Reclaiming Native Soil:
Cultural Mythologies of Soil
in Russia and Its Eastern Borderlands
from the 1840s to the 1930s

by

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Abstract

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This dissertation explores the cultural topos of soil in Russian and early Soviet culture. Centered on the Soviet project of land reclamation in Central Asia in the 1930s, this dissertation traces the roots of Soviet utopian and dystopian fantasies of soil to the ideological and discursive traditions of the 19th century. It considers how Soviet cultural, scientific, and political figures renovated and adapted 19th-century discourse in order to articulate for their own age the national, revolutionary, and utopian values attached to soil. The intersection of national soil and national identity in this discourse is examined, along with the persistent fear that Russian identity and utopian aspirations are threatened by "Asian" land, both within and beyond Russia's borders.

Providing an overview of selected high points in the discursive history of soil in Russia, this study begins with romantic and materialist discourses of soil from the 1840s to the 1860s, tracing organicist concepts of native soil from German philosopher Herder to literary critic Vissarion Belinskii and thence to the symbolic uses of Russian *pochva* in the writings of the Slavophiles, the *pochvenniki*, and others. A case study follows on German chemist Justus Liebig and the transfer of scientific metaphors of soil into the cultural domain, concluding with a discussion of Liebig's influence on Marx's theory of social metabolism and its far-reaching influence on Soviet ideology.

The study moves to its core discussion of Soviet poetics and ideologies of land use in the 1920s and 1930s. First, I examine writer and land reclamation engineer Andrei Platonov's novella *Dzhan* in the context of Soviet technological utopianism and the campaign to transform the sands of Central Asia into fertile soil. The following chapter extends the discussion of Soviet land reclamation to the dystopic themes of the Asiatic mode of production and "reforging" in the novels of Platonov, Bruno Jasienski, and Boris Pil'niak. This study closes with a discussion of the revival of organic conceptual metaphors of nationality and national soil in the context of the *smychka*, or union, between the Soviet center and its Asian periphery in the films of Vertov, Turin, Kalatozov, and Iarmatov.

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Dedicated to the memory of James L. Moore (1918-2011)—
humble tiller of the soil,
Platonovian caretaker of machines,
animals, and plants.

INTRODUCTION

> 'Soil' was the philosopher's stone for us, a journalistic elixir, an inexhaustible goldmine, a cash-cow, in a word, everything.
>
> Maksim Antonovich[1]

> Here […] we will have true Bolshevik soil. Now we just have ravines, sand, and bare clay. That's not ours—it's tsarist territory!
>
> Andrei Platonov, "Pervyi Ivan"[2]

As both Antonovich—a journalist and geology enthusiast of the 1860s— and Platonov—a writer and land reclamation engineer of the early Soviet period—demonstrate, Russian soil has long been a site of utopian projections. This dissertation traces Russian utopian fantasies of soil in the ideological and discursive traditions of the 19th century and the early Soviet period. It considers the attempts of writers, scientists, filmmakers and political figures to renovate the poetics of Russian soil through new ideologies and models of the human relationship with nature and to articulate the national, revolutionary, and utopian potentials of land. While this study proceeds chronologically, opening with a discussion of emerging materialist discourses of soil in Russia of the 1840s and concluding with Soviet poetics of land, it is, conceptually, an archeological study that originated in an interest in the Soviet project of land reclamation in Central Asia in the 1930s. As this long view of Russian discourse of soil reveals, "Asian" land—whether within or beyond Russia's borders—threatened the foundations of Russian and Soviet utopian fantasies. Although this dissertation takes a long view of the development of this Russian discourse of soil, it does not claim continous coverage of this period; rather, it explores selected moments in a continuous discourse. The result is an image that is patterned, if partial. This choice of focus offers one means of entering and understanding the continuities (and discontinuities) of the overlapping discourses of nature, society, and nation in Russian intellectual and cultural history on either side of the political rupture of the October Revolution, through a single—but crucial—cultural *topos*: soil.

Topos, which means "place" in Greek, performed a specific function in formal Greek rhetoric, but has expanded in use as a term of poetic and textual analysis.[3] Svetlana Boym

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[1] "'Почва' была для нас философским камнем, журнальным эликсером, золотым неистощимым дном, дойною коровою, словом, всем." M. A. Antonovich, "Strizham (Poslanie ober-strizhu, gospodinu Dostoevskomu)" (1864), in *Literaturno-kriticheskie stat'i* (Moscow: Gos. izd-vo khudozh. lit-ry, 1961), 182. All translations are mine unless otherwise indicated.

[2] "Вот {…} у нас получится действительно большевистская почва. А сейчас у нас есть овраги, пески, обнаженные глины. Это еще не наша, а царская территория!" Andrei Platonov, "Pervyi Ivan: fragmenty ocherka" (1930), *Oktiabr'* 5 (2004), 121.

[3] For more on *topos,* see J. E. Malpas, *Place and Experience: A Philosophical Topography* (Cambridge: Cambridge University Press, 2007).

describes a *topos* as both "an organization of space and an organization of speech."[4] The congruence (and sometimes confusion) of these configurations of space and speech remind us of the material basis of our metaphors. If, as Paul Friedrich suggests, the body is a stabilizing point of reference, then *soil* or *ground* (*pochva* in the Russian) is of secondary importance only to the body as a fundamental point of reference providing a model for our understandings of the abstract.[5] Cognitive metaphors based on such universals of embodiment inscribe the material world in the semantic and symbolic domain, and, ultimately, structure knowledge. On the one hand, then, we conceptualize and spatialize the abstract through the universals of material embodiment; on the other, as George Lakoff notes, it is a central cognitive metaphor that beliefs and ideas are themselves "locations."[6] Because human engagement with soil is fundamental, experiential and historical, soil is a crucial site of metaphor that structures experience and knowledge, perhaps the originary *topos*.

Proceeding from the understanding that metaphor structures the cultural and epistemic domains, this dissertation approaches cultural myths of soil through discourse analysis and historical contextualization. Some definition of terms is thus in order. While *pochva* is the most symbolically important term in the present study, certain lexical variations are also significant—dirt (*griaz'*), earth (*zemlia*), black earth (*chernozem*), native soil (*rodnaia zemlia*), virgin soil (*tselina, nov'*) as well as a number of technical terms appear throughout this study.[7] I examine the reach of these terms and the systems of metaphor in which they circulate in the Russian and Soviet context through several case studies connected by a cast of recurring characters.

The relationship between soil as a material substance, an index of physical embodiment and place, and soil as a symbolic *topos*, an index of culture, is a major concern of this study. While my ultimate goal is to examine these traditions in literature and film of the 1930s, I ground this study of the discourse of soil in the emergence of new scientific and cultural conceptions of soil in the early 19th century. As I discuss in **Chapter One**, the German Romantic traditions of the late 18th and early 19th centuries, particularly the work of German philosopher Johann Gottfried Herder, generated an organicist discourse of nationality that inserted symbolic values into the episteme of natural history and had a profound effect on Russian discourse of nationality. Primordialist theories of nationalism habitually reified national essence through allusion to "soil," claiming the material substance as the originary medium of national differentiation and identity. Such theories of national primordialism transferred social and cultural phenomena into an organic conceptual domain, creating the complex metaphor that nations "grew" out of "native soil." This organicist discourse of national particularity emphasized the diversity of "native soils" as natural phenomena, pluralizing the concept of culture.[8] During this period, soil was heavily infused with political, economic, and cultural

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[4] Svetlana Boym, *Commonplaces: Mythologies of Everyday Life in Russia* (Cambridge: Harvard University Press, 1994), 11.

[5] Paul Friedrich and Anwar S. Dil. *Language, Context and the Imagination: Essays by Paul Friedrich; Selected and Introduced by Anwar S. Dil* (Stanford: Stanford University Press, 1979), 516.

[6] George Lakoff, Jane Espenson, Alan Schwartz, *Master Metaphor List, Second Edition* (Berkeley: UC Berkeley Cognitive Linguistics Group, 1991), accessed August 8, 2012, http://araw.mede.uic.edu/~alansz/metaphor/METAPHORLIST.pdf.

[7] Landscape, which I understand as an aesthetic construction and an object of high cultural discourse, does not enter my discussion except at moments of intersection with material culture. For more on understandings of landscape in 19th-century Russia, see Christopher Ely, *This Meager Nature: Landscape and National Identity in Imperial Russia* (Dekalb: Northern Illinois University Press, 2002).

[8] Richard White notes that Herder is one of "the avatars of contemporary multiculturalism." Richard White, "Herder: On the Ethics of Nationalism," *Humanitas* 18:1/2 (2005), 167.

symbolism, resulting in an epistemological confusion of "space and speech," to evoke Boym's formulation, a process brokered by structural metaphors and their transfer between fields of science and culture.

If we work from Althusser's capacious definition of ideology as "the Imaginary relationship of the subject to its Real conditions of existence," then we can say that this nationalist ideology served as a resource for a mythology of Russian national particularity, or even exceptionalism.[9] One manifestation of the conflation of national identity and native soil was *pochvennichestvo*, "the native soil movement," which Fedor Dostoevskii led in the 1860s. Dostoevskii was attacked by his contemporaries, like Antonovich, for exploiting the symbolic values attached to soil without defining them, demonstrating that Russian soil was as likely to be underdetermined as overdetermined. As I discuss further in Chapter One, 19th-century Russian discourse treated soil both as an ample (if indefinable) source of fertility and national essence and as a *tabula rasa*. Petr Chaadaev inaugurated this latter discourse of emptiness, when he asserted that, "Not a single useful thought has grown in the sterile soil of our fatherland."[10] Already in Chaadaev's formulation, Russian soil was a figure for linguistic and cultural reception. If English was, for the British, a mother-tongue laden with literary and cultural history, as Gillian Beer argues, then Russian language and culture were understood to be receptive, ahistorical entities—a myth encoded with both positive and negative meaning by divergent camps.[11]

Insecurity about Russia's lack of historical progress often resulted in a compensatory valorization of Russian agrarian life, also essentialized in soil. Throughout the 19th-century, the idea of "native soil" (*rodnaia zemlia, rodimaia zemlia*) carried a conservative nostalgia for rural life and traditions, which often took the form of pastoral fantasies of the *mir* or rural commune, or idealizations of the Russian peasantry. In this tradition, the mysterious fertility of *pochva* was transferred to autochthonous man—the *narod*, born straight from the earth, historically tied to the soil, and therefore, custodian of "true" Russian national identity. This appeal to the peasantry as ciphers, sybils, and interpreters of the Russian soil marked the attitude of the Russian populist movement [*narodnichestvo*]. The slogan "return to the soil" expressed the desire of the urban *intelligentsia* to discover pure Russian identity without the contamination of cultural "transplants." The organic metaphor of "transplantation" into Russia's receptive soil is a relentless figuration in 19th-century Russian discourse, originating in the writings of the influential literary critic Vissarion Belinskii. Belinskii contains the contradictory impulses of the age, disseminating German romantic philosophy in Russia, but also serving as an important figure in the traditions of Russian literary realism and radical journalism. Chapter One considers how organicist and national discourses of soil came into dynamic contact with materialist and realist counter-discourses that began to emerge in the 1840s. By placing Belinskii in dialogue with the *pochvenniki*, the pastoral in dialogue with the natural school, and religious philosopher Vladimir Solov'ev in dialogue with soil scientist Vasilii Dokuchaev, this chapter seeks to establish a horizon of discourse for later chapters.

If cultural and scientific discourses were deeply entangled in 18th and early 19th centuries, then in the first decades of the 19th century, distinct scientific discourses began to

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[9] Louis Althusser, *Lenin and Philosophy* (New York: Monthly Review Press, 1971), 162.
[10] Petr Chaadaev, "Apology of a Madman," cited here in English from *Readings in Russian Civilization: Volume II, Imperial Russia, 1700-1917*, ed Thomas Riha (Chicago: University of Chicago Press, 1969), 303-314.
[11] Gillian Beer, *Open Fields: Science in the Cultural Encounter* (Oxford: Clarendon Press; New York: Oxford University Press, 1996), 174-5.

consolidate around new and emerging institutions and practices of science. The study of nature was disengaging itself from philosophy and aesthetics, claiming authority on the basis of empirical data and controlled experiment; the study of soil, which had not enjoyed much prestige as a field of natural philosophy and had hitherto been the occupation of the gentleman farmer, was now being claimed by institutions of scientific knowledge. In **Chapter Two**, I offer the case study of the cultural reception of the work of German chemist Justus Liebig (1803-1873), a pioneer of soil science whose work exerted a major influence on Russian discourse of soil beginning in the 1840s. Although Liebig is a trespasser in the field of literary study, his literary reception throws light on how the emergent materialist discourses of soil responded to and influenced the organic, national, mystical, and Biblical discourses of soil discussed in Chapter One. Discussed by such authors as Ivan Turgenev, Nikolai Chernyshevskii, and Fedor Dostoevskii, Liebig helps to illuminate Russian materialism as a philosophy, a political posture, and a new discursive resource. In addition to tracing Liebig's direct influence in Russia, this chapter also discusses Liebig's profound impact on a century of Russian discourse of soil through the mediation of Karl Marx. As I discuss, Marx's sociological theory of "social metabolism" originated in his reading of Liebig's theory of soil metabolism. This transfer of soil metaphors across linguistic, cultural, and epistemic borders had a far-reaching impact, as I will discuss in later chapters, on Soviet understandings of the relationship between soil and society, notably as a foundation for Lenin's concept of the *smychka*—the union between city and country.

In addition to Karl Marx, Chapter Two introduces several other key figures who reappear throughout this study—notably Friedrich Engels and Vladimir Lenin. These figures *read* the 19th century, but *write* the 20th century: as exemplary filters of their age, they distill and inscribe the literary, philosophical, and scientific discourse of the 19th century into Soviet discourse and ideology of soil. On the pivot of these transitional figures, discussion shifts in **Chapters Three, Four, and Five** to the Soviet period and the core concern of this dissertation: namely, to the effects of 19th-century discourses and ideologies of soil on Soviet utopian aspirations to remake the material world according to the Marxist "science of history."[12] Soil figures as the *protomaterial* of Marx and Engels' materialist "science of history." As demonstrated by their shared etymology, *culture* and *cultivation* have long been affiliated in Western Europe's narrative of its own development and the evolution of its modern political and social structures. However, Marx and Engels attribute specific functions to soil and its cultivation in their materialist analysis of history: soil quality is a crucial factor in the development of differential rent and the cascade of economic epiphenomena it produces.[13] Soil is, in fact, the basis of all human production and development: "It is not the mere fertility of the soil, but the differentiation of the soil, the variety of its natural products, the changes of the seasons, which form the physical basis for the social division of labour, and which, by changes in the natural surroundings, spur man on to the multiplication of his wants, his capabilities, his means and modes of labour."[14] Soil is not just a symbolic resource for Marx and Engels, or a synechdoche for environmental influences as in Herder's theories, but is assigned a specific, and significant, role in the formation of economic and social structures.

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[12] Marx and Engels write, "We know only a single science, the science of history." Karl Marx and Friedrich Engels, *The German Ideology* (Moscow: Progress Publishers, 1964), 34.
[13] Cf. Karl Marx, *Capital: A Critique of Political Economy,* ed. Friedrich Engels (New York: International Publishers, 1967), 3:710-737.
[14] Ibid., 1:513-514.

Soil was a significant factor in social forces, but it was also determined by social forces. Marx and Engels explain that, "Fertility, although an objective property of the soil, always implies an economic relation, a relation to the existing chemical and mechanical level of development in agriculture, and, therefore, changes with this level of development."[15] In this paradigm, changes in technology and modes of production have a significant impact on the "natural" fertility of soil.

