

Working title: Quiet River, Heavy Waters: Un-silencing Nuclear Narratives of Socio-environmental Inequalities in the Cradle of Soviet Plutonium, 1945-1977

Introduction

This dissertation research project aims to utilize personal and official archival sources to examine the role of Soviet-era social inequality in shaping the environmental burdens of radioactive contamination experienced by the population of north central Chelyabinskaya Oblast in the Southern Urals, particularly during the years from 1945 to 1977.¹ In 1947, the Soviet Union's first plutonium production facility, Mayak Production Association (PO Mayak), began operation near the restricted city of Ozersk. Local rural communities since then have continued to experience severe and long-lasting impacts resulting from exposure to radioactive contamination released into the Techa River and the surrounding ecosystem by PO Mayak.² On the one hand, radioactive contamination originating from PO Mayak reached the surrounding population indiscriminately, as a matter of proximity to sources and pathways of exposure. On the other hand, certain segments of the population, particularly in rural areas, suffered greater exposure than other areas as a result of local authorities' and PO Mayak directors' deliberate policies.³ My research primarily asks how environmental degradation resulting from nuclear production at PO Mayak, along with the suppression of knowledge about radioactive contamination, articulated with historical social inequalities experienced by communities situated in the areas of highest exposure to hazardous risk along the Techa River in Chelyabinskaya Oblast.

¹ Kate Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters*. (New York: Oxford University Press, 2013); Paula Garb and Galina Komarova, "Victims of 'Friendly Fire' at Russia's Nuclear Weapons Sites" in *Violent Environments*. Nancy Lee Peluso and Michael Watts (eds.). (Ithaca, NY: Cornell University Press, 2001); Galina Komarova, "Ethnic and confessional aspects of the 'Maiak' accident" in *Peoples, Identities, and Regions: Spain, Russia, and the Challenges of the Multi-ethnic State* (Moscow: Institute Ethnology and Anthropology Russian Academy of Sciences, 2015); Michael Edelstein, *Cultures of Contamination: Legacies of Pollution in Russia and the U.S.*, Series: *Research in Social Problems and Public Policy*, Volume 14, Michael R. Edelstein, Maria Tysiachniouk, Lyudmila V. Smirnova, eds. (Bingley, UK: Emerald Group Publishing, Ltd., 2007); Scott D. Monroe, "Chelyabinsk: The Evolution of Disaster," *Post-Soviet Geography*. 33(8) 533-545, 1992.

² *Ibid.*

³ Brown, *Plutopia*; Garb and Komarova, *Violent Environments*.

Relevant literature

Within the field of geography, this research engages with debates regarding the causal factors that contribute to the inequitable distribution of environmental hazards along lines of social difference⁴. A major point of contention among scholars is the question of how social differences such as race and socioeconomic status, along with capitalist market dynamics, compare in their respective causal powers to produce inequalities in the spatial and social distribution of environmental goods and hazards⁵. In Soviet society, the official discursive opposition to capitalism and social inequality renders the social and environmental inequalities that did – and continue to – exist in the north central region of Chelyabinskaya Oblast a key case study in which to examine the historical production of social and environmental inequalities.⁶ Yet, while environmental justice as an interdisciplinary academic arena of social-environmental research has become well-established in the United States along with many other regions of the world,⁷ there still exists a relative scarcity of scholarly literature concerning the question social-environmental inequalities, in relation to either Soviet or post-Soviet societies.⁸ Among the factors which defy any simplistic transfer of established concepts and models of environmental justice from their American contexts to Soviet historical

⁴ Robert D. Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality* (Boulder, CO: Westview Press, 2000); Rachel Brahinsky et al., “Race, Space, and Nature: An Introduction and Critique,” *Antipode* 46.5 (2014) 1135-1152; Jake Kosek, *Understories: The Political Life of Forests in Northern New Mexico* (Durham, NC: Duke University Press, 2006); David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (New York: Oxford University Press, 2007).

⁵ Bethany Cutts et al., “Media Frames and Shifting Places of Environmental (In)Justice: A Qualitative Historical Geographic Information System Method” *Environmental Justice*, 9.1 (2016) 23-28; Liam Downey, “US Metropolitan-area Variation in Environmental Inequality Outcomes.” *Urban Studies* 44:953-977, 2007; Jeremy Pais et al., “Unequal trajectories: racial and class differences in residential exposure to industrial hazard,” *Social Forces*, 92.3 (2014) 1189-1215.

