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Shaw, D.J.B. and Oldfield, J.D. (2008) *Totalitarianism and geography: L.S. Berg and the defence of an academic discipline in the age of Stalin*. *Political Geography*, 27 (1). pp. 96-112. ISSN 0962-6298

<http://eprints.gla.ac.uk/5232/>

Deposited on: 26 October 2009

'Totalitarianism and geography: L.S. Berg and the defence of an academic discipline in the age of Stalin'

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In his celebrated books, *The Open Society and its Enemies*, and *The Poverty of Historicism*, Karl Popper argued that science can only flourish in an atmosphere of free and open debate where scientists are able to criticize one another without undue interference from outside ([\[Popper, 1945\]](#) and [\[Popper, 1957\]](#)). The subsequent period witnessed the appearance of many new studies in the history and sociology of science which questioned the extent to which science really can be said to be autonomous ([\[Golinski, 1998\]](#) and [\[Kuhn, 1970\]](#)). However, the idea that science cannot become entirely the slave of the state or of other outside interests without losing many of its essential functions still commands general support. Concerns about the autonomy of science, and the relationship between science and politics, have continued to this day, in what is still widely regarded as the era of 'Big Science' ([\[Fuller, 2000\]](#)).²

Part of Popper's concern lay in what he considered to be the baleful influence of Marxism and its 'totalitarian' pretensions on social thought generally and on science more particularly. By implication, he was also criticizing the totalitarian societies of his own day – most notably the communist U.S.S.R. and its satellites – whose huge experiment in social engineering included enlisting science as a key instrument of societal and environmental transformation. One implication of Popper's view was that the highly centralized and ideologically-charged nature of the Soviet system would militate against the ability of science to progress and to contribute to social change. The very idea that science could be planned and controlled on the scale and to the extent that was being attempted in the U.S.S.R. must have struck him as absurd.

The context for this paper is the Soviet Union during its most 'totalitarian' phase, namely the period of rule by Joseph Stalin between the late 1920s and 1953. The focus is upon the thought and career of one prominent geographer of the time. The question to be addressed is how far this geographer was able to defend his concept of geography, a concept which derived from the scientific traditions of pre-revolutionary Russia, against the ideological pretensions of Stalinism. In other words, the paper concerns 'the politics of doing geography', and more specifically the extent to which geography and other sciences were able to retain their traditions and autonomy under unprecedented political pressure. The study aims to throw light on the complex interrelations between science and politics under totalitarianism, and on the relations between science and the state in modernizing societies more broadly.

It is important to note that Soviet geography in the period under investigation has been subjected to relatively little scrutiny either in Russia itself or in the West.³ The emphasis on the career of one important practitioner will therefore help to inform future research on this era, but more importantly will also provide a 'human' dimension to the harsh realities of Stalinism. It is a contention of this paper

that, in order to understand the impact of Stalinism and its implications for science, it is necessary to know how real people behaved on an everyday level. Whilst the individual has rarely been the focus of studies by geographers, it is at the scale of individual experience that issues like scientific autonomy and political control often come most sharply into focus.

Lev Semenovich Berg (1876–1950), the key figure for this article, was one of the most important Soviet geographers of the Stalin era, serving as president of the All-Union Geographical Society (1940–1950) and elected as a full member of the USSR Academy of Sciences (from 1946). As shall become clear, Berg was an exponent of the idea of geography as landscape science, a viewpoint which was severely criticized by Stalinist ideologues. This was an era in which the Stalinist state 'nationalized' science with the aim of subordinating it to the goals of the political leadership, thus arguably creating the 20th century's first example of 'Big Science' ([Krementsov, 1997](#): 3)⁴ and forcing geographers like Berg to show that their concept of geography could be reconciled with the new circumstances. The argument of this paper is that Berg's prominence and influence were such that, despite the problems he encountered, he successfully defended his version of geography and thus a vision of scientific autonomy against the totalitarian state.

The theory of totalitarianism⁵ has been attacked and greatly amended since the early 1950s when scholars first outlined the principal characteristics of such societies (see [Schapiro, 1972](#): 18). Thanks to the labours of historians, political scientists and other scholars, it is now generally accepted that totalitarian societies have been far from monolithic ([Linz, 2000](#)) (although in some of the geographical literature this finding may still be treated as if it is a new discovery – see, for example, [Hagen, 2004](#): 223). This paper will suggest that in practice Stalinism allowed for a surprising degree of initiative and diversity among its subordinate actors, and abetted much uncertainty. Totalitarianism, in other words, means something less than total control.

In this context, the notion of 'ideology' takes on a rather different meaning from that usually employed by political geographers and related scholars. Whereas such scholars generally base their understanding of ideology on the work of ([Althusser, 1969](#)) and ([Gramsci, 1971](#)) and others where it is typically seen as a set of ideas and representations which rule people's minds, providing a distorting mirror to reality and functioning to support class domination, here it is used in the sense of a set of doctrines, consciously fashioned and manipulated by the political leadership to bolster their power but which may or may not be believed by the mass of the population ([Schapiro, 1972](#): 45–58). In Stalinist U.S.S.R., the ruling ideology derived from the teachings of Marx as interpreted and applied to Russia by Lenin and then modified and added to by later leaders, particularly by Stalin himself. The point is that the ideology was not set in stone, but was nevertheless monopolised by the party leadership, providing it with what Kremmentsov has described as a 'powerful cultural resource' ([Krementsov, 1997](#): 27). At any point, the party leaders could make doctrinal pronouncements, allegedly based on the teachings of Marxism–Leninism, which provided their policies with the aura of unassailable orthodoxy. Officially, ideology provided the key to a correct understanding of the world and of human history. A significant finding of recent research, however, has been to show that the nature and effects of ideology changed throughout the Stalin period. Up until the mid-1930s, when the communist party

