The Soviet Steppe: Transformations and Imaginaries—Introduction

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We dedicate this special issue to the memory of Maya Karin Peterson, who passed away unexpectedly and tragically on June 16, 2021. We, the editors and authors of this special issue, are still shocked and deeply saddened by this terrible loss. We can only seek some small solace in the fact that her highly original and relevant contribution on the Eurasian steppe was ready for publication when her life ended so abruptly. We are grateful to the editors of the *Slavic Review*, who kindly agreed to publish her paper posthumously.

We have been fortunate to know Maya as a colleague, and some, as a friend. To all, she was a kind, generous, inspiring person, with a keen sense of humor; and a brilliant scholar, who produced research of the highest standard, making an extraordinary contribution to east European and Central Asian studies. Her love of different natural environments, from the steppes to the mountains, was truly inspirational, helping generate more awareness of their value, and of their specificity in the historical disciplines. Her memory will live on in our hearts and in our minds.

The steppe has many faces and many meanings. Depending on one's viewpoint or disciplinary perspective, it is perceived and depicted as a wide, free space, a geographical unit, or a contact zone. It is also seen as a barren land awaiting the transformation of humans and nature, a projection screen for identities, and a space for self-realization.[1] The steppe is often associated with certain climatic conditions, with a specific flora and fauna. As an object of study, it is not only of interest to geographers, geologists, zoologists, or botanists but also to historians, art historians, cultural studies experts, and many others.

Productive historical research mostly focuses on the steppe in the prerevolutionary period; such scholarship hardly exists for the Soviet period. Even if single studies from different disciplines exist, the Soviet steppe as such has hardly ever become a topic of interdisciplinary research. This is

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1. Christopher Ely, *This Meager Nature: Landscape and National Identity in Imperial Russia* (DeKalb, Ill., 2002).

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surprising because the Soviet and post-Soviet periods saw multiple engagements with the steppe of different groups of actors and in different spheres such as agriculture or film. The transformative zeal of the socialist regime reached into the steppe and led to large-scale attempts to change populations and landscapes, often with far-reaching and long-lasting social, political, and ecological consequences. It is the aim of this themed section to address the Soviet steppe in an inter-disciplinary approach and stimulate further research. In particular, geographic and environmental perspectives will be combined with historical-political and literary-cinematic ones.

Biogeographically, the Soviet steppe belongs to the steppe belt of the Eurasian continent, the largest steppe region in the world. It stretches from central Europe to China, comprising parts of Ukraine, southern Russia, Central Asia, Mongolia, and China. Its main characteristics are defined by its treeless vegetation, a low amount of precipitation (200–400 mm per year), with high seasonal and inter-annual differences, a temperate climate with diurnal (hot days and cold nights), seasonal (hot summers and cold winters) variations, and high solar radiation.[2] Such conditions are found not only in Eurasia, but also on other continents, however, often bearing different terms: most notably, the North American prairie, the South American pampas, and temperate savannahs in Africa.

The Soviet steppe is also a product of the political, economic, and cultural history of the Eurasian steppe belt. For millennia, the Eurasian steppe has been the home of nomadic and semi-nomadic populations practicing animal husbandry. Practices of grazing, burning grasses, and agro-pastoralism meant that the Eurasian steppe has been for a long time an anthropogenic landscape: the key characteristics of the steppe listed above are not simply "natural," but considerably shaped by humans.[3] Throughout the millennia, political and environmental changes engendered vast population movements across the steppe. Pastoralists have always been closely connected to sedentary populations in oases or outside the steppe belt through commerce. In particular, Eurasian nomads' mobility patterns influentially shaped trade along the networks of trade routes traditionally referred to as the "Silk Road."[4] Nomadic pastoralists—in particular the Huns during the fourth and fifth centuries, and the Mongols and Turks during the tenth and the fifteenth centuries—also excelled in warfare and conquest, at times driven by the limitations of the steppe ecology.[5] Migration, colonization, appropriation, and expulsion have very much shaped the steppe's history.[6]

2. Herbert Hurka, Nikolai Friesen, Karl-Georg Bernhardt, Barbara Neuffer, Sergej Smirnov, Alexander Shmakov, and Frank Blattner, "The Eurasian Steppe Belt: Status Quo, Origin and Evolutionary History," *Turczaninowia* 22, no. 3 (September 2019): 5–71.