The question of the improvability of soil and the limits of its productive capacity was an important one in Soviet land policies. The attempt to subordinate "natural law" to the Marxist "science of history" was one of the chief goals of the field of land reclamation, *melioratsiia*, which sought to make land more productive through a series of chemical, hydrological, and physical improvements. Chapter Three focuses on the problematics of the drive to make land more productive through a case study at the intersections of ideology and praxis, socialist development [*osvoenie*] and environmental conservation, and Russia and its Asian borderlands. This chapter reads the literary works of Andrei Platonov in the context of his second career as a *meliorator,* or land reclamation engineer, for the People's Commissariat of Agriculture. Platonov's technical experience with *melioratsiia* and his ongoing engagement with the transformation of nature and soil culminates in the tale *Dzhan* (1935), set in the "unreclaimable" landscape of the Kara Kum desert of Turkmenistan. As this discussion will show, peripheral Soviet Asian space was a site for the enactment of concerns that were crucial to the 19th-century Russian intelligentsia and the 20th-century Soviet elites from the center. The mythology of Russia's "Asiatic" heritage, and its consequent stagnation, was a major source of these concerns with Asian land. Reframing the myth that Russian soil is temporally stagnant, Mikhail Epstein writes that applying "the Bakhtinian concept of the chronotope to Soviet civilization, one discovers a curious pattern: chronos is consistently swallowed up by *topos*."[16] Epstein's argument that spatial-poetic *topoi* are a particularly useful tool for understanding Russian and Soviet culture is liable to seem intuitive because we are accustomed to the commonplace that the history and culture of Russia were the products of its distinctive physical geography. Russian mass psyche, he argues, was primarily spatially oriented and organized. From some distance, we can consider the cultural myth that Russia is characterized by *topos* not *chronos* (without necessarily accepting it) by considering how various commentators project Russia's historical progress—or lack of it—onto the *topos* of soil. Epstein's implication that Russia's extension in space retards its progress in time echoes orientalist myths of Eastern civilization, which I discuss in the chapters that follow.

Platonov's novel unfolds in a specifically Central Asian ecosystem, but it reflects on broader Russian mythologies of Asian desertification. In this setting, Platonov uses soil and its sterile forms—sand and dust—as a staging ground for the problematics of dialectical materialism and historical development, reflecting on the possibility of rebuilding ecosystems—and social systems—by rebuilding soil. The chapter argues that in *Dzhan* Platonov rejects the dialectical-materialist model of nature, and, with it, the conventional socialist realist plots of the land-works novel. While *melioratsiia* supplies its own narrative teleology and aesthetic and moral satisfactions, Platonov denies this mode of plot-formation, instead using his "experimental novel" to explore a model of metabolic exchange that rejects utopian ideology in favor of

[15] Ibid., 3:651.
[16] Mikhail Epstein, "Russo-Soviet Topoi," in *The Landscape of Stalinism; The Art and Ideology of Soviet Space*, eds. Evgeny Dobrenko and Eric Naiman (Seattle; London: University of Washington Press, 2003), 277.

utopian science, to use Fredric Jameson's opposition.[17] By doing so, Platonov presents a radically new understanding of what constitutes "Bolshevik soil."

While the first three chapters discuss the relationship between national identity and discourses of soil, **Chapter Four** focuses specifically on perceptions of Russia's Asiatic nature as a property that inheres in its soil. Soviet literature of the 1930s explored this idea using the *topos* of Marx's Asiatic mode of production, a theory that proposed that Asia's unique soil and climate created conditions in which a strong state power consolidated around massive forced-labor irrigation projects. In the landworks novels by Andrei Platonov, Boris Pil'niak, and Bruno Jasienski examined here, the latent fear of Russia's backward, Asiatic nature is reencoded as a Marxist political concept that diagnoses Asiatic political and social structures as symptoms of soil and climate. Because soil is represented as a site of accumulation—economic, cultural-historical, and physical—it was regarded as an inert material that could only be reshaped through violence. The novels examined in this chapter reflect on the reshaping of the inert matter of Soviet land (through *melioratsiia*) as well as the politically inert matter of the human psyche (through *perekovka,* or psychological "reforging"). Patriarchal soil is a threat to Soviet construction in these novels, but even more terrible are the monumental public works projects of the first Five-year Plan, troped as "monoliths" that demand the sacrifice of human bodies. Soviet utopian dreams of progress in these novels are transformed into a dystopic vision of Oriental regression, emblematized by the sacrifice of human bodies to the idol of Soviet construction. These novels argue that the drive to reshape the morphology of Soviet landscapes enacts an Asiatic restoration in which a strong state claims jurisdiction simultaneously over nature and the worker, transforming him into a political subject who lacks control over land, the means of production, and even his own labor. These novels suggest that Soviet power, despite its rhetoric, reveals an Asiatic face in its attempts to change the face of the earth.

While **Chapter Five** is not a summation of the previous chapters, it draws on the overlapping *topoi* of soil discussed in preceding chapters and brings the study up to the late 1930s. Departing from discourse into visual instantiations of ideology, Chapter Five considers a selection of Soviet films from the 1920s and 1930s. This chapter explores how the *smychka*, discussed in Chapter Two, was a basis for Soviet cultural understandings of the multinational project of assimilating multiple "native soils" and multiple nationalities into a unified Soviet cultural and economic geography. The material exchange underlying Lenin's idea of the *smychka* is transposed into a paradigm of exchange among Soviet nationalities. In the films discussed here, local and national soils are valorized for their unique productive properties, each contributing to the all-union division of labor. Here primordial nationality is not only emblematized by national soil, but by the *products* cultivated in national soil. This new system of national and biological monocultures (Ukrainian grain, Uzbek cotton, Siberian lumber), contained within a multicultural state and offered a way of thinking about how to contain national difference.

From mystical visions of the Russian *pochva* to the material exchanges of "socialism in one country," *utopia* is the form these *topoi* of soil aspire to attain. In the pages that follow, Biblical and folk mythologies of soil enter into conversation with nationalist, materialist and socialist fantasies of soil. Each imagines, in its way, soil as a site of identity, meaning, and possible redemption. *Soil,* primordial matter, is a mythological site that holds the promise of

[17] Fredric Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (New York: Verso, 2005), 48.

redemption of the material world itself. As Akhmatova raises her glass in toast, so we, too, begin here, devoting these pages to the "soil in which we all lie."[18]

[18] I paraphrase Anna Akhmatova, "Novogodnaia ballada" (1923). Akhmatova returns to this *topos* nearly forty years later in the poem "Native Soil" ("Rodnaia zemlia," 1961), which concludes (I quote from D. M. Thomas' translation): "But we'll lie in it, become its weeds and flowers / So unembarrassedly we call it—ours."

Chapter 1

Preparing the Ground: Russian Soil—A Brief History of its Politics and Poetics in the Nineteenth Century

Introduction

Russia's centuries-long campaign to shape, claim, and reclaim land, to enrich and expand its own soil was coextensive with the self-conscious ambition of its rulers and intelligentsia to claim and shape its ambivalent culture, one that was, in various ways, continuous and discontinuous with its land borders and with its uncertain position between Europe and Asia. The distinct history of Russian land is mirrored across the 19th and the 20th centuries: the liberation of the serfs and the subsequent movement to reform collective farming (*sel'skaia obshchina*) in the 1900s, the Soviet movement to re-collectivize agriculture in the 1920s and 1930s, famines of devastating scale, notably 1891-2, 1921-2, and 1932-3, forced labor and re/settlement programs, vast and violent land-works projects, invasion and repulsion—the multiple and various traumas of people and soil. The continuity is so great between the centuries that one cannot understand Soviet attitudes to soil without retreating to 19th-century Russia, where the politics of soil had already developed into a distinct poetics of soil in the *publitsistika*, literature, and socio-political discussions of the day, against the backdrop of the material upheavals of Russia's rural economy.

By the early 19th century, political interventions in land use had changed Europe's own traditional economic and political relationship to the soil. The French Revolution had turned "peasants into Frenchmen," as Eugen Weber wrote, evoking the transition of agriculture to national culture. England's enclosure was complete by the early 1800s, resulting in the destruction of traditional agri/culture. First Britain's, then Belgium and France's Agricultural and Industrial Revolutions influenced (and were influenced by) this change in land use and culture. These historical shifts communicated themselves across Europe's soil to Russia, which over the course of the 19th century transformed from a marginal bastion of serfdom into the economically integrated breadbasket of Europe, as Ukrainian and Russian soil were rededicated to cheap grain monoculture and began to compete with the newly cultivated Great Plains of America to feed the European masses. Beyond these larger currents, of course, Russia's 1861 Emancipation was the single most crucial upheaval in land use of the 19th century, and it was in the wake of Emancipation that the various political and cultural influences of the previous century came together into a distinct Russian discourse of the soil. In the 1860s, several strains of political and social understandings of soil were mobilized in the aesthetic-ideological movement that took its very name from soil: *pochvennichestvo.*

The Russian *pochva* was among so many other things a rhetorical staging ground for the Westernizer-Slavophile debate, a rallying cry for the *pochvennichestvo*, a proxy for the narod, and justification for imperial expansionism—in short, it was a site not only of material production, but of vast cultural production. Many of the crucial discursive, economic, and political battles of Russia's pre-revolutionary and Soviet periods alike could be called land battles: they were fought on land, about land, and about how culture inhered in land or, more often, in soil. The history of Russia, then, is the history of its soil, and if it cannot be argued that Russia is unique in this regard, it is distinct. This chapter introduces key moments and characters

in the history of the Russian discourse of soil in the 19th century, considering them in the context of aesthetic and ideological movements that would have a continuing influence.

While the origin of the Russian discourse of soil could be traced to pre-modern Russia—the primordial cult of *mat'-syra zemlia* [moist Mother Earth], for example, is an ancient *topos* of Russian folklore—transformations in Russian thought and literature from the 1840s to the 1860s gave a newly prominent place to soil in national, mystical, and materialist discourses. Commenting on the inflation of the symbolic value of soil in Russian discourse in 1864, the radical journalist Maksim Antonovich wrote that, "For us, 'soil' [*pochva*] was the philosopher's stone, a journalistic elixir, an inexhaustible goldmine, a cash-cow, in a word, everything."[1] While Antonovich, a committed materialist, was polemicizing with Fedor Dostoevskii and the *pochvenniki*, the men of the soil, he identified a broader, shared discourse of soil that had developed in Russia over the preceding twenty years, merely reaching a peak in *pochvennichestvo*, the native soil movement, in the 1860s. This chapter considers how, over the course of the 19th century, Russian soil became a "journalistic elixir," a literary *topos*, a symbol of national identity, and a marker of materialist ideology, charting a discursive history that begins in the 1840s and continues through *pochvennichestvo* and into the fin-de-siècle philosophy of Vladimir Solov'ev.

The goal of this chapter is not to present a continuous history, but to offer selected moments that demonstrate the literary, symbolic and ideological uses of "soil" in Russian discourse, thereby establishing the terms of the arguments of later chapters. Soil functions as a *topos*, a site for metaphors, in each of the episodes presented here, although the limits of these metaphors are probed by the authors who self-consciously wield them. Some authors discussed here radically extend metaphors of soil into the conceptual domain, while others seek to reject metaphor and claim soil for materialist discourse.

The first vignette presented here examines the formal struggle between the Russian pastoral—a literary mode that suppresses material experience, an idealized "landscape without soil"—and new "naturalist" modes of literary discourse emerging in the 1840s that dirtied the pristine countryside, liberating it for new themes and meanings. This literary contest affected social and political understandings of the peasantry, rural life, and the uses of "soil" in literary discourse.

The second vignette considers the development of a national discourse of "native soil," examining the ideas of German romantic philosopher Johann Gottfried Herder, their transmission into Russian discourse by the literary and social critic Vissarion Belinskii, and their diffusion into the wider field of Russian culture in the discourse of Slavophiles and *pochvenniki* alike. The section concludes with an introduction to the materialist critique of mystical soil, for which the following chapter provides a specific case study.

The relationship between scientific, materialist, and cultural discourses of soil is the focus of the final vignette presented here. First, I consider how national particularism is naturalized in the work of soil scientist Vasilii Dokuchaev through the mythology of Russian chernozem, or black earth. Next, I examine the transformation of this mythology in the wake of the 1891 drought, which raised fears of an assault from Asia on Russian chernozem. These fears are distilled in philosopher Vladimir Solov'ev's works, which dramatically imagine desertification as an ecological reenactment of the Asian conquest of Russian soil.

[1] Antonovich (1864), 182. Antonovich may also be poking fun at the famous cliché of Strakhov's sympathizer, Apollon Grigor'ev, who wrote that "Pushkin was our everything" *[Pushkin—nashe vse]*.

I: The Pastoral and its Discontents: Representing Rural Russia after 1840

The persistence of Russian feudalism into the mid-19th century, as industrial capitalism swept through the rest of Europe, left Russian intellectuals with doubts about the ethics of their own socio-political system and its basis in the coercive bond between the peasant and the land. The first vignette presents the literary contest to claim the *topos* of the countryside between 1840s and 1860s. Prior to the 1840s, the pastoral had been the primary literary mode of the representation of rural life. Following Paul Alpers, this brief treatment will consider the pastoral not as a genre, but as a mode—a collection of formal genres united by attitude, approach, or theme.[2] Although Vasilii Trediakovskii, Aleksandr Sumarokov and other founders of the Russian literary language in the 18th century produced pastoral poetry that closely conformed to the classical pastoral idylls and lyrics of Theocritus and Virgil, the pastoral mode frequently appeared in Russian literature of the 19th century in a variety of other genres, including the pastoral romance or the pastoral novel, or as pastoral insets within other generic frames.

The pastoral could be described as a landscape without soil. While the fertility of land may be an object of praise, the pastoral takes little interest in the experience of physical labor or the material conditions of agriculture. In my approach, I focus on the social and political attitudes to land that motivate the development of new idioms.

The pastoral mode, from its origins in the classical tradition, was characterized by its nostalgic depiction of rural life, its metalyrical tribute to verse and song, and its praise of the shepherd's life of leisure and natural abundance. These conventions of the pastoral mode defined the range of attitudes that could be expressed towards land in literature. In his "Forms of Time and Chronotope in the Novel," Mikhail Bakhtin defines the chronotope of one pastoral genre—the idyll—by its particular spatial-temporal inertia:

> The unity of the life of generations (in general, the life of men) in an idyll is in most instances primarily defined by the *unity of place*, by the age-old rooting of the life of generations to a single place, from which this life, in all its events, is inseparable. This unity of place in the life of generations weakens and renders less distinct all the temporal boundaries between individual lives and between various phases of one and the same life. The unity of place brings together and even fuses the cradle and the grave (the same little corner, the same earth)[…].[3]

Bakhtin's definition of the idyll as a unitary, static *topos* recalls Mikhail Epstein's aforementioned assertion that in Russia "chronos is consistently swallowed up by *topos*."[4] Depictions of land and landscape in Russian literature prior to the 1840s conform to the paradigm of spatial unity and temporal stagnation suggested by Bakhtin's idyllic chronotope and Epstein's chronos-swallowing *topos*. The fusing of cradle and grave on the nobleman's heriditary estate was a feature of Russian verse of the romantic period. The absence of worked

[2] Paul Alpers addresses this distinction in *What is Pastoral?* (Chicago: University of Chicago Press, 1996), 44-78.
[3] Mikhail Bakhtin, "Forms of Time and Chronotope in the Novel," in *The Dialogic Imagination*, ed. Michael Holquist, trans. Caryl Emerson and Michael Holquist (Austin: University of Texas Press, 1986), 225.
[4] Epstein (2003), 277.

earth is striking in the idealizing, nostalgic idyll of many neoclassical and romantic Russian rural visions.[5]

The gentry memoirist Andrei Bolotov (1738-1833) exemplifies this gentry pastoral vision of rural life and the socio-political "anxieties" that it conceals. On the evidence of Bolotov's prolific diaries, prose works, and verse, Thomas Newlin demonstrates that Bolotov's pastoral imagination depends on the suppression of the anxieties and violence of serfdom.[6] Notably, the peasant laborer is absent from Bolotov's pastoral. As Bolotov's case shows, the Russian countryside could be envisioned as a site of pastoral superabundance and the gentry the guileless progeny of an abundant and fertile nature. At the center of this glorious vision, the gentleman poet could imagine himself a Daphnis, composing verse in the idle moments on his estate. Yet, the Russian literary pastoral was burdened by what it concealed. Its chief threat was not from an external force that eroded traditional values, but from within: namely, the political economy of serfdom. Although the pastoral contained rich resources for creating a mythology of Russian rural life, many Russian writers were self-conscious in their use of the pastoral mode, shaping their depictions of rural life around absences and psychological displacements. Russian land, as a mysterious source of fecundity, came to stand in for the actual source of superabundance, which could not be represented in the pastoral—slave labor. The pastoral did not have the genetic resources to represent the socio-political reality of the Russian feudal estate. By the end of the 18th century, the mythology of the happy peasant had been damaged by both the Pugachev Rebellion and the French Revolution and henceforth imprinted on the subconscious of the Russian pastoral was the knowledge that superabundance was provided not by a generous Nature in humanity's Golden Age, but by slave labor.