still had its own intellectual centres, there was room for 'red radicalism' when Marxist militants and intellectuals could still discuss the meaning of Marxism and lead attacks on those deemed less than orthodox, including members of the scientific community. From that time, however, 'a rigid and unimaginative orthodoxy' settled over 'all spheres of intellectual and cultural life' ([Hosking, 1992](#): 216) which signalled 'almost the end of serious intellectual-political debate within a Marxist framework in the Soviet Union' ([Fitzpatrick, 1999](#): 17). It was also a period of international isolation for Soviet scholars. Yet from 1941 with the Nazi German attack on the U.S.S.R., Soviet scientists began to enjoy slightly greater freedom to interact with their Western peers and there was some easing on the ideological front in the common quest to win the war. With victory in 1945, however, and the onset of the Cold War in 1946–1947, Soviet science and culture were once more plunged into the deep intellectual freeze of the *Zhdanovshchina*.⁶ The significance of these changes will become apparent below.

One further point must be made about ideology, particularly in its relationship to scientific debate. Since ideology was tied to power, it became an important cultural resource not only to the party leadership but also to anyone in the various professional and other hierarchies, including the scientific community, wishing to advance his or her career and win influence. In these circumstances, scientific debate was rarely a sober consideration of how to apply Marxist teaching to given circumstances and much more often a struggle for power. 'Ideological criticism was obviously intended not to bring out the objectivity or novelty of scientific propositions, but to pigeonhole a criticized scientist, according to the principle "whoever is not with us is against us"' ([Krementsov, 1997](#): 26). Public debates were conducted in ideological terms, appealing to 'science', 'logic', 'ideology', 'truth' and 'reason', but they were actually elaborate games hiding the cruder power struggles taking place underneath. And Stalinism evolved an entire vocabulary which, while it appeared to refer to philosophical ideas and straightforward political constructs, was in fact a kind of 'Newspeak' designed to facilitate the exercise of power ([Krementsov, 1997](#): 300–306). Struggles over ideology, therefore, became struggles over language, in much the same way that language becomes the focus of so many studies in political and cultural geography. For example, labelling one's opponent with a suitably damning, ideologically-loaded epithet was seen as an appropriate way of discrediting an opposing argument. Thus, as shall be seen below, whilst there was some link between scientific debate and ideological understanding, that link was by no means a straightforward one.

L. S. Berg and geography in the era before Stalinism

Lev Berg was born in 1876 in Bendery (in present-day Moldova) into the family of a Jewish notary. Despite his provincial background and the anti-Semitic policies of the tsarist government, he was admitted to the Physics and Mathematics (Science) Faculty of Moscow University in 1894, though not before first being baptised into Russian Orthodoxy ([\[Murzaev, 1976\]](#) and [\[Murzaev, 1983\]](#)). At university, Berg specialised in zoology and geography, taking courses in physical geography with D. N. Anuchin, the eminent anthropogeographer. There then followed several years of field work and research in Central Asia and neighbouring regions. Berg's prime specialism was ichthyology but he

also worked on problems of climatic change, hydrology, physiography and related areas. Like many other Russian geographers of the period, therefore, Berg had a strong scientific background. His first major monograph, on the Aral Sea, was published in 1908 ([Berg, 1908](#)) and was awarded the Gold Medal of the Russian Geographical Society. The associated and highly acclaimed dissertation gained him a doctorate (rather than the designated masters degree) in 1909. From 1916, Berg headed the Geography department at Petrograd (later Leningrad) University with the rank of professor.

Berg's particular contribution to what was still a young discipline at this stage was to argue for a naturalistic concept of landscape as the essence of geographical study. In a chapter written in a 1913 *Festschrift* to celebrate D. N. Anuchin's 70th birthday ([Berg, 1913](#)), and more especially in an article published in the journal of the Russian Geographical Society in 1915 on the subject and purpose of geography ([Berg, 1915](#)), the concept of landscape (Russian *landshaft*) was central. A natural landscape, Berg argued, is an area where the character of the relief, climate, vegetation and soil 'correspond in a single harmonious whole, typically repeated across the space of a known zone of the earth' ([Berg, 1915](#): 9). Berg in effect combined a biophysical concept of landscape, which ultimately derived from the thought of the great Russian soil scientist, V. V. Dokuchaev, with a 'chorological' concept of geography, as espoused by the German geographical theorist, Alfred Hettner, of whose ideas on the nature of geography Berg openly acknowledged himself a disciple (see [Shaw & Oldfield, 2007](#)).

Geography in pre-revolutionary Russia shared to some degree in the high status accorded to science by educated society and, with an applied orientation, it also benefited initially from the seizure of power by the Bolsheviks in October 1917. Although Berg and other scientists of the old regime were regarded with a good deal of suspicion as 'bourgeois' scholars, for the time being at least the Bolsheviks could not manage without them and quickly moved to win them over. Thus in 1918, a Geographical Institute, with Berg as professor, was established in Petrograd (Leningrad) (from 1925, this would become the Faculty of Geography at Leningrad University). Some tsarist organisations, like the Russian Geographical Society and the Academy of Sciences, also prolonged their existence into the new era. Throughout the 1920s and into the 1930s, Berg built upon his already solid scientific reputation by his highly productive work in the environmental sciences, in a number of branches of which he was regarded as one of the country's leading authorities. He also continued to publish on aspects of the philosophy and methodology of geography.