3. Andrew C. Isenberg, "Seas of Grass: Grasslands in World Environmental History," in Andrew C. Isenberg, ed., *The Oxford Handbook of Environmental History* (Oxford, 2014).

4. Michael D. Frachetti, C. Evan Smith, Cynthia M. Traub, and Tim Williams, "Nomadic Ecology Shaped the Highland Geography of Asia's Silk Road," *Nature* 543, no. 7647 (March 2017): 193–98; David Christian, "Silk Roads or Steppe Roads? The Silk Roads in World History," *Journal of World History* 11, no. 1 (Spring 2000): 1–26.

5. Isenberg, "Seas of Grass," 141.

6. Nicholas Breyfogle, Abby Schrader, and Willard Sunderland, eds., *Peopling the Russian Periphery: Borderland Colonization in Eurasian History* (London, 2007). See also:

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Two main approaches inform research on the Soviet steppe. The first approach conceives of the steppe as "grasslands." Grasslands denote, somewhat tautologically, "a habitat dominated by grass."[7] This approach foregrounds the predominant vegetation cover of the steppe, but may also allude to its flat topography by making an analogy to the ocean with expressions such as "seas of grass."[8] Through its focus on vegetation cover, this approach allows the connection of the Soviet steppe to debates on other grasslands, including those with different climatic and geographical conditions.[9] The second approach conceives of the Soviet steppe as "drylands" or "arid lands."[10] Putting it simply, drylands are defined as areas where the potential water loss through evaporation balances or exceeds the meager annual rainfall.[11] Such an approach privileges conceiving of the steppe as a climatological space characterized by a low amount of precipitation with high seasonal and inter-annual variability and high evapotranspiration. It connects the Soviet steppe to debates on other semi-arid and arid spaces such as North Africa and the Middle East.[12]

The presence of these two approaches to the Soviet steppe are partly a result of the ecological diversity within the landscapes subsumed under the term "steppe" in the former Soviet Union. The distinctly different prevailing ecologies raise the question about the definition of the steppe as a biome in the Russian empire and the Soviet Union. In other words: why is it that the distinctly different ecological spaces of the fertile Ukrainian *chernozem* lands with rain-fed agriculture and the parched loess plains with sparse vegetation cover in Uzbekistan were classified under the very same category? There exists a significant body of literature on the scientific bases of the Soviet classification system for biomes.[13] However, establishing climatic, vegetation, and soil taxonomies is hardly ever a purely scientific, but also a political exercise.[14]

Michael Kunichika, *"Our Native Antiquity": Archaeology and Aesthetics in the Culture of Russian Modernism* (Boston, 2015).

7. David D. Gibson, *Grasses and Grassland Ecology* (Oxford, 2009), 1.

8. Isenberg, "Seas of Grass"; See also Marc Elie and Carole Ferret," Verte, la Steppe? Agriculture et environnement en Asie centrale," *Études rurales* 200, no. 2 (2017): 65.

9. See for example: Thembela Kepe, "Grasslands Ablaze: Vegetation Burning by Rural People in Pondoland, South Africa," *South African Geographic Journal* 87, no. 1 (March 2005): 10–17; Kathleen A. Farley, "Grasslands to Tree Plantations: Forest Transition in the Andes of Ecuador," *Annals of the Association of American Geographers* 97, no. 4 (December 2007): 755–71; Emily T. Yeh, "Green Governmentality and Pastoralism in Western China: 'Converting Pastures into Grasslands,'" *Nomadic Peoples* 9, no. 1/2 (2005): 9–30; Lesley Instone, "Encountering Native Grasslands: Matters of Concern in an Urban Park," *Australian Humanities Review* 49 (November 2010): 91–118.

10. Diana K. Davis, *The Arid Lands: History, Power, Knowledge* (Cambridge, Mass., 2016).

11. Sharon E. Nicholson, *Dryland Climatology* (Cambridge, Eng., 2009).

12. Alan Mikhail, ed., *Water on Sand: Environmental Histories of the Middle East and North Africa* (Oxford, 2013); Diana K. Davis, *Resurrecting the Granary of Rome: Environmental History and French Colonial Expansion in North Africa* (Athens, Ohio, 2007); Loretta Kim and Niccoló Pianciola, "Introduction: Watering the Land-Based Empires," *Journal of the Economic and Social History of the Orient* 62, no. 4 (May 2019): 525–59.