The slave labor that supported the Russian pastoral was being revealed by degrees in literature. Aleksandr Radishchev transformed the pastoral into a literary mode that enabled successful socio-political critique and prepared important features of the Russian discourse of soil—first and foremost, the problem of serfdom, its effect on the Russian peasant, the gentry, and the soil. While no more than an amateur in the field of chemistry, Radishchev was, according to Alexander Vucinich, "intrigued by the possibilities of a chemical study of soil (and the possibility of creating new kinds of soil)[…]."[7] Indeed, Radishchev introduces a materialist and economic analysis of agriculture into his *Journey from Petersburg to Moscow*, published in 1790, just as news of the French Revolution was filtering into Russia. Catherine exiled Radishchev to Siberia for his critique of Russia's political economy in the *Journey.*

Radishchev's narrative movement is arranged by his physical movement through geographical space: the text and journey begin in the "foreign" capital of Petersburg, the seat of imperial power founded by Peter the Great, and, from there, narrative and traveler progress through the Russian heartland to Moscow, the capital of pre-Petrine Rus' and a symbol of traditional Russian values. However, the attitude to space and speech in the *Journey* does not

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[5] The socio-political critique of the pastoral has, of course, been fraught at least since Dobroliubov's evocation of the gentry idyll as "*oblomovshchina*," and note several of the many possible caveats below. Nonetheless, the contrast between the pastoral mode and the rural visions of the "natural school," the focus of this section's discussion, is clear.

[6] Thomas Newlin, *The Voice in the Garden: Andrei Bolotov and the Anxieties of the Russian Pastoral, 1738-1833* (Evanston: Northwestern University Press, 2001), 140.

[7] Alexander S. Vucinich, *Science in Russian Culture* (Stanford: Stanford University Press, 1963-70), 1:180. There is a considerable body of Soviet literature on Radishchev's scientific interests. For an extensive bibliography, see I. A. Krupenikov, "Trudy A. N. Radishcheva po pochvovedeniiu i agronomii i ikh znachenie v istorii nauk" in *Pochvovedenie* (Moscow: Akademiia nauk SSSR, 1953), 63-64.

entirely conform to the genre of travel narrative. Spatial progress and narrative movement fall out of step in the Russian interior: the traveler enters a non-progressive, homogenous chronotope. While villages are occasionally imbued with superficial local color, speech takes precedence over space. As space breaks down in the Russian heartland, speech wrests narrative control, and Radishchev uses the pastoral convention of conversations in the countryside to provide a socio-political critique. The topic at the heart of these conversations is the condition of the laborer on the land.

Radishchev introduces a crucial trope in the discourse of soil: the connection between city and country. He lays bare their economic relations, revealing how urban centers extract the fruits of the soil and rural labor:

> "Remember," my friend once said, "that the coffee being poured into your cup, and the sugar dissolved in it, have deprived a man like yourself of rest, that they have been the cause of labors surpassing his strength, the cause of tears, groans, blows, and abuse. Now dare to pamper your gullet, hard-hearted wretch!" The sight of his disgust as he said this shook me to the depths of my soul. My hand trembled, and I spilled the coffee. And you, O inhabitants of St. Petersburg, who feed on the superabundance of the fertile districts of your country, whether at magnificent banquets, or at a friendly feast, or alone as your hand raises the first piece of bread meant to nourish you, stop and think. Might I not say the same things about it that my friend said to me about the products of America? Have not the fields on which it grew been enriched by sweat, tears, and groans? You are fortunate if the piece of bread for which you hungered was made from grain grown on what is called crown land, or at least on a field that pays its proprietor a commutation tax. But woe to you if it is made from grain that comes from a nobleman's granary! Upon it are grief and despair, upon it is made manifest the curse of the Almighty, who in his anger said: "Cursed be the earth in its fruits." Beware lest ye be poisoned by the food ye covet. The bitter tears of the poor lie heavy on it. Put it away from your lips, and fast, for that may be a sincere and wholesome fast.
>
> - Вообрази себе, - говорил мне некогда мой друг, - что кофе, налитый в твоей чашке, и сахар, распущенный в оном, лишали покоя тебе подобного человека, что они были причиною превосходящих его силы трудов, причиною его слез, стенаний, казни и поругания; дерзай, жестокосердый, усладить гортань твою. - Вид прещения, сопутствовавший сему изречению, поколебнул меня до внутренности. Рука моя задрожала, и кофе пролился. А вы, о жители Петербурга, питающиеся избытками изобильных краев отечества вашего, при великолепных пиршествах, или на дружеском пиру, или наедине, когда рука ваша вознесет первый кусок хлеба, определенный на ваше насыщение, остановитеся и помыслите. Не то же ли я вам могу сказать о нем, что друг мой говорил мне о произведениях Америки? Не потом ли, не слезами ли и стенанием утучнялися нивы, на которых оный возрос? Блаженны, если кусок хлеба, вами алкаемый, извлечен из класов, родившихся на ниве, казенною называемой, или по крайней мере на ниве, оброк помещику своему платящей. Но горе вам, если раствор его составлен

> из зерна, лежавшего в житнице дворянской. На нем почили скорбь и отчаяние; на нем знаменовалося проклятие всевышнего, егда во гневе своем рек: проклята земля в делах своих. Блюдитеся, да не отравлены будете вожделенною вами пищею. Горькая слеза нищего тяжко на ней возлегает. Отрините ее от уст ваших; поститеся, се истинное и полезное может быть пощение.[8]

Radishchev analyzes the economic and social relations that tie city and country, agricultural slave labor to commodity. In Radishchev's hands, bread—the most symbolic nourishment—is mixed with human sweat and tears. Radishchev paraphrases the Biblical curse of Adam in Genesis 3:17, which marks the fall from grace and the end of the idyllic state of the garden. It is also the birth of agriculture:

> Cursed is the ground because of you;
> through painful toil you will eat food from it
> all the days of your life.
> It will produce thorns and thistles for you,
> and you will eat the plants of the field.
> By the sweat of your brow
> you will eat your food
> until you return to the ground,
> since from it you were taken; for dust you are
> and to dust you will return.[9]

Radishchev forges a rich chain of symbols in pronouncing Adam's curse on Russia's feudal soil: the transition from pastoralism to agriculture is understood as a Biblical punishment for transgression.

The curse upon soil, and Adam himself, culminates in the final lines of verse from Genesis, which define the human body as a temporary state of soil. Radishchev turns this mythology towards a revolutionary exhortation whose violence jars against the sentimentalism that characterizes most of the text: "Destroy the tools of his agriculture; burn his barns, silos, and granaries and scatter their ashes over the fields where he practiced his tortures."[10] His incitement to destroy the tools of agriculture and scatter their "ashes" over the fields suggests a mystical burial, by which fertility may be restored to the fields and the Adamic curse lifted.

Radishchev's *Journey* introduces bitter irony into the pastoral mode of speaking about the Russian village. By the time of the Decembrist uprising of 1825, civic-minded writers sometimes adopted pastoral irony as a conscious strategy. Pushkin's 1826 poem "The Countryside" ("Derevnia"), shows the anxieties and guilt that pulled at the seams of the Russian pastoral. It is well known that Radishchev's "Ode on Liberty" may have served as a model for Pushkin's "The Countryside," and it may be that the poem rehearses as well the ironic pastoral of Radishchev's *Journey.* Fearing the censor, Pushkin had published only the first half of the poem, which speaks in lyric voice of the pleasures of the country estate, under the title "Solitude." But the subversive

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[8] Aleksandr Radishchev, *Polnoe sobranie sochinenii* (Moscow: Akademiia nauk, 1938), 2:324; *A Journey from St. Petersburg to Moscow*, trans. Leo Wiener (Cambridge: Harvard University Press, 1958), 157-8.
[9] J. I. Packer, ed. *English Standard Version Bible* (Wheaton, IL: Good News Publishers, 2001).
[10] Radishchev (1938), 2:326; Radishchev (1958), 160.

second half of the poem, circulated only among friends, systematically disassembles the pastoral myth that the author establishes in the first half of the poem, exposing the sin of serfdom concealed among the "flowering fields and mountains."[11] "The Countryside" exceeds the lyric and enters the metacritical, exposing the invisible economy of labor concealed within the Russian pastoral.[12]

In the decade following Pushkin's "The Countryside," the pastoral was yielding ever more to the pressure of counter-readings and giving way to a new mode of depicting both landscape and rural life. Renato Poggioli has argued that Nikolai Gogol's "Old World Landowners" (1835) is a parody of the idyllic story of Baucis and Philemon—what he calls an "inverted eclogue."[13] Gogol's *Dead Souls*, composed in the first half of the 1840s, also offered a challenge to the literary conventions of the pastoral and a socio-political critique of idleness and incompetence on the gentry estate.[14]

Poggioli asserts that Gogol's parody of the eclogue in "Old World Landowners" obtains largely in his translation of the story from verse to prose.[15] In the 1840s, the pastoral modes of representing the countryside and rural life were under increasing pressure, formally and thematically. Prose was becoming an important literary form in Russia, perhaps in some measure because of its capacity for social criticism during the period of relaxation of censorship in the 1840s—the "marvelous decade," in Peter Annenkov's coinage.

Vissarion Belinskii, the doyen of literary life until his death in 1848, identified civic life and social concerns as the primary charge of Russian literature and argued that Russia needed a literature not of "society," but of the "people."[16] Literature was indeed changing as a social institution, as many young déclassés, *raznochintsy*, made careers for themselves working for the newspapers and thick journals of Moscow or Petersburg, producing stories, sketches, and commentary. The entry of new authors into the field coincided with an expansion of literary themes, attitudes, and forms.

Many Russian writers in the 1840s judged the pastoral mode to be inadequate to the new social commitments of Russian literature as an approach to rural subjects, and the emancipation of the themes of rural life from the attitudes and form of the pastoral necessitated the creation of new literary and discursive strategies. One literary trend that radically transformed the representation of the countryside began, ironically, in the city, exporting from there its narrative and discursive strategies to new *topoi*. The so-called "natural school" emerged in the 1840s

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[11] My reading of the poem draws on Stephanie Sandler, *Distant Pleasures: Alexander Pushkin and the Writing of Exile* (Stanford: Stanford University Press, 1989), 23-39.

[12] Thomas Newlin uses the terms "soft" and "hard" pastoral as rough equivalencies of the pastoral and the georgic.

[13] Renato Poggioli, *The Oaten Flute: Essays on Pastoral Poetry and the Pastoral Ideal* (Cambridge: Harvard University Press, 1975), 241-264.

[14] In the second book of *Dead Souls*, Gogol shifts his attention away from pastoral idleness and takes up a new focus on georgic labor. On his travels, Chichikov visits the disordered estate of Colonel Koshkarev, contrasted with the model estate of his hard-working neighbor Kostanzhoglo, who "knows soil" and "works like a bull." Koshkarev, despite his grand designs and his rhetoric of improvement, becomes the target of Gogol's satire: Koshkarev brags that despite the ignorance he faces, some day the peasants of his village "would at the same time as walking behind the plow, read a book about [Benjamin] Franklin's 'thunder rod,' or Virgil's *Georgics*, or the chemical study of the soil [*pochva*]." Gogol's allusions to Virgil's *Georgics* and the newest, fashionable works on soil chemistry signals the death of the pastoral and the emergence of a new mythology of soil centering not on pastoral ease, but labor. N. V. Gogol', *Polnoe sobranie sochinenii* (Leningrad: Izd. Akademii nauk SSSR: 1951), 7:63.

[15] Poggioli, 262

[16] Vissarion Belinskii, "Literaturnye mechtaniia" in *Polnoe sobranie sochinenii* (Moscow: Akademiia nauk, 1953-1959), 1:34-40.

under two distinct influences, combining Nikolai Gogol's method of portraiture and his socially critical, sometimes satirical, attitude with the "scientific" and proto-ethnographic gaze of the French physiological sketch. The "natural school" label had been intended as a smear by its creator, the conservative editor of the *The Northern Bee,* Faddei Bulgarin, who regarded the naturalistic method of representation as excessively raw, devoid of artistic refinement, and obsessed with the minutiae of daily life, especially the low, base, and dirty. Dirt and *griaznofil'stvo* [love for dirt] came to define the natural school for its detractors. The writer and historian Nikolai Polevoi, for example, wrote that, "by choosing from nature and life only the dark side, selecting from them only dirt, dung, debauchery, and vice," the natural school failed to represent "nature and life."[17] The "natural school" stuck as a term—Vissarion Belinskii defiantly appropriated and celebrated it—however, it describes less a school than a loosely-affiliated group of authors who employed certain narrative strategies.

The physiological sketch was primarily associated with the urban milieu as a site of diversity and degeneracy. However, the observational and proto-ethnographic methods of the natural school soon attached to rural life as a topic of political and social importance. Ivan Turgenev and Dmitrii Grigorovich, who had contributed to the two publications most often identified with the natural school—*The Physiology of Petersburg* (*Fiziologiia Peterburga,* 1845) and *The Petersburg Miscellany* (*Peterburgskii sbornik,* 1846)—brought their narrative strategies to the countryside in their subsequent works.[18] While many of Turgenev's sketches in *A Sportsman's Sketches* exceeded the genre of the physiological sketch, traces of the tendency can be discerned in his attention to apparently trivial detail and his use of social typing (as in "Khor and Kalinych").

A year after publishing his physiological sketches "Petersburg Organ-grinders" ("Peterburgskie sharmanshchiki") and "The Lottery Ball" ("Lotareinaia bala") in *The Physiology of Petersburg*, Grigorovich produced a story "The Village" ("Derevnia"), which offered an anti-pastoral, ethnographic vision of life in the countryside. Born "in a dirty, stinking hut in a barnyard" [*v griaznoi, smradnoi izbe na skotnom dvore*], the orphan Akulina lives a brief, cruel life first with a resentful fostermother, then with a bitter husband forced by the landowner into marriage. In his description of Akulina's childhood, the narrator fixes on mud [*griaz'*] as a site of contagion, illness, and early death, exclaiming, "how many times a poor child, left to its own devices, has crept in the middle of the street, covered with mud and muddy puddles, and paid for such pleasure with evil illnesses and death!"[19] In another appeal to the reader, the narrator apologizes on behalf of his "dirty" subjects:

> Although the narrator of this story takes indescribable pleasure from talking about people who are enlightened, educated and higher class, although he is quite convinced that the reader is far more interested in them than the crude, dirty, and, furthermore, stupid peasant men and women, he must nonetheless move quickly to the latter as the individuals who are—alas—the main subject of his narrative.