The year 1930 saw the publication of the first edition of a book which was to prove most influential in Berg's long and productive career: his *Landscape-Geographical Zones of the U.S.S.R.* ([Berg, 1930](#) and [Berg, 1931](#)). The book has a significant history. It was written at the request of the eminent geneticist and student of agrobiolgy, N. I. Vavilov, who was to be elected president of the Russian Geographical Society in 1931 (thus underlining geography's close links with the natural sciences). Vavilov held a series of important scientific posts at the time, including director of the All-Union Institute of Plant Breeding (VIR) and president of the All-Union Academy of Agricultural Sciences (VASKhNIL). His major interest was in breeding high-yielding, disease-resistant hybrids which might be suitable to the different and often harsh environments of the U.S.S.R. He clearly regarded Berg as

the only scholar capable of writing a study of the country's varied geographical environments which would be of use to such a purpose. Part 1 of the book, which surveyed the tundra and forest zones (including the mixed forest) was thus published in 1930 as an appendix to the 'Works on Applied Botany, Genetics and Selection' by Vavilov's institute.⁷ It was reprinted as a separate volume the following year.

Berg described his book as 'the first attempt to give a geographical description of the landscape zones of the U.S.S.R.' (Berg, 1931: 3). Its originality, according to the author, was that, rather than looking at such factors as soil, climate, natural vegetation and so on separately, it was an attempt to synthesize 'all these elements from the point of view of landscape geography, a problem first posed by Dokuchaev' (Berg, 1931: 4). In this way, Berg claimed the authority of the pioneering Russian scientist for his work at a time when Soviet 'patriotism' was rapidly replacing internationalism as the prevailing orthodoxy.⁸ Furthermore, and no doubt in response to mounting political pressures, Berg underlined what he saw as the book's practical significance. Its reissue in 1931 by an agricultural organisation was, according to him, on the basis of the practical importance of knowledge of the natural environment in any attempt to improve agriculture (these words were written just at the time when the disastrous campaign of collectivisation in the countryside was gathering pace). 'Without a knowledge of geographical landscapes the attempt to improve agriculture is pointless' (Berg, 1931: 4). A further important feature of the book was the way in which it not only attempted to synthesize the natural components of the landscape but to relate them to human activities and ways of life as well. In keeping with a broad principle originally enunciated by Dokuchaev (and later repeated by Berg himself) of the interconnectedness of all facets of the physical environment in each zone and of the way human life and activity corresponded, Berg explained the major economic activities in each zone, particularly primary production and agriculture, in the context of environmental constraints and opportunities. There was also considerable detail on ethnic structure and on how customs, ways of life and particularly material culture were adapted to the environment. Berg's discussion, falling some way short of environmental determinism, was in fact somewhat reminiscent of the possibilism of Vidal de la Blache. It described a traditional rural world which was now rapidly disappearing with the onrush of collectivisation in the 1930s (Preobrazhenskii & Marakov, 1988: 13).

The year 1930 also witnessed the publication of another book which was to have key significance for the way geography was to develop during the Stalin period and for Berg personally. This was the Soviet edition of Alfred Hettner's major tome, *Geography, its History, Substance and Methods* (first published in Germany in 1927), a striking testimony to the esteem in which (Hettner, 1927) and (Hettner, 1930) was still held by many Soviet geographers. The book's Soviet editor was the prominent economic geographer and Marxist, N. N. Baranskii. In his editorial introduction, Baranskii provided a cautious welcome to Hettner's approach to geography. However, as events were soon to prove, the time for such ideological prevarication had now passed and the book's publication was to provide the politically-motivated opponents of the older generation of geographers like Berg and Baranskii with a golden opportunity to attack their versions of the discipline.

Berg, geography and Stalin's cultural revolution

The relatively tolerant atmosphere in which Berg and other geographers had been working since 1917 dissipated around 1929. In that year Stalin, now undisputed leader of the U.S.S.R., launched his 'Great Break' (*Velikii Perelom*) with the past in the form of the first Five Year Plan, transforming the country's economy into a thoroughgoing command system and inaugurating a breakneck process of industrialisation accompanied by the forced and brutal collectivisation of agriculture. All aspects of the country's life were remodelled as a consequence ([\[Fitzpatrick, 1978\]](#) and [\[Hosking, 1992\]](#): 149–182). Science was called upon to make its full contribution to the process of transformation. Henceforth, science was to be fully accountable to the party, government and organs of control, including the apparatus of repression (the OGPU, or NKVD from 1934). Scientific institutions were widely revamped and made to recruit large numbers of personnel from approved class backgrounds (many members of the party-state apparatus were recruited for positions of responsibility). By contrast many scientists who were disapproved of or deemed disloyal were dismissed or arrested. Scientists were now made to focus on 'relevant' and applied research and their activities were subject to planning like the rest of the economy. Scientists' contacts abroad were carefully controlled and generally discouraged, and their publications censored. Furthermore, the practices of science were now subjected to an entirely new political culture, involving political campaigns and new styles of criticism, rhetoric and ritual ([\[Krementsov, 1997\]](#): 31–53). The aim was to ensure the loyalty of the scientific community and its active and enthusiastic commitment to the regime's goals, and to root out (real or imagined) 'enemies'. For Berg and other scientists from an earlier era, this must have been a revolution indeed.

For Berg and other geographers of the old school, the new situation carried a number of quite specific dangers. One stemmed from ideology. Marxist ideology now began to be seen as a source of unchallengeable dogma of which the USSR's leaders were the high priests. Ideology was expanded to embrace science, particularly after several of [Engels' \(1940\)](#) writings on science were published as *The Dialectics of Nature* around 1925. Soviet science was increasingly expected to reflect the dialectical essence of nature as posed by Engels. One facet of this was a growing suspicion of attempts by ecologists, geographers and others to build theory which embraced both the biophysical world and human society as a single, undivided whole. Any such conceptions were felt to place illegitimate natural limits to aspirations for building socialism and ultimately communism, aspirations which would inevitably involve transforming both the physical world and humankind. Perpetrators of such heresies were liable to be accused of 'determinism', 'fatalism' and 'geographism'. Ideas like Berg's concept of 'landscape' (and indeed, Hettner's and Baranskii's concepts of geography), which seemingly embraced both human society and its physical environment, were therefore bound to attract hostility. The idea of 'harmony' between the physical and human worlds, for example, a notion which was repeatedly referred to by Berg, was felt to contradict Engels' concept of a dynamic and dialectical universe ([\[Engels, 1940\]](#): 206–207). For related reasons physical and human (or as it was now to be termed, economic) geography came to be regarded as two quite separate (albeit interrelated) disciplines, on the grounds that according to Marxism–Leninism the laws of nature and the laws governing social evolution (the latter being the domain of historical materialism) were quite

different sets of laws (see [\[Burke, 1956\]](#), [\[Hooson, 1959\]](#), [\[Hooson, 1962\]](#), [\[Matley, 1966\]](#) and [\[Matley, 1982\]](#)).

A second danger for Berg et al. related to the growing tendency on the part of those in power to view the academic citing of foreign authorities, particularly 'bourgeois' and non-Marxist authorities like Alfred Hettner, as a reactionary and anti-Soviet practice. In the 1930s, when the U.S.S.R. was almost completely isolated on the international stage and felt increasingly threatened by the outside world, and again with the onset of the Cold War in the late 1940s, Soviet scientists were expected to eschew foreign contacts, particularly unauthorised ones, to ignore or down play foreign scientific achievements (unless, of course, they were important, in which case they could be copied without acknowledgement), and to praise Soviet science and Soviet and Russian culture generally. Stalinism invented a new denunciation – 'slavishness and servility (to the West)' – to level against those who failed to cultivate the right attitude towards foreigners and foreign ways ([\[Krementsov, 1997\]](#): 298).

The third danger lay in the fact that any sign of ambivalence or indifference on the part of scientists towards the policies and achievements of the communist party, and any attempt to escape from the need to solve applied problems into the realms of pure theory or theoretical truth, were regarded as demonstrating a lack of 'party spirit' (*partiinost*), a quality which was increasingly demanded of those like academics in positions of influence (even of those who were not party members). Party spirit included the unquestioning acceptance of party dogma, strict obedience to the party's rules, and a readiness to come up with practical solutions to designated problems as and when required. And yet Berg was a man who, in 1922, had written the following: 'Thus, should anyone ask us what is the use of science, we shall say: science has methodological, health, moral, aesthetic and, lastly, practical significance. Of course, everyone can value that aspect of science which most appeals to them according to their temperament. I personally most value its moral significance: it teaches tolerance and humanity, rooting out dogmatism, despotism and absolutism – in all their varieties, forms and metamorphoses. No one has a monopoly on truth – that is the motto of science' ([\[Berg, 1922\]](#) quoted by [\[Zabelin, 1989\]](#): 88). Such sentiments could certainly be said to reflect a traditional Russian respect for science, but they hardly accorded with the unfolding spirit of Stalinism.

Many geographers were persecuted under Stalin but, given the geographers' scientific and applied orientation, their travails are hardly to be compared with those of the historians and social scientists ([\[Barber, 1981\]](#) and [\[Hosking, 1992\]](#): 170ff). Among those who did suffer in various ways were the economic geographer and statistician V. E. Den, the spatial analyst E. E. Svetlovskii, and, most notoriously, Berg's predecessor as president of the Geographical Society, N. I. Vavilov (the latter was arrested in 1940 and perished in prison in 1943²) ([\[Chistobaev, 2002\]](#), [\[Harris, 1988\]](#) and [\[Isachenko, 2001\]](#)). It is difficult to relate such grim events to political ideology or to the background, beliefs or activities of the individuals concerned, given the institutional and personal rivalries, naked ambitions and false denunciations which surrounded them. What can be said is that no one was entirely secure. Life was, to put it mildly, 'not normal' ([\[Fitzpatrick, 1999\]](#): 1–2).

Not surprisingly, the onset of the cultural revolution quickly brought difficulties for Berg and other geographers of the old school. The first clash occurred in 1929 at a symposium for geography

teachers when Marxists launched an attack on Hettner's disciples, including Berg and Baranskii. Two years later a similar assault was mounted by a group of leftist 'young geographers' from Leningrad, accusing Berg and others of 'Hettnerism'¹⁰ (*Hettnerianstvo*), a geographical sin which was now to be added to the vocabulary of Stalinist 'Newspeak'. In March 1931, Berg found himself defending his philosophical views before a special meeting of Leningrad University's Geographical-Economic Research Institute (GENII) where he denied charges that he was guilty of 'idealism' and 'fideism'¹¹ and argued, somewhat disingenuously, that his views on landscape derived not from Hettner but from Dokuchaev ([Isachenko, 2001](#)). In the same year, a series of articles in the journal *On the Front of Communist Education* again denounced the crime of 'Hettnerism' and the major proponents of Hettner's views in the U.S.S.R., including Berg, Baranskii and the eminent geographer and conservationist, V. P. Semenov-Tyan-Shanskii ([Bogdanchikov, Bol'shakov, Vol'pe, & Savchenko, 1931](#)). The necessity of separating physical and economic geography was also stressed. In 1932, in a collective work by geographers entitled *On the Methodological Front of Geography and Economic Geography*, the attacks became even more strident, accusing Berg, Baranskii and others of following 'a bourgeois neo-Kantian methodology' ([Bogdanchikov, 1932](#): 3). In another geographical article published in the same year, Hettner was described as 'an ideologue of a German imperialism broken by war and dreaming of revenge' whilst Berg's notion of landscapes as harmonious wholes was criticized as 'Menshevik idealism' which contradicts 'the dialectical understanding of the natural complex as a unity of opposites' ([Pervukhin, 1932](#): 101). For his part, as a result of the problems he faced in this period, Berg withdrew from Leningrad University for five years ([Berg, 2003](#): 433).