⁶ Brown, *Plutopia*. Julian Agyeman and Yelena Ognjeva-Himmelberger, *Environmental Justice and Sustainability in the Former Soviet Union* (Cambridge, MA: MIT Press, 2009); Jane Dawson and Robert Darst, “Russia’s proposal for a global nuclear waste repository: safe, secure, and environmentally just?” *Environment*, 47.4 (2005) 12-21.

⁷ David Harvey, *Justice, Nature, and the Geography of Difference* (Malden, MA: Blackwell Publishers Inc., 1996); Elizabeth Ammons and Modhumita Roy, Eds., *Sharing the Earth: An International Environmental Justice Reader* (Atlanta: University of Georgia Press, 2015).

⁸ Julian Agyeman and Yelena Ognjeva-Himmelberger, *Environmental Justice and Sustainability in the Former Soviet Union* (Cambridge, MA: MIT Press, 2009).

contexts, are those defined by the distinct structure of social relationships which defined the Soviet era. That is, an official discourse in which social difference, particularly that based on race and ethnicity, was ostensibly not only celebrated but even institutionalized as part of its *raison d' être*.⁹ Furthermore, in the particular case of the Techa River Valley, scholars who have studied the social and cultural implications of radioactive contamination have noted that many of the afflicted communities themselves, of which Bashkir and Tatar ethnicities compose a large proportion, express skepticism or uncertainty regarding their race, ethnicity, or Muslim identity as a causal factor contributing to their disproportionate burdens of contamination.¹⁰ Therefore, while the pioneers of environmental justice, such as Robert Bullard whose trailblazing research has made poignantly visible the environmental and spatial manifestations of Jim Crow and other forms of social inequality, it would make for more rigorous scholarship to be cautious in synthesizing theoretical approaches to address Soviet social-environmental inequalities using concepts developed in American historical contexts.

This research also engages with the field of history of science, focusing on Soviet science in relation to the environment and nature. American and Western European scholars have critiqued Soviet policies and practices towards ecosystems and resources, often portraying the Soviet system as inherently antagonistic towards nature.¹¹ In more recent years, American and Western European scholars have posed challenges for this model of Soviet human-environment relationships. Their arguments are based on historical research demonstrating critical yet previously overlooked

⁹ Joy Gleason Carew, *Blacks Reds and Russians: Sojourners in Search of the Soviet Promise* (New Brunswick, NJ: Rutgers University Press, 2010); Yuri Slezkine, “The USSR as a Communal Apartment, or How a Socialist State Promoted Ethnic Particularism,” *Slavic Review*, 5(2) (Summer, 1994) pp. 414-452.

¹⁰ Garb and Komarova, *Violent Environments*.

¹¹ Marshall Goldman, *The Spoils of Progress: Environmental Pollution in the Soviet Union*. (Cambridge, MA: MIT Press, 1972); Murray Feshbach and Alfred Friendly, Jr., *Ecocide in the USSR: Health and Nature Under Siege* (New York: Basic Books, 1991); Paul Josephson et al., *An Environmental History of Russia* (New York: Cambridge University Press, 2013).

nuances in the histories of Soviet-era science and human-environment relationships¹². In this way, scholars argue that it is inaccurate to portray Soviet scientists as monolithic and incapable of self-reflexive critique¹³ or to essentialize Soviet human-environment relationships as invariably deleterious. Based on such awareness of tensions and differences among Soviet scientists, my proposed research aims to investigate their role in producing knowledge – or, alternately suppressing knowledge – about the human health and environmental impacts of plutonium production and how they enabled or challenged the processes by which environmental inequalities were produced.

Methods

A large portion of the data I collect for this research project consists of archival material from national and regional state affiliated repositories.

Rather than regard archival material as self-evident truth, I view the texts as qualitative data which exist by virtue of their privileged position held at the particular place and time when these texts were produced. Understanding that the privileged nature of state bureaucratic documents means that there are narratives and texts missing from the repositories of these documents, my approach to these primary sources is to not only read them for the existing text, but also for whose narratives are missing. On the other hand, given that my questions directly address the Soviet state articulated and exercised power to shape space and society, documents produced by Soviet state bureaucracies represent a critical source of data for this project. Within the holdings

¹² Jonathan Oldfield and Denis J.B. Shaw, “A Russian Geographical Tradition? The Contested Canon of Russian and Soviet Geography, 1884-1953,” *Journal of Historical Geography*, 49 (2015) 75-84; Douglas Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev* (Berkeley: University of California Press, 1999).

¹³ Denis J.B. Shaw and Jonathan Oldfield, “Scientific, Institutional and Personal Rivalries among Soviet Geographers in the Late Stalin Era,” *Europe-Asia Studies*, 60.8 (2008) 1397-1418; Sergey Glebov, “The Empire of Language: Space and Structuralism in Russian Eurasianism,” in *Empire De/Centered: New Spatial Histories of Russia and the Soviet Union*, Sanna Turoma and Maxim Waldstein, eds. Pp: 31-60 (Burlington, VT: Ashgate, 2013).

at OGACHO in particular, a key source of data is located within the division of personal documents for individuals whose life work has been recognized as contributing to the region's history.

Archival material housed at a site of privilege with state institutions, is processed and mediated by archivists who are bound by obligations primarily to the state and its laws, particularly in terms of guarding classified or politically sensitive material, secondly, to the professional practice and theory of producing and maintaining archival material, especially as technology and sheer growth in the volume of material continues to usher in rapid changes, and thirdly, to production of knowledge.¹⁴

Apart from archival material, additional sources of data consist of published material as primary sources. This includes newspaper articles and letters to the editors, journals, historical maps, and memoirs. I place the texts I use as sources of data within the context of the time and place with the intention of keeping their meanings and purposes intact, using what I know about the Soviet state, the governing bodies and hierarchies of government and the Communist Party, and how it changed from the Second World War to the late Brezhnev years. Accordingly, I use the historiographies of the Soviet period of that time in order frame my interpretation of the texts.

In line with my critical approach to the inherent subjectivity of knowledge production, I am conscious of my own value-laden questions and analysis interpreting texts in a language, a history, and a place that is far from my own.¹⁵

¹⁴ Francis X. Blouin and William G. Rosenberg, *Processing the Past: Contesting Authority in History and the Archives* (New York: Oxford University Press, 2011); Kristina Spohr Readman, "Memoranda," in Miriam Dobson and Benjamin Ziemann (eds.), *Reading Primary Sources: The Interpretation of Texts from 19th and 20th Century History* (New York: Routledge, 2009).

¹⁵ Benjamin Ziemann and Miriam Dobson, "Introduction," in Dobson and Ziemann (eds.), *Reading Primary Sources: The Interpretation of Texts from 19th and 20th Century History* (New York: Routledge, 2009).

Overview of content sections:

1. Social space and inequality in the Southern Urals
 - The historical contexts in which the social and cultural geography of the Southern Urals formed during the twentieth century, leading up to 1945
 - Addresses Research Question #1
2. Conceptualizing a chronotope of total war
 - Brief outlining the concept of a chronotope – or time-space – of total war as a conceptual approach in order to connect the spatial and temporal impacts of the war not only on the Soviet Union, but in particular, the Southern Urals region
 - Continues to address Research Question #1
3. Un-accidental exposure and the social production of space
 - Spatial proximity as a directly correlated to risk, and the sociopolitical practices and conditions which contributed to this spatially-contingent risk; the production of space as a critical factor regarding what was and what was not accidental exposure.
 - Addresses Research Question #2
4. Scientists as Subjects
 - Focusing on the subjectivities of scientists and their distinct situations as knowledge producers
 - Addresses Research Question #3

Archive List (main archives to be used)

Name of repository	City			Specific collections to use
OGACHO	Chelyabinsk			Executive committee decrees, R -274 and personal division
RGANI	Moscow			1. Fond 3, Politburo TsK KPSS (1952-1990), Opis 33, On questions of education and science
				2. Fond 5, Apparat TsK KPSS (1949-1991), Opis 17, Division of Science and Education
AMN SSSR-RAMN	Moscow			Fond P-9120: Reports of the Institute of Medical Genetics
МДМАК	Moscow			Fond 2: Personal papers of I.V. Kurchatov, including scientific writings, notebooks, and professional correspondence

Acronyms

AMN SSSR-RAMN	Академия медицинских наук СССР / Российская академия медицинских наук / Academy of Medical Science of the USSR/Russian Academy of Medical Science
OGACHO	Объединенный государственный архив Челябинской области (ОГАЧО)/ Integrated State Archives of Chelyabinsk Oblast
RGANI	Российский государственный архив новейшей истории (РГАНИ)/ Russian State Archives of Contemporary History
МДМАК	Мемориальный дом-музей академика И. В. Курчатова