[17] Nikolai Polevoi, *Russkii vestnik*, no 56 (1842). Cited in Ronald D. Leblanc, "Teniers, Flemish Art, and the Natural School Debate," *Slavic Review* 50:3 (1991), 580.
[18] Ivan Turgenev had contributed the story, "Three Portraits," and the poem, "The Squire" to *The Petersburg Miscellany.*
[19] Dmitrii Grigorovich, "Derevnia" in *Izbrannye sochineniia* (Moscow: Gos. izd. khudoz. lit., 1954), 23, 26.

> Хотя рассказчик этой повести чувствует неизъяснимое наслаждение говорить о просвещенных, образованных и принадлежащих к высшему классу людях; хотя он вполне убежден, что сам читатель несравненно более интересуется ими, нежели грубыми, грязными и вдобавок еще глупыми мужиками и бабами, однако ж он перейдет скорее к последним, как лицам, составляющим – увы – главный предмет его повествования.[20]

When Polevoi criticized the natural school's fetishization of dirt, he may have been right that they did not deploy dirt simply for verisimilitude. In Grigorovich's work, dirt is used as a symbol of sociological difference, an inversion of the idealization of the pure bond of the peasant to the soil. Dirt and mud were facts of rural life (albeit previously unrepresented in literature), but they also symbolized the degradation of the Russian peasantry, challenging the pastoral idyll. "Dirt, dung, debauchery, and vice" were not only urban phenomena, as it happened, but were endemic in the countryside as well. The physiological sketch had provided the precedent and tools for this aesthetic and social attack on Russian myths of the happy peasant in a covenant with the land.

Following the natural school was a new generation of *griaznofily,* the village writers of the 1850s through the 1880s—among them Nikolai Uspenskii, Gleb Uspenskii, Aleksandr Levitov, and Aleksei Pisemskii.[21] A survey of their stories reveals entire villages suffused with *griaz*: every street, every home, every household object, and every body is covered in dirt, mud, and manure. The uses of dirt range from mundane verisimilitude (houses made from "earth and dung,")[22] to the absurd (the reader must "pass through piles of some sort of manure" to reach the door of a home),[23] and throughout manure confers odor, not otium, on the scenes. It is hard to imagine that peasants have dirt thrown at them as punishment for offenses (as in a Pisemskii story), given their everyday subjection to the insult of dirt.

The radical critic Dmitrii Pisarev, who rated Pisemskii's work highly, described the accuracy of Pisemskii's portrayal of the countryside in the novella "The Simpleton" ("Tiufiak"). He explains that the characters are not to blame for their moral impotence, rather, it is simply an effect of the dirt and soil that cling to the Russian people: "the soil [*pochva*] will always remind you of itself with its strong odor, the Russian spirit [*russkom dukhom*], from which the characters don't know how to escape, from which even the reader sometimes gets sick at heart."**[24]** Pisarev destabilizes the rhetoric of *griaznofil'stvo* by switching *griaz'* [dirt] with *pochva* [soil]—a term that is charged with abstract meaning. Pisarev further mingles high and low, puncturing Russian self-regard by playing on the resemblance of soul [*dukh*] and perfume [*dukhi*], suggesting that the filthy smell of "soil" is the perfume of the Russian soul. By the time Pisarev writes this in 1861, he is responding to a developed discourse of Russian "soil" and "soul" that must be understood in the context of the German Romantic tradition.

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[20] Ibid., 43.

[21] Pisemskii's 1853 "Leshii" is the story of a depraved lackey, Parmenov, who comes from the city to manage the estate of his absent master, bringing urban infection with him into the countryside. The tale generically infects of the *topos* of the countryside with the narrative methods of the urban physiological sketch.

[22] Gleb Uspenskii, "Tishe vody, nizhe travy," in *Polnoe sobranie sochinenii* (Leningrad: Akademii nauk, 1941), 3:193.

[23] Aleksei Pisemskii, *Liudi sorokovykh godov* in *Sobranie sochinenii v piati tomakh* (Moscow: Khudozhestvennaia literatura, 1984), 5:89.

[24] "[П]очва постоянно будет напоминать о себе крепким запахом, русским духом, от которого не знают куда деваться действующие лица, от которого порой и читателю становится тяжело на душе." D. I . Pisarev, "Stoiachaia voda" in *Sochineniia* vol. 1 (Moscow: Gos. izd. khud. lit., 1955), 172.

II: The Discourse of Native Soil

The growth of nationalism and interest in the origin of nations in the Romantic age would have a profound effect on Russian discourse of soil. Herder (1744-1803), who introduced a new understanding of the relationship between national identity and national soil—captured by the metaphor of "native soil." As the founder of romantic nationalism and a theorist of national particularism, Herder maintained that each nation was an organic product of its unique environmental conditions. This environmental or geographic determinism would prove highly influential on understandings of national identity throughout the 19th century. In *Another Philosophy of History for the Education of Mankind,* Herder explains that "native soil" is more than a material substance:

> And what are the bonds of love that tie us to it [the fatherland]? The *soil* of the country, on which we are born, can hardly tie this magic bond all by itself. It would, rather, be the heaviest of all burdens if man, viewed like a tree or a plant or a beast, would have to belong, inherently and eternally, with all his soul, body, and powers, to the *land* where he was born. There have been and still are enough harsh laws about such servitude and serfdom, and so forth. [Meanwhile] the whole course of reason, of culture, even of industry and of utilitarian calculation, leads towards a gradual unshackling of these slaves, born of a mother's womb or of the *mother-earth*, from the hard scrap of *land* that they are expected to fertilize with their sweat in life and their ashes in death, and instead ties them with more gentle bonds to a *fatherland*.[25]

Herder distinguishes between a "natural" citizenship, which reflects a primitive and material relationship to soil—akin to enslavement—and a "cultural" citizenship, in which "native soil" is understood as a matrix of shared cultural values and history. Herder enlists a series of terms to fill in his conceptual metaphor: "soil," "land," "mother-earth," and "fatherland." While this may appear to be lexical slide, in fact Herder uses these terms in binary fashion. Soil, with its specific materiality, yields to land, a term more abstract and general in its denotation and associations. Further, Herder's distinction between "mother-earth" and "fatherland" expresses a progressive teleology: the cultural *topos* of the "fatherland" emerges from the primitive symbolic domain of the "mother-earth," as each individual articulates his relationship to the soil, transforming himself from a natural slave into a national subject. Herder's semantic encodings are yet more clear in the following passage:

> When nomadic peoples were still roaming the *earth*, dwelling in deserted places for periods of time and burying their fathers there, the *ground* of the *land* held by these peoples, at that time or in the past, gave rise to the name *land of the fathers*. "We shall await you at the graves of our fathers," one would call out to the enemy: "Their ashes, too, we shall protect as we defend our *land*." Thus the holy name emerged, and not as if human beings had sprung from the *soil*. Only

[25] Johann Gottfried Herder, *Another Philosophy of History and Selected Political Writings,*trans. and ed. Ioannis D. Evrigenis and Daniel Pellerin (Indianapolis: Hackett Publishing Company, 2004), 110. Italics mine.

> children can love the *fatherland*, not serfs born of the *soil* or slaves captured like wild animals.[26]

Soil is associated with the primitive material state of biological enslavement, while land is defined by a relationship of cultural mastery or dominion over the state of nature. The act of burial appears to unite the material and cultural realms, important to the production of native soil. Herder's binary terms (soil and land; mother-earth and fatherland) correspond further with his assertion that a "national plant" grows from soil, but "national spirit" is cultivated in land.[27] Significantly, Herder creates a powerful discourse of nationality that defines the material and symbolic functions of soil in the formation of nationality. Herder's discourse of native soil would diffuse through Russian discourse in the 19th century and have far-reaching effects.

The influential critic Vissarion Belinskii was one channel of this discourse, considering Herder a "prophet."[28] Belinskii enhances Herder's organic theory of nationality by extending it to botanical metaphor, writing that, "The people are the soil [*pochva*] containing the vital fluids of all development; the [national] personality is the flower and fruit of this soil."[29] He further naturalizes cultural differences and diversity, placing Russian soil in the context of other national soils and systems. In his "Literary Musings" (1834), he writes of Peter the Great's "transplantation" of foreign ideas into Russian soil, initiating what would become an ongoing debate in the larger Slavophile-Westernizer polemic:

> He saw the miracles and wonders overseas and wanted to *transplant* them to his *native soil*, not thinking about the fact that this *soil* was still too harsh for *foreign plants*, that they have not experienced the Russian winter; he saw the *fruits* of centuries of education and wanted to appropriate them for his people in an instant.
>
> Увидел чудеса и дива заморские и захотел пересадить их на родную почву, не думая о том, что эта почва была слишком еще жестка для иноземных растений, что не по них была и зима русская; увидел он вековые плоды просвещения и захотел в одну минуту присвоить их своему народу.[30]

Extending the metaphor of "transplantation" into Russian "native soil," Belinskii understands Russia's forced development as a violation of the laws of "organic" growth. If soil produces distinctive material phenomena "organically," then transplantation results in "rootless" plants. Development can only come from a firm anchoring in native soil:

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[26] Ibid.

[27] As Robert Ergang notes, Herder used a variety of terms corresponding to "national spirit": *Nationalgeist, Seele des Volks, Geist der Nation, Genius des Volks,* and *Geist des Volks.* Robert Reinhold Ergang, *Herder and the Foundations of German Nationalism* (New York, 1931), 85. Herder's unexpected opposition of plant and spirit echoes Nietzsche's later comment that humans are a hybrid of plant and ghost: "Whoever is the wisest among you is also a mere conflict and cross between plant and ghost. But do I bid you become ghosts or plants?"

[28] Vissarion Belinskii, "Opyt sistemy nravstvennoi filosofii," in *Polnoe sobranie sochinenii* (1953-1959), 2:244.

[29] Vissarion Belinskii, "Sel'skoe chtenie, izdavaemoe kniazem V. F. Odoevskim i A. P. Zabolotskim," in *Polnoe sobranie sochinenii* (1953-1959),10:368.

[30] Belinskii, "Literaturnye mechtaniia," 1:38.

> It [the epoch of art] will come, be assured! But to do this, first, we have to form a society in which the physiognomy of the mighty Russian people can be expressed, we need education, created by our labors, returning to their *native soil*. We have no literature, I repeat it with enthusiasm, with joy, for in truth I see the pledge of our future successes.
>
> Она [*эпоха искусства*] наступит, будьте в том уверены! Но для этого надо сперва, чтобы у нас образовалось общество, в котором бы выразилась физиономия могучего русского народа, надобно, чтобы у нас было просвещение, созданное нашими трудами, возвращенное на родной почве. У нас нет литературы: я повторяю это с восторгом, с наслаждением, ибо в сей истине вижу залог наших будущих успехов.[31]

Into the discourse of native soil, Belinskii unexpectedly introduces a new term—literature. In Belinskii's formulation, "native soil" is the growth medium of Russian culture, exemplified by literature—a cultural institution emerging from virtuous labor, as in Belinskii's admonition to writers to go forth into the countryside to perform georgic labor. His development of the Russian national soil metaphor found a receptive audience among the Slavophiles and *pochvenniki*.

The idea of transplantation of foreign cultivars into Russian soil was a frequent trope, and one that often took on negative coloration. When Petr Chaadaev, the locus classicus of the 19th-century Russian intelligentsia's anxiety of influence and identity, published his "First Philosophical Letter" in the journal Telescope in 1836, it caused a scandal in Russian high society and alienated both Westernizers and Slavophiles. Chaadaev wrote that, "Not a single useful thought has grown in the sterile soil of our fatherland."[32] Although any mention of Chaadaev's work was prohibited by the censor for several years after the first publication of his *Philosophical Letters*, he provoked a strong reaction in Slavophile discourse. The second-generation Slavophile Ivan Aksakov, the son of Sergei Aksakov, carried on the rhetoric of 1840s Slavophiles in the 1860s, emphasizing soil as a locus of national genius:

> Beyond our native soil there is no basis, outside of the national nothing is real or living, and every thought that is good; any establishment not connected by its roots to our historical native soil, or not grown organically out of it, does not bear fruit and turns to rags.
>
> Вне народной почвы нет основы, вне народного нет ничего реального, жизненного, и всякая мысль благая, всякое учреждение, не связавшееся корнями с исторической почвой народной, или не выросшее из нее органически, не дает плода и обращается в ветошь.[33]

[31] Ibid., 1:101.
[32] Chaadaev, 303-314.
[33] I. S. Aksakov, "O despotizme teorii nad zhizn'iu," in *Otchego tak nelegko zhivetsia v Rossii?* (Moscow: ROSSPEN, 2002), 283.

Aksakov further extends this organic metaphor to the "rooting" of national identity in "historical native soil." The organic connection between "soil" and culture suggested by Belinskii is understood by Aksakov conservatively as a limit on transferability of ideas (ironically expressed in the idiom of German organicism). This organic body of metaphor would be further elaborated in the *pochvennichestvo* movement of the 1860s.

Pochvennichestvo was a literary-political movement that centered around the journal *Vremia* and advocated a sort of middle-course between the Slavophiles' apotheosis of the Russian people and soil and the Westernizers' embrace of modernization and the importation of European values and ideas. Its proponents were Mikhail and Fedor Dostoevskii, the editors of *Vremia*, and a few like-minded critics, including Nikolai Strakhov and Apollon Grigor'ev. They sought not only a reconciliation of East and West, but a metadiscursive reconciliation of Slavophile and Westernizer ideas. Although the movement was originally concerned with political, intellectual, and literary questions, by 1862 the elaboration of *pochvennichestvo* in *Vremia* had taken a definitively mystical turn. Indeed, the *pochvenniki* played an important role in encoding the discourse of national identity and native soil with religious meaning.

In his announcement for the new journal *Vremia* in 1860, Dostoevskii developed his own philosophy of Russian history from the time of Peter. He identifies 1812 as a unique moment in Russian history, when the intelligentsia were united with the "people" [*narod*] in a sort of mystical consummation of national identity and purpose. In this essay, he lays the foundation for the middle-way of *pochvennichestvo* by accepting both Peter's reforms and subsequent Westernizing efforts. He argues that the intelligentsia's period of separation from the Russian *pochva* was a necessary stage of development, allowing for an ecstatic return to the soil and a renewed appreciation of their distinctive Slavic culture. He writes, "We have finally seen that we, too, are a distinct nationality, highly original, and that our task is to create a new form, our own native form, drawing on our own soil, drawing on our national spirit and national source."[34] Dostoevskii and Grigor'ev both identify the task of Russian literature as the creation of Russia's own native form, directly responding to Belinskii's association between cultural "ground" and literature.

Although Dostoevskii had been working out various theoretical aspects of *pochvennichestvo* throughout the run of *Vremia*, its most programmatic aesthetic statement was elaborated in Grigor'ev's "Paradoxes of Organic Criticism," published in *Vremia*'s short-lived successor, *Epokha*, in 1865. Grigor'ev's organic criticism is based entirely on botanical metaphor: literary creations and writers evolve from their own native soil like plants. Grigor'ev praises the Russian folk song, for example:

> The fact of it is that the soil here is completely virgin, untouched, it has not been planted with anything that would interfere with the natural growth of this organic product.
>
> Дело в том, что почва тут совершенно девственна, не тронута, не засеяна ничем таким, что мешало бы естественному произрастанию органического продукта."[35]

[34] Fedor Dostoevskii, *Polnoe sobranie sochinenii* (Leningrad: Nauka, 1972-1990), 18:36. Italics mine.
[35] Apollon Grigor'ev, "Neskol'ko slov o zakonakh i terminakh organicheskoi kritiki," *Apologiia pochvennichestva* (Moscow: Institut russkoi tsivilizatsii, 2008), 138.

Grigor'ev later corrects himself, noting that, actually, "The [Russian folk] song is not only a plant, it is also the soil itself in which there are layers upon layers […]."[36] As Linda Gerstein remarks, "organicism" was a prevalent strain in journalism around the time of *Vremia* and *Epokha*."[37] Grigor'ev advocates for judgment of all "artistic work according to its connection with the soil."[38] He evokes Friedrich Schiller's distinction between mechanical and organic processes of formation—be they of literature, soil, or nations—to distance himself from what was seen as the reductive materialism of the Enlightenment, revived by Russia's "men of the 60s."[39]

Throughout numerous discussions of *pochvennichestvo* in *Vremia*, *pochva* is never defined and holds a sort of totemic, private meaning for the *pochvenniki*. Indeed, this private encoding of signification emerged from Slavophile ideology and German organicist philosophy. This tradition focused on national particularism and was fundamentally conservative in its politics; Wayne Dowler even translates *pochvennichestvo* as "native soil conservatism."[40]

Affiliated with the Slavophile tendency and the late period of *pochvennichestvo* was Nikolai Iakovlevich Danilevskii, a theorist of pan-Slavism, who carried the biological metaphor of nationality of Belinskii and Grigorev to an extreme. In addition to collaborating with Nikolai Strakhov on the journal *Zaria*, the final publication to emerge from *pochvennichestvo*, Danilevskii was a natural scientist who had studied botany and had written on issues of climate change.[41] Danilevskii proposed a theory of "cultural-historical types"—a sort of *terroir* theory of distinctive national personalities. He fully extends the metaphor of native soil and transplantation using specific biological terms and concepts:

> Is it possible that an organism that for so long has been nourished by its own juices, which have been pulled by its own roots out of its own ground could latch with its suckers on to another organism, leaving its own roots to dry out and make itself a parasite instead of independent plant? If the soil is exhausted, that is, if it is missing any components required for full growth, it should be fertilized, to deliver these missing particles, to loosen through deep plowing those already in it so that they are better and more easily absorbed, rather than parasitize, leaving its own roots to dry out. But more about that later. We'll see, maybe, how much and in what form it is possible to assimilate the foreign, but for now let it be, if not by birth, by adoption Russia became Europe; European cuttings have been grafted on to a wild fruit tree.
>
> Возможно ли, чтобы организм, столько времени питавшийся своими соками, вытягиваемыми своими корнями из своей почвы, присосался сосальцами к другому организму, дал высохнуть своим корням и из самостоятельного растения сделался чужеядным? Если почва тоща, то есть если недостает ей

[36] Ibid., 139.
[37] Linda Gerstein, *Nikolai Strakhov* (Cambridge: Harvard University Press, 1971), 44.
[38] Quoted in in Wayne Dowler, *Dostoevsky, Grigor'ev and Native Soil Conservatism* (Toronto: University of Toronto Press, 1982), 44.
[39] For background on *pochvennichesto,* I have relied on Dowler (1982).
[40] Dowler (1982), 9.
[41] David Moon, "The Debate over Climate Change in the Steppe Region in Nineteenth-Century Russia," *The Russian Review* 69 (April 2010), 266.

> каких-либо необходимых для полного роста составных частей, ее надо удобрить, доставить эти недостающие части, разрыхлить глубокою пахотою те, которые уже в ней есть, чтобы они лучше и легче усвоялись, а не чужеядничать, оставляя высыхать свои корни. Но об этом после. Мы увидим, может быть, насколько и в какой форме возможно это усвоение чужого, а пока пусть будет так; если не по рождению, то по усыновлению Россия сделалась Европой; к дичку привит европейский черенок.[42]

Danilevskii represents an extreme tendency of the organicist rhetoric of the soil, which drew on German Romantic philosophy and Slavophilism, and created an internally coherent system of botanical metaphors. For Danilevskii, nations *were* organisms which emerged from the material conditions of their environment. This conceptual framework extends metaphors with absurd meticulousness: Russian society is an organism "uprooted" from "native soil"; its "roots dry out" and it sends out "suckers" to "parasitize" other nations. Ultimately, the problem is soil exhaustion, for which he suggests a program of enrichment and deep plowing. Danilevskii's synthesis of science and Romantic nationalism lends the appearance of scientific authority to his socially conservative pan-Slavism, and adds a new coloration to the metaphor of transplantation. However, his precise botanical knowledge does not make his metaphor or his suggestions the more precise or actionable. What, the reader might inquire, would "deep plowing" of cultural ideas entail in practice? Further, should we feel that we have mastered his meaning, he adds a second metaphor whose meanings do not entirely align with the first: "European cuttings" are "grafted" on to the "wild fruit tree" that is Russia. Russia parasitizes Europe, but Europe has also been grafted onto Russia, presumably bearing its own fruit from the supporting tree and soil.

The encoding of soil with national symbolic importance, typified in the work of Danilevskii, found critics among those who saw soil itself as the subject of scientific knowledge. Belinskii's intellectual heirs included not only Danilevskii, the Slavophiles, and the *pochvenniki*, but also radicals such as Nikolai Dobroliubov, Nikolai Chernyshevskii, and Pisarev who carried Belinskii's banner of social criticism into a new era, inspiring the radical "men of the sixties" and many of Russia's future revolutionaries.[43] The practitioners of this materialist discourse frequently professed intolerance for mystifying metaphors, particularly where they ventured onto the territory of science, as in the case of soil. Antonovich, the radical journalist who called *pochva* a "journalistic elixir," identifies this kind of mystification among his opponents, the *pochvenniki*: "Suddenly a new phrase appears: 'pochva,' even more indefinite and therefore more convenient, than 'narodnost.'"[44] In a delightfully heated response in *Vremia*, Nikolai Strakhov took issue with his opponent's contention that the rhetoric of "soil" in Russian letters was merely that—rhetoric. Strakhov writes:

> Let's start at the beginning. Mr. Antonovich writes about soil. The first proposition, which he tries carefully and at length to convince his readers of, is that all the talk of soil is just phrases. This is his starting point. Some magazines, he says, incessantly repeat it in different ways: soil, soil, soil...Hearing this, Mr.

[42] N. Ia. Danilevskii, *Rossiia i Evropa* (S-Peterburg: Glagol, 1995), 49-50.
[43] Lenin was an ardent admirer of Pisarev.
[44] Maksim Antonovich, "O Pochve" (1861), in *Literaturno-kriticheskie stat'i* (Moskva: Gos. izd-vo khudozh. lit-ry, 1961), 15.

> Antonovich cleverly decided to respond by repeating another word: phrase, phrase, phrase, phrase…"We held in our hands," writes Mr. Antonovich, "a printed page, on which nothing remained, not one thought or word, after we struck out phrases about soil." [...] Why talk about the phrases? We need to talk about action.
>
> [Начнем же сначала. Г. Антонович пишетъ о почве. Первое положение, которое онъ пространно и тщательно старается внушить своим читателям состоитъ в том, что все толки о почве -- одны фразы. Это его исходная точка. Некоторые журналы, говоритъ он, безпрестанно повторяютъ на разные лады: почва, почва, почва... Слыша это, г. Антонович решился остроумно отвечать повторением другого слова: фраза, фраза, фраза, фраза... "Мы имели в руках -- пишет г. Антонович -- печатную страницу, на которой ничего не осталось, ни одной мысли и слова, после того как мы вычеркнули из ней фразу о почве."[...] Зачем говорить о фразах? Нужно говорить о деле.][45]

Strakhov's interlocutor, Maksim Alekseevich Antonovich, was a "man of the 60s," a literary critic and translator of works of natural science, who assumed editorship of literature for the journal *Sovremmenik* after Dobroliubov's death in 1861. As an amateur geologist, Antonovich perhaps felt he had a special mandate to rescue *pochva* from the *pochvenniki*—mystics and men of letters, who were deeply invested in the trope of native soil. Antonovich was right to remark that soil was the elixir of 19th-century Russian journalism, and by a further coincidence of actors, of 19th-century literature, whose practitioners—positivist materialists and mystics alike—used their broadsheets to sort out the soil question in its various manifestations, bringing the lofty question of national identity down to earth and grounding discussions of cultural soil in the pragmatics of agriculture and land use.

Antonovich's positivist materialism doesn't immunize him from accusations of empty rhetoric either, and Strakhov badgers him for his own evacuation of the symbol. The positivist materialists felt they had a particular right to feel territorial about soil. Antonovich may be right that signification is especially vexing in the case of soil, by reason of its character: the primordial materiality of the signified, this proto-organic stuff from which all other organic matter arises, a material into which, in the Biblical story, life is breathed, or from which scientific man derives—"human" or "Homo" being from the Latin humus, soil. Something is lost and something is gained in this process of signification: for Antonovich, the loss is materiality, or the very essence of soil; for Strakhov, the gain is culture, nationality, and identity, a view formed, as we have seen, in large part under the influence of German organicism—in this case, particularly Schelling and Herder. To further muddle things, Antonovich performs a sort of proto-discourse analysis in his objection to the excessive fetishization of the sign, ironic in view of his position as a positivist materialist. For all that he is an avowed materialist, Antonovich is also a witty discourse analyst. In this response to the *pochvenniki*, Antonovich exhausts the journalistic declensions of "soil":

[45] N. N. Strakhov, "Primer' apatii (Pis'mo v redaktsiiu "Vremeni" po povodu stat'i G. Antonovicha 'O Pochve' Sovremennik 1861, dekabr')," *Vrem'ia* 1 (1862).

> Yes, so, for a critical article of one and half broadsheets, just sit yourself down quietly and without any great mental strain or invention, just decline soil into all of its cases and your article is done. It's like this. The nominative: the soil is unknown to us, a Sphinx, a riddle, terra incognita, and so on—that's about two pages. The genitive: we do not know the soil, do not understand it, do not love it, are disconnected from it, etc.—that's a total of three pages. The dative: we owe everything to the soil—our being, our spirit, our life, and therefore soil deserves our sympathy, empathy, passion, etc.—that's a total of four pages. The accusative: we must not fertilize and remake the soil, but fertilize ourselves through a return to the soil, the penetration into it, and so on—that's a total of five pages. The vocative: O soil, who has penetrated and understood you?—only Pushkin, and us too, but not any of those theorists who… etc.—there you have a total of six pages. The instrumental: the soil should never be neglected, even if nothing grows on it but thorn-apple and henbane, etc.—a total of four pages. The prepositional: soil can be endlessly written about, because we can always continue into the next book. That altogether totals twenty-four pages, exactly one and a half broadsheets, and all this without the slightest difficulty; well, that's it!
>
> Да, нужна, бывало, критическая статья листа в полтора, сядешь себе преспокойно и без всяких этих ломаний головы и придумываний просто проводишь почву по всем падежам, и -- статья готова. В таком роде: именительный -- почва нам неизвестна, сфинкс, загадка, terra incognita и т. д., -- итого две страницы; родительный -- почвы мы не знаем, не понимаем, не любим, оторвались от почвы и т. д., -- итого три страницы; дательный -- почве мы обязаны всем, бытием, духом, жизнию, а потому нужны симпатия, сочувствие, пристрастие к почве и т. д., -- итого четыре страницы; винительный -- почву мы должны не удобрять и переделывать, а сами удобряться возвращением в почву, проникновением в нее и т. д., -- итого пять страниц; звательный -- о почва, кто тебя проникнет и разгадает? -- только Пушкин, да мы, но никто из тех теоретиков, которые и т. д., -- итого шесть страниц; творительный -- почвою никогда не должно пренебрегать, хотя бы на ней и ничего не росло, кроме дурману и белены и т. д., -- итого четыре страницы; предложный -- о почве можно писать без конца, потому оставляем продолжение до следующей книги. Итого всего двадцать четыре страницы, как раз полтора листа, и все это без малейшего труда; ну, каково это?![46]

Antonovich's absurd catalogue of the declensions of *pochva* skewers the nationalist discourse of soil pervasive in the 1860s. In this mockery of rhetorical mystification, Antonovich advocates divesting the soil of the encumbrances of culture, returning it to the material plane without the harrow of interpretation and without the dubious "enrichment" of words. Although each man is, on his own terms, calling for action, Antonovich cannot accept Strakhov's terms: that it is human to invest in soil and that our cultural enrichment is nearly as primordial as the substance itself, whether it is manifest as Biblical soil, burial soil, or native soil.

[46] Antonovich (1864), 182.

The question of native soil was inseparable in the 19th century from the question of the history and the development of nations and of national character, the terms of which were largely dictated by Johann Herder and theories of German Romantic philosophy. Antonovich's critique of the discourse of native soil, the indeterminacy of Russian "soil," and the conflation of substance and symbolism leads us into the topic of the following chapter: the emergence in the 1840s of a materialist discourse of soil. Although materialists like Antonovich challenged the inflated rhetoric of Russian mystical soil, they developed their own metaphoric systems of meaning, drawing on the emerging discipline of soil science and an analytic rather than religious-mystical system of metaphor. Antonovich's critique of the discourse of native soil and the conflation of substance and symbolism gestures toward the topic of the following chapter: the emergence in the 1840s of a materialist discourse of soil.

III: Enemy from the East: Soil between Nature and Culture

As historian V. O. Kliuchevskii writes, "The history of Russia is the history of a country that colonizes itself."[47] In Lev Tolstoy's *Anna Karenina* (1873), Levin offers theory on this process of self-colonization, asserting that the Russian people believe in their own calling "to populate the enormous unoccupied spaces of the east," resulting in a "view of the land that differ[s] completely from that of other peoples."[48] Levin's implied connection between Russians' view of the land and their vocation to colonize the "east" may be understood in a larger Russian discourse of "internal colonization," a topic which Aleksandr Etkind has placed in a cultural-historical context.[49] Cultivation and agriculture were not only the pre-conditions of culture in the European imagination, they were a tool of Russian political expansion in the 19th century. Unlike its English equivalent, Russian *kolonizatsiia* describes both "internal" and "external" settlement; it is defined as "the process of settlement and economic development of outlying vacant land in one's own country ('internal colonization'), as well as the foundation of settlements (mostly associated with agricultural activities) outside the country ('external colonization')."[50] This political program was in dialogue with cultural myths of the Russian east.

The understanding of internal development as "colonization" reflects Russia's distinct geo-political conditions and its cohabitation with other ethnic groups, or nationalities, within the "vast unoccupied spaces" of its east. Russian mythologies of these peripheral "Asian" lands and their inhabitants (contrary to Levin's proposition, the east was not "unoccupied") took many forms. The Biblical mythology of Russia's eastward drive to cultivate new land is represented in Sergei Aksakov's *Family Chronicle* (*Semeinaia khronika*, 1856), in which the patriarch Stepan Bagrov moves his family and peasants to a new estate in the "endless steppe, with chernozem soil a yard and a half deep."[51] As we learn, this territory is not uninhabited, but rather has been

[47] Quoted in Aleksandr Etkind, *Internal Colonization* (Cambridge: Polity, 2011), 2.
[48] Quoted in English from Leo Tolstoy, *Anna Karenina*, trans. Richard Pevear and Larissa Volokhonsky (New York: Viking, 2000), 679.
[49] Etkind (2011).
[50] "Kolonizatsiia," *Bol'shaia Sovetskaia entsiklopediia* vol. 12 (Moscow: Sovetskaia entsiklopediia, 1969-1978), 446.
[51] Sergei Aksakov, *Sobranie sochinenii* (Moscow: Gos. izd. khudozh. lit., 1955), 79.

historically occupied by nomadic Bashkirs, although they merely graze over the surface of this "deep" fertile soil.