Despite these difficulties, Berg continued to work and publish, particularly in the field of ichthyology but also in other areas, including the history of geography. From 1934, he headed a section of the ichthyology laboratory of the Academy of Sciences Zoological Museum in Leningrad. What is uncertain is whether this part of the Academy, despite the shake up the Academy had received from the authorities ([\[Krementsov, 1997\]](#) and [\[Vucinich, 1984\]](#)), was in this way sheltering Berg from further political attack. What is known is that by now the radicalism of the Marxist militants, who were the authors of many of the attacks cited above, was gradually being quelled by the 'unimaginative orthodoxy' of high Stalinism. Berg and other senior geographers, with their applied and scientific orientation, may well have benefited from this development.¹²

In 1936, despite the fact that [Berg's 1930](#) book on *Landscape-Geographical Zones of the U.S.S.R.* had been sharply criticized in the aforementioned 1932 collective work for (among other things) the reactionary sin of describing only the traditional character of the zones, before the advent of Soviet power, it was now republished by Leningrad University in its second edition under the title *Physical-Geographical (Landscape) Zones of the U.S.S.R.* ([Berg, 1937](#)). There were, however, some important changes to this new edition. Thus Berg now omitted almost the entire discussion regarding human settlement and human activities as adapted to the physical environment in each of his zones (no doubt in response to the denunciations of environmental determinism in geography being levelled by the ideologists). His book thus became in essence a text on physical geography and as such it was adopted by the Commissariat of Education for university use. And yet, perhaps as an indicator of

Berg's determination to defend his version of geography, Dokuchaev's notion that the concept of (physical) zonality embraces the entire terrestrial globe 'including mankind and its economic activity' ([Berg, 1937](#): 13), together with references to foreign scholars like the landscape geographer, Siegfried Passarge and Hettner himself, are repeated from the first edition. Furthermore, the book was now furnished with an introduction by an editorial team whose chair was M. Bogdanchikov, a geographer who had made a major contribution to the critical literature of 1931 and 1932, cited above ([Berg, 1937](#): 7–9). The editors were at pains to distance themselves from a number of Berg's ideas and assertions, including his description of landscapes as 'harmonious wholes', his citation of Russian and foreign scholars (including Hettner) without rehearsing their 'well-known errors', his belief that geography studies landscapes rather than processes as such, and his failure to acknowledge 'the recent methodological successes in geography' as practised in the U.S.S.R. Related to the latter point is their observation that he pays no attention to the transforming effects of socialism on landscapes or to the recent 'successes and victories' of Soviet agriculture (a reference to collectivisation, which had in fact been an unmitigated disaster). They explain that much of the book was written before 1930, but that landscape dynamics becomes the centre of attention in the most recent part (that is, the section concerned with the forest-steppe). In fact, a dispassionate reading of this section hardly warrants their assertion. The editors conclude, somewhat lamely, that the book would be much improved if it addressed properly the issue of socialist landscapes. From this, one might deduce that Berg's book was valued for its substantive content (and for that reason was deemed publishable) but that the editors were anxious to escape any blame for its undoubted ideological shortcomings.

L. S. Berg versus A. A. Grigor'ev

Berg's influence on geography and related areas was national but his professional life was tied to the city of Leningrad where his major institutional bases were the university, the Academy of Sciences (to which he was elected corresponding member in 1928) and the Geographical Society. But under Stalin, the city was to lose out increasingly to the national capital, Moscow and there is reason to believe that the dictator resented the independent ways and possibly superior outlook of its inhabitants ([Hosking, 1992](#): 192, 313–314). The Academy of Sciences was transferred to Moscow in 1934 with many of its institutes and, especially after the assassination of Sergei Kirov, Leningrad's party leader, in December of that year, the city's residents were subject to frequent purges.¹³ In other words, the geography of Stalinism was beginning to display a definite 'power-geometry' ([Massey, 1993](#)). With the centralization of the sciences under Stalin, Moscow was the place to be and many of the most ambitious quickly gravitated there. One who did so was A. A. Grigor'ev who was soon to become one of the country's most powerful geographers and a major opponent of L. S. Berg and his concept of landscape geography.

Grigor'ev's history was a rather tortuous one ([Zabelin, 1976](#)). Before the First World War, he had been a student of Hettner at Heidelberg. Returning to Russia in 1914, he worked as an economic geographer but, finding himself accused of 'Hettnerism' and related sins, he decided to move into physical geography, including its philosophy and methodology. In 1930, Grigor'ev was appointed

director of the Academy of Sciences, Geomorphological Institute. Having moved to Moscow in 1934, this organisation eventually became the Institute of Geography. From this institutional base, Grigor'ev was well placed to exercise a growing power over Soviet geography as a whole. By the early 1930s, he was criticizing Hettner's chorological approach to geography in print, linking it with Berg's name ([\[Grigor'ev, 1930\]](#) and [\[Grigor'ev, 1932\]](#)). Finally, in April 1933 at the first All-Union Geographical Congress in Leningrad, Grigor'ev argued for a dynamic geography reconstructed on the basis of dialectical materialism and firmly tied the discipline's cart to the horse of the Soviet state and its political priorities ([Materialy, 1933](#)).

Grigor'ev's 'dialectical' alternative to Berg's landscape science lay in his concept of the 'single physical-geographical process' – a unity of the physical processes operating in the earth's 'geographical envelope', above the earth's core but below the upper atmosphere, under the influence of solar radiation and corresponding with the sphere of life. Grigor'ev took from Engels, the idea that each science should study its own distinctive form of the 'movement of matter'. By focusing geography on 'the single physical-geographical process', Grigor'ev believed, geography could be reconstructed in accordance with the dictates of dialectical materialism by concentrating on a distinct process. Furthermore, unlike Berg's landscape science with its seemingly painstaking, localistic and conservative vision, this refocused geography would be a dynamic geography reflecting Engels' view of nature as 'in ceaseless flux, in unresting motion and change' ([Engels, 1940: 13](#); [Grigor'ev, 1965](#)). Landscapes, Grigor'ev averred, are not distinctive systems but rather external and local expressions of the physical-geographical process. Grigor'ev seems to have believed that the accent on the dynamism of the 'single physical-geographical process' made his geography more congruent with the mounting environmental ambitions of the Soviet state than the apparently static view posed by Berg's landscape science.

After the cultural revolution

Berg's troubles were by no means over as the cultural revolution gradually subsided through the 1930s. In 1939, for example, the possibility that he might be elected a full member of the Academy of Sciences evoked a denunciation of his views on evolution in the pages of the party newspaper *Pravda*, under the title 'No Place for False Scientists in the Academy of Sciences'. The letter was signed by a group of prominent biologists led by Academician A. N. Bakh, an ally of the notorious Stalinist biologist, Trofim Lysenko ([Bakh et al., 1939](#)).¹⁴ The group condemned Berg's 'anti-Darwinist' evolutionary views as expressed in his 1922 book on *Nomogenesis* ([Berg, 1926](#)). The essence of the book can be conveyed in Berg's own words in his preface to the first English-language edition: 'The object of the following pages is to show that the evolution of organisms is the result of certain processes inherent in them, which are based upon law. Evolution is *Nomogenesis*, development in accordance with definite laws, and not, as was believed by Darwin, development due to chance. In this process, the struggle for existence and natural selection possess but secondary importance, and progress in organisation in no degree depends on the struggle for existence' ([Berg, 1926: xi](#)). The book assembles an array of empirical evidence from across the biological sciences (and some from

physical anthropology) to support its argument. The problem was that this attack on Darwin could also be interpreted as an attack on Marxism–Leninism, since by this stage Darwinism, now blended with Marxism, had become an important part of the party's ideology. According to *Pravda's* correspondents, among other outrages Berg's book embraced idealism and an organic concept of nature, and had quickly attracted foreign anti-Darwinist interest in the form of an English translation and a citation by a fascist palaeontologist. In the long years since the book's appearance, they asserted, Berg had never expressed any criticism of his 'harmful anti-Darwinist conceptions'. 'Can he strengthen the Darwinist position of the biological front of the Academy of Sciences ' they demanded, in the Stalinist rhetoric of the day.

Not surprisingly, Berg was not elected to membership of the Academy (he had to wait until 1946, at the age of 70, whilst Grigor'ev was elected in 1939). His personal archive in St. Petersburg contains the text of a letter addressed to A. A. Zhdanov, secretary of the communist party and dated April 11, 1939, in which Berg attempted to defend his good name, having evidently accepted the disappointment of his non-election (which was presumably irreversible) ([ARAN fond 804 opis' 3 delo 30 list'ya 4–12](#)). Suggesting that the name of the (politically-influential) Bakh had been used to hide that of the real perpetrator of the *Pravda* letter, Berg rejects the unfounded linking of his own name with fascism, declaring that there is nothing fascist in his work. His book, *Nomogenesis*, he explains, was written before the revolution and appeared only in 1922, attracting considerable criticism, as a result of which he moved on in his work to geography and ichthyology. He cannot understand why a book written so long ago, to which he has not returned since, should be cited against him now. Besides, he argues, criticism of Darwin is not impermissible 'in our state' – even Marx can be criticized.¹⁵ Pointing to his own scientific achievements and honours, including a citation for his work on fish, the Aral Sea and so on by *Politburo* member Anastas Mikoyan (who, according to Berg, 'evidently has a higher opinion of me than the letter's authors'), and to the support he has received from the social and party organs of his university faculty and as a member of Leningrad City Soviet (sitting for October district), he appealed to the party through Zhdanov to defend his good name 'by means of a short published rebuttal of the letter by the above-named persons' (*list* 11). However, as far as is known, Berg's appeal met with no satisfaction, and he never referred to the issue publicly. Presumably, he decided that 'in our state' it was best to let the matter drop.

L. S. Berg in the post-war period

It was at the very end of the slightly more liberal interval of the wartime and immediate post-war period referred to above¹⁶ that Berg published the third edition of his book on *Geographical Zones* ([Berg, 1947](#)) – this time through the agency of the geographical publisher, OGIZ,¹⁷ and without the benefit of an editorial *apologia*. Here once again he simply repeated many of his assertions about the nature of landscape which had been so bitterly criticized by the ideologues previously – that landscapes are harmonious wholes, that they incorporate 'to a known degree' human society, that landscape science, rather than the study of processes as such, is the essence of geography. Furthermore, just after a bitter war with Germany in which millions of lives had been lost, he repeated

his positive citations to the German scholars Hettner and Passarge ([Berg, 1947](#): 5–33). The reference to Passarge seems particularly extraordinary. Not only was he a major landscape geographer but had also been a prominent Nazi, serving in 1933–1934 as Reich supervisor for geography ([Elkins, 1989](#): 20). Was Berg, or indeed were the Soviet censors, aware of this fact? It is an intriguing question.

Yet a further public humiliation for Berg occurred in October, 1948 at an expanded session of the Scientific Council of the Institute of Geography called by its director Grigor'ev to discuss the implications for geography of the party's final renunciation of Mendelian genetics in favour of 'Michurinism' (or Lysenkoism) three months previously.¹⁸ The essence of this occasion was a definitive attempt to reconstruct geography along the increasingly *dirigiste* and voluntaristic lines demanded of science by Lysenko and his followers, and of course by Stalin. Not surprisingly, Grigor'ev used the opportunity to launch further attacks on Berg and other proponents of the landscape approach to geography. Thus Berg (who was absent from the meeting) was once again accused of idealism, particularly in his description of geography as a spatial science, and of divorcing the study of space from that of matter and time, contrary to a materialistic world view. Furthermore, Grigor'ev indicted Berg's landscape science for, among other crimes, avoiding the delineation of scientific laws, reducing geography to a formal, descriptive study of individual places, and developing contrary to the needs of the national economy ([Saushkin, 1976](#)).

Berg's personal archive contains his formal written defence against these accusations, addressed to the Geology and Geography Section of the Academy of Sciences and dated 13 December 1948 (AAN *fond* 804 *opis*' 3 *delo* 42). Here he refuted charges of 'idealism' and rejected Grigor'ev's description of landscape science's supposed weaknesses. Indeed, Berg deflected his attack by characterising it as an attack on Dokuchaev himself and his concept of natural zones (a deft rhetorical move). As regards Grigor'ev's claim to have founded a 'new Soviet physical geography', Berg argued that there is in fact 'nothing original or useful in it', being based on old and discredited ideas. Grigor'ev's real originality, he asserted, consisted in his 'extremely heavy style' and generally incomprehensible prose. 'I do not know of a single scientific work in which the views of A. Grigor'ev can have been realistically used. And they cannot be used because no one understands what it is he wishes to prove. In the heads of the students the ideas of Academician A. Grigor'ev seem like complete nonsense'. Berg concluded by noting that Grigor'ev had failed to define the single physical–geographical process or specify how it is to be studied without breaking it down into its component parts, which is what geographers do already. Whether there was ever an official response to Grigor'ev's assault, and Berg's response, is unknown.

Conclusion

Lev Berg was a skilled and careful navigator of the rough waters of Stalinist scientific life whilst perhaps also enjoying a measure of good fortune. Avoiding the treacherous shoals of public disputation or overt political controversy, and understanding when strategic attack or tactical retreat were necessary, he defended his vision of geography even to the extent of stubbornly repeating in print points which had earlier been harshly denounced by Marxist ideologues. Unlike geographers

defending their science in other circumstances, Berg's actions must on occasion have involved serious risk to his liberty and perhaps even his life.¹⁹ He may have suffered for his science in some ways,²⁰ but nevertheless managed to uphold a concept of scientific integrity and autonomy as reflected in his 1922 book on science cited above. Whether his fate would have been different had he lived to witness the outburst of anti-Semitism which marked the final years of Stalin will never be known.

In a seminal book on the nature protection movement under Stalin, Douglas [Weiner \(1999\)](#) has argued that conservationists enjoyed a surprising degree of freedom to argue their views despite the fact that, in principle at least, such views might have been taken as attacking the regime's goals. Weiner does not make clear how far he believes that this situation embraced only the conservationists.²¹ Berg's case, coupled with what is known of other eminent geographers of the period like Baranskii and Semenov-Tyan-Shanskii whose fame was international,²² suggests that such autonomy was not confined to the conservationists but that others too were able to enjoy something of that 'freedom' which he describes.

We have no precise idea how it was that Berg managed to survive until his death, apparently from natural causes, in December, 1950.²³ He may have been protected to some degree by his institutional base in Leningrad and perhaps even by influential politicians like Mikoyan. The scientific and practical importance of his work may have been a factor. It is also possible that geography as a subject had a particular relationship to ideology. Unlike history and the humanities which had political significance, or genetics which was suspect on account of its close foreign connections, geography was relatively unaffected by ideology (though one long-term effect was the permanent division between physical and 'economic' geography). Geography, like genetics, had practical significance but lacked the latter's international prestige and its foreign links. Perhaps, then, its internal debates were too unimportant for the authorities to worry about.

In fact, Soviet ideology was far from all-embracing, and certainly much less so than the Marxist 'radicals' and ideologues expected and campaigned for. What mattered to the authorities, it seems, was not so much a discipline's content as the position it occupied within the Soviet science system ([Krementsov, 1997](#): 281–285). Furthermore, in an era of 'Big Science', science was expected to perform and to provide practical solutions to key problems. For this reason, the influence of political ideology on all the sciences, as against history, the humanities and the social sciences, seems to have been limited in the longer term (even in the case of genetics). It is not to belittle the courage of scientists like Berg to suggest that, in modernizing societies, even those which were totalitarian like the U.S.S.R., the capacity and even willingness of politicians to undermine the autonomy of science was and is ultimately constrained by stern practicality.

Acknowledgements

The authors are grateful to Grigorii Ioffe, Julia Lajus and the anonymous referees for their comments on earlier versions of this paper, and to Dr. Lajus for arranging archive access. The advice and guidance of Professor Alexei Postnikov and his colleagues and of Dr. Nikolai Dronin are gratefully acknowledged, as is the assistance of archivists at the St. Petersburg branch of the Archive of the

Russian Academy of Sciences (ARAN). The authors wish to acknowledge the U.K. Economic and Social Research Council (ESRC) (Ref.: R000223743), who funded this research.

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² For discussion of the implications for geography in the United States of the advent of 'Big Science' during and after the Second World War, see [\(Barnes, 2004\)](#) and [\(Barnes, 2006\)](#).

³ The best study of geographical thought in this period is that by [Zabelin \(1989\)](#), but this is essentially an intellectual history and only takes the story down to 1941.

⁴ As [Krementsov \(1997: 3\)](#) writes, 'Stalinist science was Big Science, a gigantic, centralized system with thousands of institutions and hundreds of thousands of scientists'.

⁵ The term 'totalitarianism' was popularized by Hannah [Arendt \(1958\)](#) in her celebrated book with that title.

⁶ See footnote [16](#) below.

⁷ The second edition appeared in 1936/37/38 (including the forest-steppe) and the third in 1947 ([\[Berg, 1937\]](#) and [\[Berg, 1947\]](#)). Part 2 (embracing the steppe, semi-desert, desert and mountain zones of the USSR, plus the 'subtropical' lowlands of the Transcaucasus) appeared only in 1952, after Berg's death ([Berg, 1952](#)).

⁸ Legitimation of a scientific field through a claimed link back to a Russian 'founding father' (*osnovopolozhnik*) was an important rhetorical device of Soviet science in the Stalin era. See [Krementsov \(1997: 50–51\)](#) and for an example from [Berg \(1931: 25\)](#).

⁹ Among the reasons cited by scholars for Vavilov's arrest are the extent of his contacts with foreign scientists, and Stalin's personal animus. In the former connection, it is interesting to note that, whilst Berg travelled abroad several times both before the revolution and in the 1920s, he does not seem to have done so after about 1927.

¹⁰ The actual content of 'Hettnerism' was far from clear, except to imply that those guilty of this heresy were geographical determinists (which was not in fact strictly true of Hettner himself) and were in favour of a unified (physical and human) geography. In the rhetoric of Stalinist science, appeals to the authority of Russian 'founding fathers' of science like Dokuchaev were balanced by denunciations of foreign 'reactionaries' like Hettner.

¹¹ 'Idealism' and 'fideism' were other (essentially meaningless) political heresies of the period.

¹² This was certainly the view of Baranskii, whose autobiography was posthumously published only in 2001, where he notes the continual troubles he had suffered at the hands of the 'leftists'. See [Baranskii \(2001\)](#).

¹³ The NKVD launched a series of investigations of Leningrad geographers over 1935–1938, but we have no information over the extent to which they included Berg. See [Isachenko \(2001\)](#).

¹⁴ The Lysenkoists were evidently anxious to prevent the election of Lysenko's opponents to Academy membership. See [\(Adams, 1980\)](#) and [\(Krementsov, 1997\)](#).

¹⁵ This, surely, was a dangerous point to make in the circumstances, given the ways in which both Marx and Darwin were elevated by Stalinism to political sainthood.

¹⁶ According to [Krementsov \(1997: 129–131\)](#), the first effects of the Cold War on Soviet life, in the form of the harsh ideological campaign known as the *Zhdanovshchina*, were felt in the summer of 1946, but not in science until the following summer.

¹⁷ Director of OGIZ was Yu. G. Saushkin of Moscow University, follower of Baranskii and a correspondent of Berg's in this period – see [Saushkin \(1976\)](#).

¹⁸ For an extended discussion of the sweeping implications of this development across the Soviet sciences, see [Krementsov \(1997\)](#).

¹⁹ A case in point might have been Berg's public citations to N. I. Vavilov, to whom Berg seems to have been close, judging from the warm acknowledgment to his help recorded by Berg in the 1926 English-language edition of his book *Nomogenesis* ([Berg, 1926](#): xiii). Thus, despite the fact that Vavilov's name disappeared from public view in the wake of his arrest in 1940, as [Vucinich \(1984: 234\)](#) points out, Berg 'did not hesitate to write several pages on Vavilov as president of the Geographical Society' in his 1946 centenary history of the society (see [Berg, 1946](#): 209–218). Raisa Berg claims that the censors had in fact demanded the removal of the offending passages but Berg refused, threatening not to publish the book without them. 'And thus the text of the book was published in all its defiance. Only Vavilov's portrait was rejected' ([Berg, 2003](#): 434). Similarly, at the Second All-Union Geographical Congress held in Leningrad in January 1947, none of the celebratory speeches or official greetings telegrams mentioned the name of Vavilov as past president whilst acknowledging the others. Only Berg, in his presidential address, spoke of Vavilov's scientific achievements ([Dronin, 1997](#): 10).

²⁰ For example, there was his delayed election to the Academy, and the fact that official commendation of his long-published book on the USSR's freshwater fish ([Berg, 1948](#)) in the form of the Stalin prize was delayed until 1951, after his death.

²¹ [Weiner \(1999: 29\)](#) mentions the eminent scientists V. V. Vernadskii and P. Kapitsa as among the very few individuals outside the realm of the conservationists who were able to profess the old values of science in the face of Stalinist repression. He argues that such individuals continued to be 'valued by the Soviets for their strategic importance to the economy or national security'.

²² Among the international honours which Berg received were Honorary Life Membership and Fellowship of the Royal Scottish Geographical Society in 1947. In return, Berg presented copies of two of his latest books for the society's library, including his *Geographical Zones*. We are grateful to Dr David Munro, Director of the RSGS, for information relating to this incident.

²³ Raisa [Berg \(2003: 439\)](#) appears to suggest that her father died in improper or even suspicious circumstances. 'He perished as a result of a medical mistake by the privileged doctors of the now disbanded Sverdlov Hospital for the privileged. The mistake was not an accident. It was the law-like result of the subservience of diagnostics to ideological diktat'.