13. A.A. Chibilev, *Lik stepi: Ekologo-geograficheskie ocherki o stepnoi zone SSSR* (Leningrad, 1990).

14. Mikhail Stroganov, "Landshaftnye obrazy i identichnost' 'voobrazhaemykh soobshchestv,'" in N. Kokovina and Mikhail Stroganov, eds., *Step' shirokaia:*

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For Russian (imperial) and Soviet history, the steppe has always been important. Tensions between settled Slavs and their nomadic neighbors date back to early Russian history. In the sixteenth century, a distinct shift occurred on the Eurasian steppe: the advent of Russian settlers and the spread of agriculture. The Turko-Mongolic inhabitants of the steppe zones were often perceived as a threat to Slavic settlement. In the early modern period, the steppe zones in the south were regarded by Catherine the Great and other Russian rulers as lands of economic possibilities and demographic engineering with the potential for agriculture, trade, and commerce. Ultimately, the steppe became a symbol of Russia itself.[15]

The trend of settlers appropriating the steppe accelerated during the eighteenth to the twentieth centuries not just on the Eurasian steppe, but also in similar ecological zones across the globe, when farmers converted millions of hectares of grasslands into fields of grain.[16] This brought about fundamental changes to the pastoral economies of the grasslands, with a series of invasions in flora and fauna, the advent of new technologies such as trains or hydrological engineering, but also rapid social change and displacement of entire populations.[17] The comparison of these processes on different continents remains to date little explored, with the exception of the connections between the Russian steppe and the North American prairie.[18]

Since the time of Catherine the Great at the latest, nomads' way of living was clearly regarded inferior to settlers' by representatives of the imperial political system and elites. Nevertheless, the Russian empire did not pursue large-scale campaigns of sedentarization. Turning nomadic or semi-nomadic groups into sedentary Soviet citizens became a major project under Iosif Stalin. It is not by coincidence that several historiographic studies in different languages have been devoted to the sedentarization campaign and the catastrophic famine in Kazakhstan in the (early) 1930s, as it was a blatant example of how Stalin's regime dealt with rural and nomadic populations.[19]

Prostranstvennye obrazy russkoi kul'tury. Materialy nauchnoi konferentsii (Kursk, 2009).

15. Willard Sunderland, *Taming the Wild Field: Colonization and Empire on the Russian Steppe* (Ithaca, 2004).

16. David Moon, *The Plough that Broke the Steppes: Agriculture and Environment on Russia's Grasslands, 1700–1914* (Oxford, 2013).

17. Isenberg, "Seas of Grass."

18. David Moon, "The Grasslands of North America and Russia," in John Robert McNeill and Erin Stewart Mauldin, eds., *A Companion to Global Environmental History* (Chichester, UK, 2012).

19. Niccolò Pianciola, *Stalinismo di frontiera. Colonizzazione agricola, sterminio dei nomadi e costruzione statale in Asia centrale (1905–1936)* (Rome, 2009). See also his: Niccolò Pianciola, "Famine in the Steppe: The Collectivization of Agriculture and the Kazak Herdsmen, 1928–1934," *Cahiers du monde russe* 45, no. 1/2 (January–June 2004): 137–91; Isabelle Ohayon, *La sédentarisation des Kazakhs dans l'URSS de Staline: Collectivisation et changement social (1928—1945)* (Paris, 2006). See also the Russian translation: Isabelle Ohayon, *Sedentarizatsiia kazakhov v SSSR pri Staline: Kollektivizatsiia i sotsial'nye izmeneniia (1928–1945 gg.)* (Almaty, 2009); Sarah Cameron, *The Hungry Steppe: Famine, Violence, and the Making of Soviet Kazakhstan* (Ithaca, 2018); Robert Kindler, *Stalins Nomaden: Herrschaft und Hunger in Kasachstan* (Hamburg, 2014). See also the English translation: Robert Kindler, *Stalin's Nomads: Power and Famine in Kazakhstan*, trans. Cynthia Klohr (Pittsburgh, 2018).

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The Bolsheviks' extreme efforts to transform people, society, landscapes and nature affected the steppe and desert regions in several respects. Continuing pre-revolutionary, imperial practices and patterns of thought, the "empty," "barren" lands were regarded as ideal spaces for the erection of modern worlds, of economic and infrastructure development, for the construction of railways or irrigation canals, simultaneously aiming to modernize populations perceived as "backward." The non-productive, dull steppe lands were to be turned into blossoming gardens, with the aim of cultivating certain crops in ever growing amounts.[20] Cotton was the "white gold" around which some of the Soviet republics' economies and politics centered. Cotton growing demanded the expansion of irrigation systems that was most intensely pursued beginning in the (late) 1950s. Irrigation construction, however, did not always lead to full-scale infrastructural development as the building of roads or settlements lagged behind. Drainage systems were much discussed but not realized sufficiently so that ecological problems like groundwater rising and waterlogging quickly became so serious that they damaged (agricultural) production. The desiccation of the huge Aral Sea since the 1960s was in large part a consequence of excessive irrigation.

The steppe-related imaginaries and discourses certainly became more critical from the 1970s on. However, the perception of steppe inhabitants (human and non-human) as strange, the "othering," or the persisting visions for large-scale transformation remained, thereby exhibiting a strong continuity of pre-Soviet and Soviet narratives. Irrigation construction, for example, went on until the late Soviet period although due to its ecological and economic effects it was heavily criticized by journalists, scholars, and writers.[21] Other ecological problems were increasingly discussed in public in the late Soviet period.[22] In 1989, on the eve of the Soviet Union's collapse, one of the first notable anti-nuclear movements in the Soviet Union emerged in Kazakhstan. It was called "Nevada Semipalatinsk" and was led by the author Olzhas Suleimenov. The movement's protests resulted in the closure of the nuclear test site at Semipalatinsk in 1991 where the Soviet state had conducted hundreds of nuclear weapons tests.[23] The national and social implications of ecological damage, the decline of biodiversity and radiation need to be studied further.

20. Matthew J. Payne, *Stalin's Railroad: Turksib and the Building of Socialism* (Pittsburgh, 2001); Irene Anastasiadou and Aristotle Tympas, "Iron Silk Roads: Comparing Interwar and Post-War Transnational Asian Railway Projects," in Martin Schiefelbusch and Hans-Liudger Dienel, eds., *Linking Networks: The Formation of Common Standards and Visions for Infrastructure Development* (London, 2014), 169–86; Julia Obertreis, *Imperial Desert Dreams: Cotton Growing and Irrigation in Central Asia, 1860–1991* (Göttingen, Germany, 2017); Maya K. Peterson, *Pipe Dreams: Water and Empire in Central Asia's Aral Sea Basin* (Cambridge, Eng., 2019).

21. Obertreis, *Imperial Desert Dreams*, 371–461.

22. There was, for example, a drastic decline of saiga antelopes known for their large migration routes. As an overview: Marinus J. A. Werger and Marja A. van Staalduinen, *Eurasian Steppes: Ecological Problems and Livelihoods in a Changing World* (Dordrecht, Netherlands, 2012).

23. Paul Josephson, Nicolai Dronin, Ruben Mnatsakanian, Aleh Cherp, Dmitry Efremenko, and Vladislav Larin, *An Environmental History of Russia* (Cambridge, Eng., 2013), 131, 283.

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The articles within this thematic cluster speak to many of the themes highlighted above. In her analysis of the steppe as a curative place, Maya Peterson describes how exposure to its climate in conjunction with drinking vast quantities of *kumys*, the famous fermented mare's milk produced by steppe herders, was understood to improve people's health. Rather than referring to the steppe as a capricious, unstable, and possibly hostile environment for humans, the "climate-kumys cure" *(klimatokumysolechenie)* in the 1920s Soviet Union propagated the climatic characteristics of the steppe as beneficial for the human organism. Soviet doctors argued that exposing the body to the large temperature differences between hot summer days and cool temperatures at night would lead to *zakalivanie* (Russian for tempering). More precisely, the body would be trained to be less affected by cold, better able to resist infections and generally to protect itself. This tempering should be particularly beneficial for patients suffering from tuberculosis, provided that their bodies were not too weakened by the condition to endure the strain of this process. The idea of *zakalivanie* involved physical activities and taking advantage of the fresh air rather than letting the body rest only. It drew on the presumed strengthening properties of the steppe environment, which also, in condensed form, were contained in the *kumys* produced from sturdy mares fed by steppe grasses. In this understanding, the harshness of the steppe thus invigorated and cured humans.

Timm Schönfelder's article points to the term *melioratsiya*, translated as "melioration" or "amelioration." Melioration refers to hydro-technical and agricultural measures intended to "improve the land" by improving its water and soil as well as climatic conditions. The main aim of these measures is to enable or increase agricultural production, or to make possible the exploitation of raw materials such as peat.[24] While *melioratsiya* as a concept already existed during the early Soviet Union, it gained particular traction during the Brezhnev era. The science and practice of *melioratsiya* mainly developed on the experimental fields of the Central Asian drylands and particularly in the Turkmen SSR, with irrigation and drainage being its key measures. As Schönfelder's paper demonstrates, insights from Central Asia were transferred to the steppes of the North Caucasus without adaptations to the local context. Through the lens of *melioratsiya*, the steppe was turned conceptually into a natural resource. In other words, the steppe was understood solely through its useful properties for the Soviet economy—as potentially fertile soil strata to increase the agricultural output of the land. This view of the steppe was both instrumental and technical, and *melioratsiya* was a domain of Soviet engineering. It resulted in grand plans to bring ever more water to the Stavropol steppe to fix its presumed key deficit: sparse and unpredictable rainfall. Such a perspective, however, ignored the steppe's fragile ecosystem and led to erosion and degradation.

Throughout the Soviet period, the steppe remained a challenge not just for land reclamation and irrigation, but also for Soviet imagination. The Central

24. Artem Kouida, "Land Melioration in Belarusian Polesia as Modernization Factor in the Soviet Periphery," *Zeitschrift für Ostmitteleuropa-Forschung* 68, no. 3 (August 2019): 401–17.

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Asian drylands defied easy integration into narratives of a collective Soviet space. Soviet art was partly built on the heritage of the pre-revolutionary Russian imperial culture. Clemens Günther's article explores the element of strangeness in the case of Turkmenistan. Particularly insightful is his exploration of Turkmenistan's landscape in Russian and Soviet science fiction literature and film. These works allude to Turkmenistan as being "alien" by connecting it to outer space. In doing so, they undertake a literary exploration of a Marxist political and economic utopia on Mars as in Alexander Bogdanov's *The Red Star* (1908) or *Engineer Menni* (1912),[25] suggesting that it could also come true on Earth. In turn, they provide the ground for the biting critique of the Soviet system in Georgii Danieliya's film *Kin-dza-dza* (1986) with a built-in escape route by claiming that the story was situated in outer space. Turkmenistan, it seems, served as a "landscape analogue" in Soviet literature and film to simulate outer space. Such an interpretation expands the redefinition of the steppe as new or virgin land by yet another dimension—the term also denotes spaces beyond the Earth's atmosphere. Yuri Gagarin, the Soviet cosmonaut and first man in space, received among many other awards the Soviet medal "for the conquest of virgin lands" (*"za osvoenie tselinnykh zemel'"*).[26] The Soviet steppe has been closely connected to Soviet spacefaring from its inception. Among other reasons, the location of Baikonur spaceport was chosen because it had the possibility of launching eastward or near-eastward over a "sparsely populated" area—the Kazakh steppe. Together with the agrarian modernity of the Virgin Lands Campaign, the Kazakh steppe was chosen as the background of Soviet space modernity and became both the landing ground for victorious cosmonauts and the drop zone for rocket debris.[27]

25. Compare also: McKenzie Wark, *Molecular Red: Theory for the Anthropocene* (London, 2016), 3–61.

26. Filipp Prokudin, "Planeta Tselina" SSSR pokoril kosmos, no poterpel porozhenie na zemle," *Ria Novosti online*, July 7, 2019, at https://ria.ru/20190707/1556136197.html (accessed February 11, 2022).

27. Robert A. Kopack, "Rocket Wastelands in Kazakhstan: Scientific Authoritarianism and the Baikonur Cosmodrome," *Environmental Governance in Authoritarian and Populist Regimes*, special issue of *Annals of the American Association of Geographers* 109, no. 2 (March 2019): 556–67.

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