The black soil Aksakov mentions—chernozem—occupied an important place in the mythology and science of Russian agriculture and borderlands settlement. Although an old vernacular term, chernozem entered standard scientific discourse by way of the soil scientist Vasilii Dokuchaev. From his first major work on Russian soil, *Russian Chernozem* (*Russkii chernozem*, 1883), Dokuchaev had imported peasant knowledge and discourse into the universal scientific domain; *narod* was now informing *obshchestvo* on the subject it knew best: soil.

In *Russian Chernozem,* Dokuchaev proposed that soil was not merely an inorganic mass of rock and mineral deposits, but a "living" substance, a unique organic body formed under particular topographic, climatic, and other geographical conditions. Pedogenesis (the origin of soil types) and ethnogenesis emerged as scientific subjects from a general, intensified interest in the 19th-century in the effects of the environment on living and non-living formations, with the nation often functioning as the unit of study in each. Dokuchaev stressed the exceptionalism of Russian soil, asserting that other countries

> how ever long they may continue to exist, will never, under the present climatic conditions, develop the advantageous, fertile soil which is the intrinsic and unique treasure of Russia, the result of a surprisingly fortuitous and very complicated entity [sic] of physical conditions. Outside Europe, only the steppes of Siberia, Missouri and Mississippi may possibly compete with the Russian chernozem zone.[52]

Dokuchaev further notes that because of the unique properties of Russian soil, "We should be ashamed of having applied German agronomy in Russia to true Russian chernozem, without taking account of conditions of climate, vegetation, and soil conditions [...]."[53] Dokuchaev's scientific discourse of the particularism of Russian soil echoed an ongoing discourse of Russian national particularism: Dokuchaev asserted, in a scientific idiom, what the Slavophiles and *pochvenniki* had claimed decades before—Russian soil *was* special.

The national character of Dokuchaev's work also had a folkloric dimension, drawing on vernacular soil terminology and local folk knowledge of soil conditions.[54] As he studied local soils, Dokuchaev spoke with peasants across Russia, sharing their stories and quoting them throughout his work. In *Russian Chernozem,* after describing the sinkholes along the P'yana river, for example, Dokuchaev relates a story passed on by local peasants: "Not infrequently the local population witnesses the formation of sinkholes […] About ten years ago, a house was 'swallowed up' in the village of Vorontsovo, about 3 versts east of Edelevo. The local inhabitants point out sinkholes which were formed 'last summer' or 'the summer before last.' This phenomenon is familiar to the local peasants, who say that all their land along the entire

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[52] Quoted here in English from V. V. Dokuchaev, *Russian Chernozem: Selected Works of V. V. Dokuchaev, vol. I*, trans. N. Kaner (Jerusalem: Israel Program for Scientific Translations Ltd., 1967), 384.
[53] Dokuchaev, 2.
[54] Pavel V. Krasilnikov and Joe A. Tabor, "Perspectives on Utilitarian Ethnopedology," *Geoderma* 111:3/4 (2003), 197. In a strange twist of history, Russian soil terminology was universalized through Dokuchaev's system: Russian vernacular terms for soil types were adopted untranslated—linguistically and scientifically, as it turns out—as standard terms, used to describe soils around the world to this day. The question of the transferability of these soil terms into a universal context is still being debated.

P'yana bank is of this kind."[55] Although Dokuchaev's subject was natural science, his work entailed the gathering of oral history, local mythologies, and ethnographic data about the ways that people worked and managed the soil of their region. This scientific witnessing of a countryside suffused with dirt echoed the work of the *griaznofily* writers who had presented ethnographic sketches showing the muddied *byt* of village life.

The widespread professional and amateur interest in soil in Russia took on a new hue in the last decade of the century, as concerns spread of a national "soil crisis." In 1891, the Volga and central regions of Russia experienced one of the most serious droughts in recorded history, and by the summer, the extent of the catastrophe was becoming clear as crops withered in the heat; 12.5 million people were in need of food aid by December, and the number would grow steadily over the following year.[56] The Russian government was widely blamed for inadequately responding to the crisis,[57] and public frustration was projected onto the plane of discourse, where everyone from scientists to mystics proposed solutions for preventing future drought and famine. There was a new urgency to the ongoing discussion of climate change and soil management at every level of society; the extensive social and political debates around *pochva* of the earlier decades were supplanted by debates about human effects on the environment, the fitness of steppe soil for cultivation, and the potential for reversing or mitigating erosion of soil, climate change, and drought. Dokuchaev was among the first scientists to publish a serious response to the crisis, *Our Steppes, Past and Present* (*Nashi stepi prezhde i teper'*, 1892), in which he proposed "improvements" to the steppes of southern Russia. Dokuchaev had apparently been considering the problem of the steppe erosion even before the drought; when he visited Gogol"s Dikanka estate in 1888, he lamented the destruction of the virgin steppe described in "Taras Bulba."[58]

As Dokuchaev's concern with the erosion of the steppe of "Taras Bulba" illustrates, scientific discourse of soil overlapped with poetic *topoi.* In responses to the 1891 drought, pedological discourse also mixed freely with symbolist eschatological visions, as when agronomist Nikolai Vereshchagin (brother of the Orientalist painter Vasilii) likened the "harmful influence of the hot Asiatic winds" from Central Asia to the Mongol invasion of the 13th century.[59] The analogy was further elaborated by philosopher Vladimir Solov'ev, who was its vector into the 20th century, where it recurred with surprising frequency in the Soviet imagination.

Following the 1891 drought, Solov'ev published an essay called "Enemy from the East" ("Vrag s vostoka," 1892) that warned of an emerging threat to Russia's black earth region—desertification. As Catherine Evtuhov has observed, "enemy from the east" is a pun: "vrag" [enemy] obtains from "ovrag" [ravine], particularly as the "o" would be elided in peasant speech.[60] Solov'ev dramatically opens his essay with the warning that

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[55] Dokuchaev, 42.

[56] Richard G. Robbins, *Famine in Russia 1891-1892; The Imperial Government Responds to A Crisis* (New York: Columbia University Press, 1975), 7. A British commercial attache, E.F.G. Law, estimated over 35 million people were in need of food aid. David Moon, "The Environmental History of the Russian Steppes: Vasilii Dokuchaev and the Harvest Failure of 1891," *Transactions of the Royal Historical Society* 15 (2005), 149.

[57] Robbins, however, disputes this claim.

[58] Moon (2005), 165.

[59] N. V. Vereshchagin, "Po povodu neurozhaya tekushchego goda," *Trudy Imperatorskogo Vol'nogo Ekonomicheskogo Obshchestva*, 2:5 (1891), 183. Quoted in in Moon (2005), 160.

[60] Catherine Evtuhov "The Roots of Dokuchaev's Scientific Contributions: Cadastral Soil Mapping and Agro-environmental Issues," *Footprints in the Soil: People and Ideas in Soil History,* ed. Benno P. Warkentin

> it is up to us, that is, not all of Europe, but just Russia, to meet yet another, specific Eastern enemy, more terrible than the Mongol destroyers or the Indian and Tibetan teachers of the future. Central Asia is advancing on us with its elemental force of the desert, it is breathing on us with its withering eastern winds, which, not encountering any obstacles in the felled forests, carry whirlwinds of sand right up to Kiev.
>
> […] собственно нам, т. е. не всей Европе, а одной России, приходится еще встречать иного, особого восточного врага, более страшного, чем прежние монгольские разорители и чем будущие индийские и тибетские просветители. На нас надвигается Средняя Азия стихийною силою своей пустыни, дышит на нас иссушающими восточными ветрами, которые, не встречая никакого препятствия в вырубленных лесах, доносят вихри песку до самого Киева.[61]

In Solov'ev's work, climate change became a new discursive site for the projection of old fears of the invasion of Russian land from the East. Drawing on the work of A. S. Ermolov[62] and Vasilii Dokuchaev,[63] Solov'ev attributes the threat to several factors: first, the external threat from heat and the *sukhovei* (a hot wind from Central Asia); second, the internal threats of deforestation and "predatory agriculture" which disturb virgin soil and vegetation. He describes the "slow desiccation of our soil, including chernozem" and explains that "due to poor care, inadequate nourishment, excessive labor straining and exhausting its powers, the organism, no matter how well built, no matter with what high natural abilities it is gifted, is no longer able to function properly […]"[64] It is difficult to discern which "organism" Solov'ev has in mind; although the state of Russian soil has been his focus hitherto, he appears to be no longer talking about soil, but about the pathos of the Russian *narod*—the "outgrowth" of the soil. Indeed, Solov'ev asserts that desertification is not only caused by nature, it is also caused by social imbalances. He lists three issues that must be addressed to avert the threat to Russian soil:

> The increasing desiccation of the Russian soil and the impossibility of leaving agriculture in its present form, the need for the educated class to help the *narod* of not only in the transformation of agriculture, but also in general to lift the intellectual and cultural level of the masses, without which there can be no stable agricultural reforms, and finally, the inability of Russian society to help the *narod* as is fitting […].

(Amsterdam; Boston: Elsevier, 2006), 144; and *Portrait of a Russian Province: Economy, Society, and Civilization in Nineteenth-Century Nizhnii Novgorod* (Pittsburgh, Pa: University of Pittsburgh Press, 2011), 40.

[61] Vladimir Sergeevich Solov'ev, "Vrag s vostoka" in *Sochineniia v dvukh tomakh* (Moscow: Akademiia nauk SSSR, Inst. filosofii: Izd-vo "Mysl," 1988), 2:480.

[62] Aleksei Sergeevich Ermolov (1846-1917) served as the Minister of Agriculture and State Domains. The book to which Solov'ev refers is *The Crop Failure and the National Disaster* (*Neurozhai i narodnoe bedstvie*, 1892).

[63] Solov'ev quotes Dokuchaev's *Our Steppes, Past and Present* (*Nashi stepi prezhde i teper'*, 1892), asserting that the erosion of Russian soil has been exacerbated by the cutting of trees which anchored the loose soil.

[64] Solov'ev, 2:491-2.

> Возрастающее иссушение русской почвы и невозможность оставлять земледелие в прежнем виде; необходимость помощи народу со стороны образованного класса не только для преобразования сельского хозяйства, но и вообще для подъема умственного и культурного уровня народной массы, без чего невозможны и прочные сельскохозяйственные реформы; наконец, неспособность русского общества помочь народу как следует […][65]

Solov'ev recognizes the imbalance in Russian society within the mirror of nature and proposes that the "enemy from the east" can only be countered by a reconciliation between society and the *narod*; between city and country. Asia, as a figure for Russia's own backwardness and inequalities, is the enemy that Solov'ev seems to have identified within.[66] Only the general lifting of "the intellectual and cultural level of the masses" might neutralize the social factors leading to the desiccation of Russian soil.

Conclusion

Over the course of the 19th century, a distinct Russian discourse of soil had developed. As the three vignettes presented here demonstrate, however, this discourse was neither uniform nor consistent. Commentators frequently disagreed about the terms of their debate, but they shared many concerns and influences, and frequently competed for control over the same ideological or discursive ground. Nor did the century witness a steady progression from a symbolic to a materialist attitude in the discourse of soil. The unresolved questions raised by many of the commentators in this chapter inform the discourse of soil for a century to come: the representation of the peasantry and agricultural practices, national exceptionalism, the relationship between city and country, the threat of Asian soil to Russian identity, and the tension between scientific and cultural knowledge.

[65] Solov'ev, 2:482-3.

[66] The anxiety of Asian soil within Russian territory would later be expressed in the Soviet period through the trope of the Asiatic mode of production, the topic of Chapter Four.

Chapter 2

The Metaphorics of Soil in Eurasia and the Legacy of Justus Liebig

I. Introduction

This chapter examines the cultural reception of the ideas of pioneering German chemist Justus Liebig (1803-1873) in 19th-century Russia, and considers the far-reaching effects of his model of soil chemistry on Russian attitudes to agriculture and soil management as social questions. A protégé of Alexander von Humboldt and founder of one of the most important chemical research centers in Europe, the Giessen Chemical Institute, Liebig would become a pioneer of modern organic chemistry and one of the most significant promoters of science in the public interest in 19th-century Europe. While Liebig's name is still found in histories of organic and agricultural chemistry, his renown, like that of many great popularizers of science, was far greater in his own time than today. At his peak of productivity from the 1840s to the early 1870s, his name was constantly before the European public in the ephemera of the age: an extensive body of journalistic writing including his popular *Letters on Modern Agriculture*, public and professional polemics surrounding his work, product testimonials, and his own uneven commercial ventures involving chemical fertilizer and meat extract. Liebig's books on plant and animal chemistry, moreover, were popular among lay audiences and translated into a number of European languages by his numerous students. Even if Liebig's works have been called too technical for the lay reader—Karl Marx complained of having to "wade" through them[1]—it did not prevent them from reaching a broad readership. In a widely-circulated anecdote, it was said that the passport official examining Liebig's documents on his arrival in London in 1842 shook his hand and affably chatted with him about his first major work, *Agricultural Chemistry*. In addition to his direct outreach to the public, Liebig was enormously important in building the social institutions that supported the development of chemistry through his editorship of a major journal of the day, his professional relationships with chemists across Europe, and his long teaching career, which spun off several generations of students who would go on to form the core of Europe's grand chemists and industrialists. Liebig's 1873 obituary in the English journal *The Chemical News* summed up the chemist's significance: "The application of chemistry to agriculture, and to many of the wants of daily life, received so powerful an impulse from Liebig, that the popular mind has taken him for the representative of the science in its application to practical purposes."[2]

Liebig revolutionized agriculture with his assertion that organic life relies on inorganic substances for nutrition, laying the foundation for the development of artificial fertilizers. His theory of mineral nutrition essentially supplanted the prevailing "humus theory" of his German predecessor, A. D. Thaer, which asserted that the top horizon of soil, humus, was a uniform

[1] Karl Marx and Frederick Engels, *Selected Correspondence, 1846-1895* (New York: International Publishers, 1942), 204. I discuss Marx's reading of Liebig further below.
[2] "Obituary. Justus Liebig," *The Chemical News and Journal of Physical Science*, ed. William Crookes 27:700 (April 25, 1873), 206.

growth medium formed by vegetal and animal matter which nourished growing plants.[3] On the contrary, Liebig's mineral theory of nutrition proposed that soil was a dynamic medium of mineral exchange between human, plant, and animal life. Moreover, this metabolic process depended on the recycling of minerals back into the soil, a process that involved a number of social, economic, and cultural factors. Liebig's ideas on soil fertility were at least as powerful an influence on the Russian "popular mind" as on the European or American mind, and arguably more so, in view of the pervasiveness of the "soil question" in 19th-century Russia's political and intellectual history. Mid-19th-century Russia had developed a distinct "discourse of soil" and when Liebig's ideas began to filter into Russia, they met with a charged political and cultural environment. From the 1860s onward, Liebig's work was widely discussed in Russia's press and literature, among gentlemen farmers and amateur scientists, novelists such as Ivan Turgenev and Fedor Dostoevskii, and socialist and Marxist revolutionaries. In the Russian context, the reception of Liebig's ideas, and of Liebig *himself* as a symbolic avatar, was arguably characterized more by cultural and social debate in Russia than by scientific inquiry. Liebig's *ideas* became a site of political contest between supporters of the Romantic, anti-reductionist trend in science and the radical positivist-materialist trend that would follow. Liebig's *name* became a rallying cry for groups with wildly different agendas and a symbolic object of contention between intellectual generations.[4] Above all, Russian discussions of Liebig and his materialist soil chemistry focused on how Russia's distinctive national spirit arose from its "native soil." In addition to discussing Liebig's direct impact on Russian discourses of agriculture, history, society, and environment, this chapter will further consider how creative readings of Liebig's work by such figures as Marx and Engels had a profound, long-reaching impact on Russian—and, as we will see in the next chapter—Soviet, attitudes to soil**.** Marx's transfer of Liebig's ideas across epistemic domains—from soil science to social science—had a profound impact on discourses and ideologies of soil for a century to come.

II.

One historian of science has called Liebig's Giessen Chemical Institute a "chemist breeder," and indeed a significant number of Russia's chemists and scientists in the mid-19th century were mentored by Liebig or one of his disciples. [5] By the 1860s, Liebig's Russian students had returned home to establish themselves as major figures in their field and to propagate Liebig's legacy and materialist vision of the world in both the scientific and cultural domains. This cohort constituted the first generation of Russian chemists: Nikolai Nikolaevich

[3] A. A. Rode, *Soil Science* (Jerusalem: Israel Program for Scientific Translations, 1962), 5.
[4] It is worth noting that Liebig was also understood by some to be a vitalist, while others claimed him to be a materialist. For more on this subject, see Timothy O. Lipman, "Vitalism and Reductionism in Liebig's Physiological Thought," *Isis* 58:2 (1967), 167-185.
[5] Vucinich expands the formulation somewhat: "It was virtually impossible to find a Russian chemist of the time who had not taken a course from Justus Liebig at Giessen, Heinrich Rose at Berlin, R. W. Bunsen at Heidelberg, or Marcellin Berthelot at the College de France." See Vucinich, 2:136. The term "chemist breeder" was coined by J. B. Morrell, see "The Chemist Breeders," *Ambix* 19 (1972), 1-46.

Zinin (first chairman and co-founder of the Russian Chemical Society),[6] Nikolai Nikolaevich Sokolov (who published the first Russian journal of chemistry, *Khimicheskii zhurnal,* from 1859-1860 together with the agronomist and journalist Aleksandr Nikolaevich Engel'gardt, whom I will discuss further below), Aleksei Ivanovich Khodnev, Nikolai Erastovich Liaskovskii, Fedor Fedorovich Beilstein, and A. A. Fadeev. Liebig's famed student Aleksandr Abramovich Voskresenskii, called the "grandfather" of Russian chemistry, trained a succeeding generation of Russian scientists—among them Dmitrii Ivanovich Mendeleev, physical chemist Nikolai Nikolaevich Beketov, and chemist Nikolai Aleksandrovich Menshutkin (discoverer of the Menshutkin reaction).[7] Beketov and Mendeleev, in turn, mentored the founder of modern soil science and soil classification, Vasilii Dokuchaev, discussed in the previous chapter.[8] Aside from transmission of influence through these direct lineages, Liebig shaped Russian chemistry on an institutional level, insofar as the first Russian chemistry labs were modeled on the Giessen research center.

Liebig's students of chemistry further popularized his works by translating them into Russian. The earliest translations, mostly excerpted in journals, were published in the 1840s and 1850s, but it was not until the 1860s that Liebig's works exploded in Russia, a trend coinciding with the professionalization of his first generation of Russian students.[9] Between 1860 and 1863, at least nine full Russian translations of Liebig's books were published; it was such a sensation that agronomist and journalist Aleksandr Engel'gardt was compelled to pen an editorial on the phenomenon in *Saint Petersburg News*.[10] The first full Russian translation of Liebig's *Agricultural Chemistry* was published in 1862 by Liebig's student Pavel Antonovich Il'enkov (1821-1877), who would become professor of chemical engineering at St. Petersburg University.[11] Brokgaus-Efron, the most authoritative Russian encyclopedia of the pre-revolutionary period, demonstrated the high esteem in which Liebig was held, calling this work a "blessing to mankind."[12]

The reach of Liebig's ideas in Russian society extended through scientific institutions, journals, professional relationships, and, finally, social circles. The *kruzhok* had become an important institution of intellectual life during the repressive reign of Nicholas I, and it served as a forum for the intermixing of politics, ideology, and science. Formally, within *kruzhki*, and informally within the close circles of intelligentsia sociability, Liebig's disciples brought their scientific interests, education, and expertise to the troubling questions of Russian society.[13]

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[6] Even the Russian composer Aleksandr Borodin had studied chemistry with Liebig's disciple Zinin and had a distinguished career as a chemist.

[7] For more on Liebig's influence on the development of chemistry in 19th-century Russia, see Iu. S. Musabekov, *Iustus Libikh, 1803-1873* (Moscow: Izd-vo Akademii nauk SSSR, 1962), 169-177.

[8] Beketov was the great uncle of the Silver Age poet Aleksandr Blok, while Mendeleev was Blok's father-in-law. Beketov's brother, Andrei Nikolaevich Beketov, was a celebrated botanist who wrote extensively on soil conditions, and both Beketovs were friends of Fedor Dostoevskii as well. The close social and family ties between scientists and artists during the mid-to-late century facilitated the movement of metaphors and images across fields.

[9] The short work, *Artificial Fertilizers* (*Iskusstvennye udobreniia ili tuki*), was published in Petersburg in 1850.

[10] A. N. Engel'gardt. "Libikh v russkom perevode," *Sankt Peterburgskie vedomosti*, No. 272 (Dec. 6, 1863), 1105-6.

[11] IUstus Libikh, *Khimia v prilozhenii k zemledeliu i fiziologii rastenii*, *7th ed.* trans. P. A. Il'enkov (Braunshveig: Fiveg and Son, 1864).

[12] V. Kurilov, "Libikh," in *Entsiklopedicheskii slovar',* ed. I. E. Andreevskii (St. Petersburg: Brokgauz i Efron, 1890-1907), 34:640. The author was affirming the assessment of German chemist August Wilhelm von Hofmann.

[13] For a discussion of the *kruzhok* in the formation of the Russian Chemical Society, see Michael D. Gordin, "The Heidelberg Circle: German Inflections on the Professionalization of Russian Chemistry in the 1860s," *Osiris* 23:1 (2008), 23-49.

Indeed, the "soil question" in Russia was a concern not only of scientists and agronomists, but of all the Russian intelligentsia throughout the 19th century. Soil was an endless topic of discussion, as both a material and a symbolic object. In Imperial Russia's agrarian society, even the most disinterested landowner was aware that soil was the foundation of his estate; on a national level, soil was the primary source of wealth and contention in an age of political and land reform, imperial expansion and borderland colonization. But, it was also a symbolic source of national identity in the tradition of Romantic nationalism and a nostalgic proxy for the Russian *narod* among Slavophiles, who contended, in the tradition of German romantic nationalism, that Russian soil and character were distinct from those of Western Europe. Most importantly, soil as material became conflated with soil as symbol in theories of environmental determinism and primordial nationalism. Commenting on this excessive rhetorical and symbolic inflation of "soil" in the 1860s, Maksim Antonovich, a radical journalist and amateur geologist, wrote that "'soil' was the philosopher's stone for us, a journalistic elixir, an inexhaustible goldmine, a cash-cow, in a word, everything."[14] The Russian term for soil that Antonovich singled out in this distinct 19th-century discourse of the soil was *pochva* (soil). By the 1840s, *pochva* was becoming highly politicized and symbolic, its usage often more distinctly marked than the ubiquitous and polysemic *zemlia* (earth, soil). *Pochva* evolved from *podoshva*, meaning "the sole of the shoe" and acquired the more figurative meaning of foundation, ground, or the top layer of the Earth.[15] *Pochva* had also entered scientific usage by the 18th century in discussions of geognosy and the attempt to systematize the study of earth.[16] But the most transformative semantic shift in *pochva* occurred in the 1830s-1840s, under the influence of the French *terrain*. A number of new phraseologies from French entered Russian, considerably expanding the figurative uses and associations of *pochva*. Linguist V. V. Vinogradov notes several of these, including *naiti podkhodiashchuiu pochvu* (to find common ground) and *na pochve chego-nibud'* (on the grounds of something).[17] These new phraseologies further shifted *pochva* into a predominantly symbolic or figurative register, rendering the "soil question" not only environmental and political, but semiotic and symbolic.

When Antonovich critiqued the symbolic use of soil, he spoke from the subject position of a geologist, materialist, and radical. Materialism as a philosophy was nearly inseparable from radical politics in the Russian sixties, and Liebig, as an icon of materialism in Russia, also became an icon of radical politics. Liebig's work on agricultural chemistry had been published in Russia in the 1840s and 1850s—a period of political upheaval in Europe and political repression in Russia. Michael Gordin notes that the "German states perceived the revolutions to be at their roots agricultural disturbances caused by instability in crop production."[18] Liebig himself argued that agricultural chemistry could help stabilize society by ensuring "greater crop stability across harvests."[19]

While German states were promoting agricultural chemistry as a utopian cure for revolutionary unrest, Nicholas I was reacting to the events of 1848 with repressive measures, including curtailing foreign travel and study and eliminating philosophy from the university

[14] Antonovich (1864), 182.
[15] V. V. Vinogradov, *Istoriia slov* (Moscow: Nauka, 1999), 527-528.
[16] Ibid., 529.
[17] Ibid., 529.
[18] Gordin, 29.
[19] Ibid.

curriculum.[20] Nearly all of Liebig's most important Russian disciples had studied in Giessen before 1848, and they were a key force in bringing to Russia not only Liebig's ideas, but materialist ideas generally. Victoria Frede notes that Nicholas I's censorship "delayed the arrival of the new materialism into Russia."[21] However, agricultural chemistry had already been a way of discussing materialism during the 1840s and 1850s. Russian translations excerpted from Liebig's seminal work on *Agricultural Chemistry in Its Application to Agriculture and Physiology* (1840) had been published in Russia in the 1840s and offered a text on materialism that not only examined soil, a topic of vital national interest to the Imperial Russian government and, for the most part, politically unobjectionable, but also carried subversive content by examining the relationship of soil to plant physiology and, more crucially, animal physiology. It was but a short step to the attribution of purely materialist explanations to human physiology and even, as Jakob Moleschott would suggest, cognition.[22] Thus, by the 1860s, while Liebig's ideas were being critiqued in Western Europe as vitalist and Romantic by a younger generation of positivist materialists, the younger Russians of that decade still overwhelmingly hailed Liebig's work as an affirmation of scientific materialism and a broader materialist worldview.

Liebig's assertion that organic life—including the human body—could be studied as a chemical system had radical implications beyond the field of chemistry. I will now consider how literature and the social sciences responded to Liebig and his ideas.

Liebig's role in the generational conflict in mid-century Russia is exemplified by a polemic between typical representatives of the two ideological camps that defined that period's intellectual discourse: the gentry novelist Ivan Turgenev and the revolutionary Nikolai Chernyshevskii. In 1861, Turgenev dissolved his relationship with the journal *The Contemporary* over ideological conflicts with Chernyshevskii and a younger, radical generation of contributors at the journal. This debate was playing out publicly just as Turgenev was finishing work on his novel *Fathers and Sons* (*Otsy i deti*, 1862), and Turgenev's portrait of the young nihilist student Evgenii Bazarov was regarded as an unflattering portrait of Chernyshevskii's generation. The novel has been called a "concrete social picture" of the generational conflict between the men of the forties—liberals like Turgenev who favored gradual reform of Russia's political institutions—and the succeeding generation of radicals, the men of the sixties like Chernyshevskii.[23]

As Robin Feuer Miller observes, *Fathers and Sons* is a compendium of the intellectual debates of the age; accordingly Liebig is depicted as an empty idol of the younger generation.[24] In the novel, the positive materialists Bazarov and Nikolai Petrovich excitedly discuss a number of contemporary works of science and social theory. Turgenev savagely parodies the dilettante

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[20] Nicholas Riasanovskii, *Nicholas I and Official Nationality in Russia, 1825-1855* (Berkeley: University of California Press, 1959), 218.

[21] Victoria S. Frede, "Materialism and the Radical Intelligentsia: The 1860s," in *A History of Russian Philosophy 1830-1930; Faith, Reason, and the Defense of Human Dignity*, ed. G.M. Hamburg and Randall A. Poole (Cambridge: Cambridge University Press, 2010), 71.

[22] The Dutch physiologist, Jakob Moleschott, wrote several works polemicizing with Liebig, including *The Cycle of Life: Physiological Replies to Liebig's Chemical Letters* (*Der Kreislauf des Lebens: physiologische Antworten auf Liebig's Chemische Briefe,* 1852). For more on Liebig's differences with the young materialists, see Vucinich, 2:311.

[23] Robin Feuer Miller, "Fathers and Children," in *Ivan Turgenev*, ed. Harold Bloom (Broomall, Pa: Chelsea House Publishers, 2003), 23.

[24] Ibid.

Kukshina who refers to Liebig in her amateur enthusiasm for chemistry. At their first meeting, Bazarov and Kukshina turn their conversation from lunch to Liebig:

> [Bazarov] "'A piece of meat's better than a piece of bread even from the chemical point of view."
> [Kukshina] "Are you are studying chemistry? That is my passion. I've even invented a new sort of glue myself."
> [Bazarov] "A glue? You?"
> [Kukshina] "Yes. And do you know for what purpose? To make dolls' heads so that they won't break. I 'm practical, too, you see. But it's not quite ready yet. I've yet to read Liebig."[25]

Kukshina herself, whose very name suggests *kukla*, or puppet, applies Liebig's chemical philosophy to the formulation of better glue for dolls' heads. In his parody of the "lady chemist," Turgenev declares Russia's men *and* women of the sixties to be puppets uncomprehendingly replicating European materialist discourse. Kukshina and her dolls also represent a parody of the mechanist view of the human body—a mannequin held together not by vital spirit, but by chemical glue.

For the young positivist materialists, Turgenev's parody of Liebig and his materialist principles was a provocation. Chernyshevskii responded in his work of the following year, *What Is To Be Done?* (1863), a revolutionary handbook thinly veiled as a novel. This defense of Liebig and the men of the sixties would exert a major influence on the architects of the Russian revolution, including Lenin, who called it his favorite novel. In *What Is To Be Done?*, Liebig's ideas concerning soil are the basis for an extended social metaphor in the dream of the novel's heroine, Vera Pavlovna. The evening before her dream, Vera's dinner guests steer the conversation to "the current debate about the chemical basis of agriculture according to Liebig's theory, the laws concerning historical progress—an unavoidable subject of conversation in such circles at that time."[26] Chernyshevskii associates theories of "agricultural chemistry" with the laws of "historical progress," affirming the structural transfer of metaphors across cultural and scientific fields and between the natural sciences and social sciences and echoing Marx and Engels' assertion that, "We know only a single science, the science of history."[27] That night, Vera Pavlovna's dream logic fuses agricultural chemistry and historical development into an extended metaphor of Russian soil and revolution. In the dream, the young positive materialists Lopukhov and Aleksei Petrovich contrast plants grown in "real" soil with those grown in "putrescent" soil. "Real" soil is composed of healthy elements (*elementy*), which form "complex chemical arrangements" using energy from the sun. The main "element" of this healthy soil is *labor*. Putrescent soil, on the other hand, is characterized by "stagnation" and lack of movement.

This discussion of healthy and putrescent soil plays out a dialectic between soil (*pochva*) and dirt (*griaz'*). Chernyshevskii marks *dirt* as "real" soil, a lexical choice that underscores his desire to reject the lofty and encumbered symbolism of *pochva* and restore materiality to soil. The putrescent and "fantastic" soil of Vera Pavlovna's dream is the symbolic *pochva* of Russian

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[25] I. S. Turgenev, *Polnoe sobranie sochinenii i pisem v dvadtsati vos'mi tomakh* (Moscow: Nauka, 1964), 8:259-260.
[26] Nikolai Chernyshevskii, *Chto delat'?: iz rasskazov o novykh liudiakh* (Leningrad: Nauka, 1975), 123. Cited here in English from Nikolai Chernyshevsky, *What Is To Be Done?*, trans. Michael R. Katz (Ithaca and London: Cornell University Press, 1989), 180.
[27] Marx and Engels (1964), 34.

discourse: a sign emptied, then filled with abstract cultural symbolism. Liebig's theories of sanitation, drainage, and land improvement provide a metaphoric structure for Chernyshevskii's proposal for revolutionary social transformation.

Chernyshevskii suggests that minerals and labor circulate together in a healthy economy of soil—a utopian vision that affirms labor as a cure for the defects of Russian national character and the deficiencies of Russian "native soil." This vision of the imbrication of soil economies and social economies echoes Karl Marx's nearly simultaneous extension of Liebig's theories into socio-political theory. In the section that follows, I examine Liebig's influence on Marx's concept of social metabolism.

While formulating *Capital*, Karl Marx was keenly interested in new developments in agricultural chemistry, a field that was already making important social and economic changes throughout Europe. Liebig in Germany and John Bennet Lawes in Scotland were developing fertilizers that could raise crop yields significantly and mitigate the effects of the declining fertility of Europe's soil under the *Raubsystem*.[28] In his letters to Engels, Marx wrote that "the new agricultural chemistry in Germany, especially Liebig and [Christian] Schonbein […] are more important than all the economists put together […]."[29] Marx's concept of "social metabolism" evolved directly under the influence of Liebig's model of soil metabolism.

In this model, the agricultural cycle depends on the return to the soil of all extracted minerals in the form of human waste and human remains. Liebig writes:

> In the large towns of England the produce both of English and foreign agriculture is largely consumed; elements of soil indispensible to plants do not return to the fields,--contrivances resulting from the manners and customs of English people […] render it difficult, perhaps impossible, to collect the enormous quantity of the phosphates which are daily, as solid and liquid excrements, carried into the rivers.[30]

Liebig considered it a major agricultural problem that urban waste was not returned to the soil of the countryside as fertilizer, but was "wasted" in cities, where it poisoned water and spread disease.[31] While Liebig suggested that this was a problem with social origins, Marx extended this diagnosis of the source of soil depletion to a broader socio-economic critique of the unhealthy relationship between city and country.[32] This transfer shows how, more generally,

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[28] Liebig's poetics and the development and application of his ideas should be understood in the context of the larger political, economic, and social forces at work in Europe in the first half of the 19th century, including the Irish potato famine and the English High Farming movement that emerged after the repeal of the English Corn Laws. For more on Liebig, see William H. Brock, *Justus von Liebig: The Chemical Gatekeeper* (Cambridge: Cambridge University Press, 2002).

[29] Karl Marx and Friedrich Engels, *Selected Correspondence, 1846-1895* (1942), 204.

[30] Justus Liebig, *Familiar Letters on Chemistry in Its Relations to Physiology, Dietetics, Agriculture, Commerce, and Political Economy* (London: Taylor, Walton, and Maberly, 1851), 473.

[31] Liebig writes: "The importation of urine or of solid excrements from a foreign land, is quite equivalent to the importation of corn and cattle. All these matters, in a certain time, assume the form of corn, flesh, and bones; they pass into the bodies of men, and again assume the same form which they originally possessed. The only true loss that we experience, and that we cannot prevent, on account of the habits of our times, is the loss of phosphates, which man carries in his bones to the grave." Liebig, *Chemistry in its Application to Agriculture and Physiology,* 3rd ed. (London: Taylor and Walton, 1843), 178.

[32] For further interpretations of the Liebig's influence on Marx, see John Bellamy Foster, *Ecology Against Capitalism* (New York: Monthly Review Press, 2002), 154-170; "Marx's Theory of Metabolic Rift: Classical

Liebig's ideas about soil metabolism nuanced Marx's metaphors, placing the *Stoff* of materialism in a fluid system of *Stoffwechsel*—metabolism, or material exchange (in Russian, *obmen veshchestv,* or *krugovorot veshcheshtv*). Marx explains how Liebig's agricultural metabolism is sealed into the larger interdependent processes of "social metabolism":

> […] Large landed property reduces the agricultural population to a constantly falling minimum and confronts it with a constantly growing industrial population crowded together in large cities. It thereby creates conditions which cause an irreparable break in the coherence of social interchange [*Stoffwechsel*], a metabolism prescribed by the natural laws of life itself. As a result, the vitality of the soil is squandered, and this prodigality is carried by commerce far beyond the borders of a particular state (Liebig).[33]

Soil fertility was regarded not only a phenomenon with economic effects, but also as a metaphor for socio-economic functions. Liebig and Marx's contention that "robbery" of nutrients from the soil was a form of socio-economic exploitation prefigures what sociologist John Bellamy Foster calls the "metabolic rift."[34]

As Marx and Engels attempted to incorporate the rural sphere into their vision of progress, Liebig's critique of the broken metabolic cycle of city and country was an important touchstone. Engels, in *The Housing Question* (1872), appeals to Liebig as an authority in his own articulation of the "metabolic rift" between town and country:

> The abolition of the antithesis between town and country is no more and no less utopian than the abolition of the antithesis between capitalists and wageworkers. From day to day it is becoming more and more a practical demand of both industrial and agricultural production. No one has demanded this more energetically than Liebig in his writings on the chemistry of agriculture, in which his first demand has always been that man shall give back to the land what he takes from it, and in which he proves that only the existence of the towns, and in particular the big towns, prevents this.[35]

In his appeal to the "antithesis" between town and country, Engels fuses Liebig's theory of soil-cum-social metabolism with dialectical materialism, suggesting an alternative rhythm of progress. This vision of Liebig offered Marx and Engels a means of incorporating the countryside into their primarily urbanist vision of socialism. This endeavor to synthesize the

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Foundations for Environmental Sociology," *American Journal of Sociology* 105:2 (1999), 366-405; and Kozo Mayumi, "Temporary Emancipation from Land: From the Industrial Revolution to the Present Time," *Ecological Economics* 4 (1991), 35-56.

[33] Karl Marx, *Capital* (1967), 3:813. The parentheses are original to Marx.

[34] Liebig's concern with the return of organic waste back into the nutrient cycle led him to advocate not only for fertilizer, but also for better urban sanitation. Marx interprets Liebig's metabolic rift between city and country as a phenomenon related to class and economic exploitation. Marx writes, "Capitalist production, by collecting the population in great centres, and causing an ever increasing preponderance of town population […] disturbs the circulation of matter between man and the soil, i.e, prevents the return to the soil of its elements consumed by man in the form of food and clothing; it therefore, violates the conditions necessary to lasting fertiity of the soil.'" Marx (1967), 1:505.

[35] Friedrich Engels, "The Housing Question," in *On Historical Materialism: A Collection*, ed. T. Borodulina (New York: International Publishers, 1974), 158. "The Housing Question" was translated into Russian no later than 1887.

urban and rural spheres into a communist utopia would later become a major preoccupation of Soviet culture.

The transfer of this preoccupation, whether directly from Liebig or mediated by Marx, may be traced through a line of Russian radicals. An examination of two important Russian figures in this discussion of urban-rural union, Aleksandr Engel'gart and Vladimir Lenin, will illustrate a broader phenomenon. Aleksandr Nikolaevich Engel'gardt, who was a distinguished chemist, a popular journalist, and an active figure in the Russian Populist movement of the 1870s echoed Liebig's theory of the robbery of nutrients from the countryside in his popular writings on agriculture. Engel'gardt had studied with Liebig's disciple Nikolai Zinin before attaining the position of chemist and rector at the St. Petersburg Agricultural Institute.[36] Engel'gardt wrote that as a student he was "very attracted to Liebig's scientific genius" and interested in Liebig's observations about "soil exhaustion"; indeed, Engel'gardt himself developed phosphate fertilizers.[37] Allegations of political radicalism during his tenure at the Agricultural Institute led to Engel'gardt's internal exile on his estate near Smolensk in 1881, but there he continued research and wrote prolifically on agricultural methods and farm management.[38] Beginning in 1872, he published his impressions on rural life and agriculture in *Letters from the Country*, printed serially in the journal *Notes of the Fatherland*.

In one of his *Letters from the Country*, Engel'gardt recapitulates Liebig's theory of the "robbery of the soil," but adds his own specific critique of landowners:

> The need for fertilizer has entered everyone's consciousness, so that the landowner devotes all his attention to building up stores of manure. […] But at the same time that the landowner, who is selling grain and cattle, renting out his meadows in part, and leasing land for flax and grain, depletes the soil due to the removal of soil particles (most importantly—phosphate salts) through the grain, cattle, and hay; on the contrary, the peasant imports soil particles from the outside […] improving and humifying.[39]

Engel'gardt echoes Liebig as he accuses landowners of robbing the soil and praises peasants for enriching it—not only with "imported" mineral substances, but also with labor. Engel'gardt asserts that landowners' attempts to address soil degradation with manure alone are ultimately insufficient, given that soil fertility has an inherent economic and social component.

The influence of Engel'gardt's *Letters* ran deep among the Russian intelligentsia at the turn of the century. As Cathy Frierson writes: "For Lenin, Engelgardt was one of the best of the Populist observers of developments in the countryside, and he drew on the letters […] both in his study of the development of capitalism in Russia and his criticism of Populism as an ideology and revolutionary movement."[40] Although Lenin critiqued Engel'gardt, he did share the position that soil depletion was not only a problem of an incomplete rural-urban cycle, but also a problem of economic exploitation. Lenin also alluded to Liebig in *Marxist Views on the Agrarian*

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[36] Cathy Frierson, Introduction to *Aleksandr Nikolaevich Engelgardt's* Letters from the Country, *1872-1887.* trans. and ed. Cathy Frierson (Oxford: Oxford University Press, 1993), 5.
[37] A. N. Engel'gardt, *Iz derevni. 12 pisem. 1872-1887* (Moscow: Gos. izd-vo sel'khoz. lit-ry, 1956), 429-430.
[38] Frierson (1993), 6-7.
[39] Engel'gardt (1956), 381.
[40] Frierson (1993), vii. Lenin devoted a section of *The History of Capitalism in Russia* to Engel'gardt's life and work. See V. I. Lenin, "Istoriia khoziastva Engel'gardta," in *Polnoe sobranie sochinenii* (Moscow: Gos. izdatel'stvo politicheskoi literatury, 1961), 3:210-213.

Question in Europe and in Russia, in which he writes that "there is no doubt that capitalism has upset the equilibrium between the exploitation of the land and fertilisation of the land (the role of the separation of the town from the countryside)."[41]

The unification of city and country (*smychka goroda i derevni*) became a crucial slogan of Soviet politics in the 1920s. The *smychka,* having evolved from Marx's vision of social metabolism, can ultimately be traced to Liebig's system of soil metabolism. Scientific knowledge of soil was transferred into Marxist political metaphor, which was then reified in Soviet environmental policies. The state-directed effort to achieve the *smychka* resulted in policy decisions with concrete agricultural and environmental consequences. For example, Lenin echoed Liebig's prescription that mineral exchange between the city and the country be strictly balanced when he declared in his 1919 document "On the Transportation of Fertilizers by Rail" that shipments of chemical fertilizers to the country should be precisely equivalent to shipments of grain to the city.[42] Later, with the "strategic retreat" of NEP, Lenin seems even to have regarded the *smychka* as a way to come to terms with free trade—which he feared would lead to the "full restoration of capital"—by imagining the NEP economy as a system of moneyless exchange between city and country. As historian E. H. Carr notes, "He seems at first to have envisaged the exchange of goods between town and country as a grandiose system of organized barter."[43]

Lenin's innovation in interpreting social and soil metabolism was the centralization of control of these "metabolic" functions within a state apparatus. His scientists and engineers who were steeped in the 19th-century tradition of cultural and scientific materialism, and, in many cases, claimed direct professional descent from Liebig through a chain of apprenticeships.

The reception of Liebig's ideas in 19th-century Russia offers a case study in how metaphors transfer between the scientific and cultural domains. This transfer was facilitated by the early Russian chemists, agronomists, and soil scientists, who were also frequently active in political and cultural circles within the Russian *intelligentsia*. These figures popularized Liebig's scientific works, translated his ideas into idioms that were familiar to the reading public, and suggested the social implications of his scientific thought. The resulting conflation of soil as a material and as a symbol resulted in an intertwining of the history of soil science and the history of soil culture in Russia. Liebig's own articulation of the relationship between agriculture and culture relied on structural metaphors of the sort that some considered literary, produced, as his mentor Berzelius scornfully remarked, "at the writing desk," rather than the lab.[44] But, however much the materialists may have wanted to disconnect material from metaphor, they were themselves inspired to extend Liebig's work into metaphors of society, as with Chernyshevskii, and into models of social and historical development, as with Marx. Although not grown on Russian soil, Marxist ideology, including the creative interpretation of Liebig's thought, is very much a part of Russian intellectual history in the 19th and 20th centuries.

All of these metaphors and models would, perhaps, have remained in the realm of discourse as phenomena of intellectual history but for the 1917 Revolution. The Soviet utopian

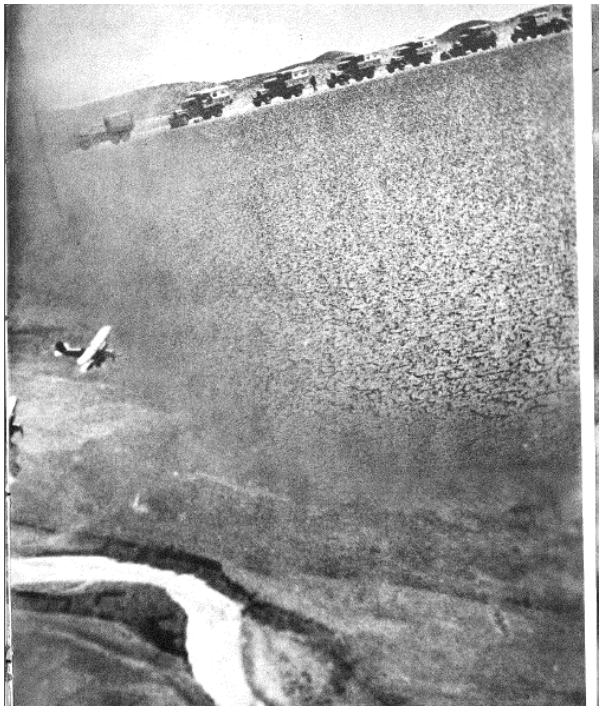
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[41] Vladimir Lenin, "Marxist Views on the Agrarian Question in Europe and in Russia," in *Lenin's Collected Works* (Moscow: Progress Publishers, 1964), 6:345.
[42] V. G. Mineev, "Udobrenie," *Bol'shaia sovetskaia entsiklopediia*, ed. A. M. Prokhorov, Vol. 26 (Moscow, 1970-1981), 479.
[43] Edward Hallett Carr, *The Russian Revolution: From Lenin to Stalin (1917-1929)* (London: Macmillan, 1979), 52.
[44] Quoted in Brock, 194.

project to remake human nature, the natural environment, and the entire material world according to Marxist "laws" of historical development resulted in a reification of ideology at many levels, including the policy level. Certainly, policy was not always consistent with ideology, nor was it *only* a reification of it. