russians, it seems, the prestigious names were mainly foreign, and especially German ones like Richthofen and Hettner. Even those former students of Dokuchaev who had taken geography posts barely cite him. The likely explanation is that Dokuchaev was not regarded as a geographer. It was the Germans in particular who were regarded as the international pioneers in the establishment of

geography as a university science and the Russians, seeking recognition for their new science from their university colleagues, evidently felt that this could only be achieved by citing German authorities. Russia's long-standing connection with German science which began with the foundation of the Russian Academy of Sciences in 1725 was a further powerful reason for the prominence of German geographical thought.⁵⁷ At this time, then, the canon, such as it was, was diverse in nature, allowing for contrasting understandings of the nature of the discipline. It was only later, during the Stalin period, that this situation began to change.

The geographical canon after Stalin's 'Great Break' (from 1929)

The essential context for the 1949 General Assembly of the Academy of Sciences meeting described above was set not, as might be imagined, by the 1917 revolution but by events attending and following the First Five Year Plan (1928–1932). Prior to what became known as Stalin's 'Great Break' which unfolded in these years, Soviet science was in some respects a continuation of pre-1917 Russian science.⁵⁸ Nevertheless, there were shifts in the organization of science linked to the development of key initiatives such as KEPS (Commission for the Study of the Natural Productive Forces of Russia). KEPS had been founded in 1915 primarily as a response to the demands of World War One, and gained additional momentum during the 1920s. Indeed, this initiative would lay the foundations for many subsequent Soviet institutes, including the Institute of Geography.⁵⁹ During the First Five Year Plan, however, Soviet society underwent a profound transformation. It was during these years that the centrally planned or command economy was inaugurated, agriculture was collectivized and the private economic sector virtually disappeared. Accompanying these sweeping economic changes was a far-reaching cultural revolution which reached into every corner of society, including science. It was in these years that what Kremensov refers to as 'the Stalinist science system' was founded.⁶⁰ The geographers could hardly escape the consequences. Having benefitted from the pro-science policies of the Bolshevik regime after 1917 (including the establishment of a specialized Geographical Institute in Petrograd/Leningrad in 1918), they were now subjected to the same authoritarian controls as other scientists, including the demand for a science oriented to national goals and for strict ideological conformity. From the mid-1930s the pressures were compounded by the unleashing of the Great Terror, under which those who failed to conform were liable to dismissal, arrest or worse. For geographers and other scientists, and especially for those who had begun their professional lives under the tsarist regime, this was a revolution indeed.

It was in this context that the concept of a strict geographical canon, which reached its apogee at the 1949 Academy of Sciences meeting as we have seen, began to be formed. The implications of

⁵¹ Berg, *Predmet* (note 50), 471.

⁵² Berg, *Predmet* (note 50), 469.

⁵³ O.A. Aleksandrovskaya, Andrei Nikolaevich Krasnov, 1862–1914, in *Tvortsy*, 307–317.

⁵⁴ F.N. Mil'kov, A. N. Krasnov — *geograf i putesthestvennik*, Moscow, 1955, 161–170; A.N. Krasnov, *Osnovy zemlevedeniya*, part 1, Khar'kov, 1895, 5.

⁵⁵ A.N. Krasnov, *Geografiya kak novaya universitetskaya nauka*, *Zhurnal Ministerstva narodnogo prosveshcheniya* cclxvi no. 1 (February 1890), 233–244; Krasnov, *Osnovy* (note 55); A.N. Krasnov, *Lektsii po fizicheskoi geografii*, Khar'kov, 1910.

⁵⁶ A.N. Krasnov, *Sovremennaya geografiya i ee novye tekhniki*, *Priroda* (June, 1912) 793–802 (800–801).

⁵⁷ Graham, *Science* (note 6), 19; A. Vucinich, *Science in Russian Culture: A History to 1860*, Stanford (CA) 1963, 75–122.

⁵⁸ Kremensov, *Stalinist Science* (note 6), 13.

⁵⁹ A.V. Kol'tsov, *Sozdanie i deyatelnost' Komissii po izucheniyu estestvennykh proizvoditel'nykh sil Rossii*, St. Petersburg, 1999; L. Graham, The formation of Soviet research institutes: a combination of revolutionary innovation and international borrowing, *Social Studies of Science* 5 (1975) 303–329; Vucinich, *Science in Russian Culture* (note 58), 1861–1917, Stanford, 1970, 220–222.

⁶⁰ Kremensov, *Stalinist Science* (note 6), 4.

the 'Great Break' for the geographers will now be considered with respect to two geographers who in many ways dominated the period: the aforementioned Lev Berg and Andrei Grigor'ev. As before, the discussions which bore upon the issue of a geographical canon very much concerned the disputed issue of the nature of geography itself.

It was noted above that in his 1915 article, Berg seemed keen to position geography in relation to Hettner's chorological framework rather than to the naturalistic one of Dokuchaev. This accent on Hettner rather than Dokuchaev continued through the 1920s. It is found, for example, in Berg's 1921 book, *Science: its Content, Meaning and Classification* and in his essay, 'Geography and its position among the other sciences', which was published in the collective monograph *Questions of Regional Geography* by the Geographical Institute (Leningrad) in 1925.⁶¹ In neither case is prominence given to Dokuchaev. Indeed, it should be noted that Hettner was widely respected among Soviet geographers throughout the 1920s, and several of his papers were translated and published at the time, including his seminal 1905 paper which appeared in the same essay collection as Berg's paper in 1925.⁶² Furthermore, Hettner's major monograph, *Geography: its History, Essence and Methods*, which originally appeared in 1927, was republished in Russian under the editorship of the Moscow University economic geographer, N.N. Baranskii, as late as 1930.⁶³

By the end of the 1920s, however, things were beginning to change. Thus, in his 1929 volume, *Notes on the History of Russian Geographical Science (to 1923)*, in the short methodological section, Berg once again asserted the chorological nature of geography, citing 'the German geographer, A. Hettner' as a strong proponent of this view. However, he also accorded particular emphasis to Dokuchaev as the 'founding father' of the study of geographical landscapes, the essence of the discipline.⁶⁴ And just in case anyone should miss the point, a prominent photograph of the eminent soil scientist is provided.

Why this change in emphasis? One reason certainly relates to Berg personally. In a footnote to his already-cited article of 1939, Berg stated that he only realised that Dokuchaev had written about 'natural-historical' zones as global phenomena after he had read Glinka's article and book on Dokuchaev and soil science, both published in 1927.⁶⁵ This was allegedly because both of Dokuchaev's articles relating to this theme had appeared in rather obscure outlets. But there was a broader context to this changing emphasis. Throughout the 1920s, following the end of the Civil War (and Western intervention) in 1921, the Soviet Union had been internationally isolated, being the world's only communist state (apart from Mongolia). Soviet leaders feared that, sooner or later, one or more of the capitalist powers would intervene yet again to put down the revolution. For science generally, and for geography in particular, the 1920s had been a relatively liberal period in which a variety of viewpoints and opinions had been tolerated. But as the international atmosphere darkened towards the end of the decade,

and as Stalin consolidated his dictatorship and decided on a programme of forced industrialization and militarization, Soviet scientists began to look inwards rather than outwards and, in the case of the geographers, began to regard their own past scientists, particularly Dokuchaev, rather than foreign ones as the heroes of their field.

In 1931, in the midst of the 'Great Break', Berg published the first edition of his seminal work, *Landscape-Geographical Zones of the USSR*.⁶⁶ This was the second printing of a book which had been published in the previous year by the All-Union Institute of Plant Breeding, whose director was N.I. Vavilov, eminent geneticist and from 1931 president of the All-Union Geographical Society.⁶⁷ In keeping with Stalin's emphasis on the importance of applied science, Berg in his introduction was at pains to point out the relevance of his study to the task of agricultural improvement: 'both in the improvement of agriculture and in the organization of agricultural experimental work, it is above all necessary to bear in mind those geographical circumstances or, in other words, the geographical landscape in which the agriculturalist is obliged to work. Without knowledge of geographical landscapes, agricultural improvement is inconceivable.'⁶⁸ Vavilov evidently believed that Berg's book was vital to Stalin's agricultural revolution.

In his introduction, Berg claimed that his was the first attempt to give a geographical description of the USSR's 'landscape zones.' 'Landscape zones' are more or less the same phenomena as Dokuchaev's 'natural-historical zones', or biomes, and, in Berg's conception, each zone is composed of a series of typical, smaller-scale 'landscapes.' Giving a similar definition to 'landscape' as in his earlier papers, Berg was now keen to underline landscape's resonance with Dokuchaev's soil science. Referring to climate, vegetation and other factors as 'elements', he wrote: 'In the present work there is the attempt at a synthesis of all these elements from the perspective of landscape geography – a problem first posed by Dokuchaev.'⁶⁹ And just to underline the point, on a later page he asserted: 'The founding father [osnovopolozhnik] of the science of geographical landscape zones, and, together with that, the founding father of modern geography was the great soil scientist, V.V. Dokuchaev.'⁷⁰

The tendency to accent Dokuchaev perpetuated itself in Berg's writings as the 1930s unfolded, helped on its way by a series of verbal and written attacks made on Hettner, his Soviet disciples like Berg, and the chorological concept in geography. Essentially these attacks accused Hettner, Berg and others of infringing the principles of dialectical materialism by advocating a geography which focused solely upon the spatial distributions of phenomena at the expense of their essence and their modes of development, which embraced environmental determinism, and other sins.⁷¹ The situation inevitably affected Berg's writings. Thus the second edition of Berg's landscape book, now entitled *Physical-Geographical (Landscape) Zones of the USSR*, published in 1936, was accompanied by a somewhat critical editorial introduction.⁷² The book itself continued the

⁶¹ L.S. Berg, *Nauka: ee soderzhanie, smysl' i klassifikatsiya*, Petrograd, 1921; Idem., *Geografiya i ee polozhenie v ryadu drugikh nauk*, in *Voprosy stranovedeniya: sbornik statei*, Moscow-Leningrad, 1925, 3–17.

⁶² A. Hettner, *Sushchnost' i metody geografii*, in *Voprosy stranovedeniya*, 33–85.

⁶³ A. Hettner, *Geografiya: ee istoriya, sushchnost' i metody*, Moscow-Leningrad, 1930.

⁶⁴ Berg, *Ocherki istorii russkoi geograficheskoi nauki (vplot' do 1923 goda)* (note 30), Leningrad, 1929, 5–6.

⁶⁵ Berg, V. V. Dokuchaev (note 32), 18 footnote 1. See also page 16.

⁶⁶ L.S. Berg, *Landshaftno-geograficheskie zony SSSR*, Moscow-Leningrad, 1931.

⁶⁷ Berg, *Landshaftno-geograficheskie* (note 67), Leningrad, 1930.

⁶⁸ Berg, *Landshaftno-geograficheskie* (note 67), 1931, 4.

⁶⁹ Berg, *Landshaftno-geograficheskie* (note 67), 1931, 4.

⁷⁰ Berg, *Landshaftno-geograficheskie* (note 67), 1931, 25.

⁷¹ The details will be found in Shaw and Oldfield, *Totalitarianism and geography* (note 17).

⁷² L.S. Berg, *Fiziko-geograficheskie (landshaftnye) zony SSSR*, Leningrad, 1936.

accent on Dokuchaev as the founder of landscape geography as in 1931, and also cited the German geographers Hettner and Siegfried Passarge as in 1931 again, but there was a somewhat greater tendency to criticize the latter, for example for their 'unscientific' understanding of landscape. A distinctive feature of this volume compared is the omission of almost all consideration of the 'cultural landscape', or the effects of human settlement on landscape and vice-versa. This is no doubt in response to the accusations of environmental determinism which had been levelled at the first edition.

Praise for Dokuchaev and also for his own role in raising the profile of the soil scientist's work reached a crescendo in Berg's already-cited 1939 article in the journal *Soil Science*, which is entitled 'V.V. Dokuchaev as a geographer'.⁷³ No doubt Berg's concern in 1939 was to defend the discipline in the face of Stalinist pressure by again stressing Dokuchaev's place as central to the discipline. But this did not prevent him from once again citing, in a relatively positive way, the work of foreign geographers like Hettner and Passarge, something he repeated in the 1947 third edition of his landscape book.⁷⁴ As a geographer of the old school who began his professional career before the revolution, it seems that Berg was not to be deflected from what he believed was the truth by fashion, even Stalinist fashion – an interesting comment on the nature of Stalinist totalitarianism.

Whilst Berg's relationship with Hettner was that of a distant follower, Grigor'ev's was more immediate and ultimately more complicated.⁷⁵ Grigor'ev had studied as a postgraduate student at Heidelberg under Hettner's supervision, emerging with a doctorate just before the outbreak of war in 1914. Back in Russia, among other activities, he worked for KEPS where he organized a section on industrial geography. Well into the 1920s Grigor'ev was regarded as an economic geographer and a strong proponent of Hettner's chorological approach to the discipline. Eventually, however, and possibly partly as a result of his experiences on a series of scientific expeditions to the Soviet north organized under the auspices of KEPS, Grigor'ev abandoned the chorological view and his adherence to Hettner. In an article published in the aforementioned journal *Nature* in 1926, for example, he argued that the complex study of territory, of the kind undertaken on the KEPS expeditions (which were very much oriented towards issues of resource and economic development) demanded more than a summary of information on the influence of the various geographical factors moulding a territory but a conception of the entire physical environment as a single interacting unity.⁷⁶ Thus he began to move away from the localistic, regional geography of the kind advocated by Hettner and Berg towards a focus on the 'geographical envelope', or earth's environment as a whole. In this way he resurrected a view of geography initially developed by Richthofen, and arguably Ritter before him, a view which was quite popular among the pre-revolutionary Russian geographers, as we have seen.⁷⁷ However, in his *Nature* article, Grigor'ev cited neither Richthofen nor any of the Russian geographers.

With the heated discussions which accompanied Stalin's 'Great Break', however, Grigor'ev's writings began to take on a more overtly political dimension, taking the form of a direct attack on Berg's landscape geography.⁷⁸ Grigor'ev's argument was that his approach endowed geography with a dynamic element which was

not to be found in landscape geography but which reconciled the discipline with the tenets of dialectical materialism. The key point is that this dynamism gave geography an applied emphasis which made it particularly relevant to the mounting environmental ambitions of the Stalin regime. From the perspective of this paper, what is most notable about Grigor'ev's work in the 1930s, and what distinguishes it from that of Berg, is his failure at this point to claim Dokuchaev's teachings as the basis of his ideas. Rather, he appealed to the tenets of dialectical materialism, bolstered by the teachings of Engels and Lenin, and to his scientific focus on the dynamism of the natural environment. In Grigor'ev's view, this meant that his science, unlike that of Berg, was one focused on the great task of socialist construction.

None of this, however, is to suggest that Grigor'ev ignored or bypassed Dokuchaev. In the post-war period especially, as we have seen, the Institute of Geography under his directorship was to take a leading role in propagandizing Dokuchaev's achievements and his significance for geography, claiming at the same time that Grigor'ev's 'process' school was more consonant with Dokuchaev's science than landscape geography.⁷⁹ It is notable that Grigor'ev's critique of Berg's landscape geography always focused on Berg's loyalties to Hettner, never on those to Dokuchaev.

Conclusion

This paper posed the question why, at the 1949 General Assembly of the USSR Academy of Sciences, a specific canon was defined for Soviet geography. It was noted that the canon chosen was notably Russocentric, highlighting the great soil scientist V.V. Dokuchaev in particular, but also other past Russian scientists like Voeikov and Anuchin, as having made seminal contributions to the discipline's evolution. No non-Russians were included. The paper's argument is that, in selecting their canon, Soviet geographers were responding to the political pressures imposed by the *Zhdanovshchina* and in this way mimicked the developments in other branches of science during this period.

A second question posed by this paper was whether the particular canon chosen in 1949 contained the names of the geographers who had actually had a seminal influence on the development of Russian and Soviet geography since the 1880s, or only of those deemed significant under late Stalinism. Our analysis of the selected writings of prominent geographers from both the pre-revolutionary and post-1917 periods suggests that the answer is a complex one. On the one hand, Dokuchaev and his soil science clearly had some influence on the geographers who were active before Stalin's 'Great Break', even if that influence was often an indirect one, mediated in most cases by his broader school. This influence was linked to his work on soil and by extrapolation the interrelated character of natural phenomena at the earth's surface giving rise to regular manifestations of natural entities. Such insight dovetailed well with the work of geographers such as Lev Berg who attempted to advance a geography framed by a chorological approach and centred on landscape zones and units. On the other hand, the pre-revolutionary geographers appear to have been much impressed by foreign scholars, and especially German ones, a fact which was simply ignored in 1949. It is not until the late 1920s

⁷³ Berg, V. V. Dokuchaev (note 32).

⁷⁴ L.S. Berg, *Geograficheskie zony Sovetskogo Soyuza*, Moscow, 1947, 7, 12–13.

⁷⁵ T.D. Aleksandrova, *Akademik Andrei Aleksandrovich Grigor'ev: zhizn' i nauchnoe tvorchestvo*, Moscow 2011.

⁷⁶ A.A. Grigor'ev, *Zadachi kompleksnogo izucheniya territorii, Priroda* (1926) nos. 5–6 43–58; L.S. Abramov, Andrei Aleksandrovich Grigor'ev, 1883–1968, in *Tvortsy*, 439–454.

⁷⁷ N.G. Sukhova, *Karl Ritter i geograficheskaya nauka v Rossii*, Leningrad, 1990.

⁷⁸ See Shaw and Oldfield, *Totalitarianism and geography* (note 17); Shaw and Oldfield, *Scientific* (note 17).

⁷⁹ On the Dokuchaevian significance of Grigor'ev's 'process' school, see the Institute's *Estestvennoistoricheskoe raionirovanie SSSR*, Moscow, 1947, 34–35.

that Dokuchaev's work is acknowledged explicitly by the geographers. It seems clear that the pre-revolutionary and post-1929 scholars, in defining their canons, were motivated by two different factors: pressures exercised by their fellow academics to defend and define their discipline and pressures coming from the Stalin regime to prove their science's ideological rectitude, its relevance to policy, and its authentically Russian character.

The paper has cast doubt on the idea that there was a straightforward canon or Russian geographical 'tradition' which can be used to explain the subject's evolution in that country. Our historical analysis of the work of Russian and Soviet geographers suggests that there is no basis to the idea that Dokuchaev was the central figure or 'founding father' of Russian geography in any absolute sense. Rather geography developed in response to a whole series of factors, including scientific, political, ideological, institutional, and personal influences. The tradition or canon identified in 1949 was a partly invented one, designed to meet the political and social challenges of the day.⁸⁰ It hardly reflected the complex canon

of geographical authorities who were cited by scholars active before 1917 and in the 1920s. Canon making in science, in other words, is a process which responds to changing circumstances. It is thus as much a social and political activity as it is a scientific one.

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⁸⁰ For analogous 'traditions', see E. Hobsbawm and T. Ranger eds., *The Invention of Tradition*, Cambridge, 1992.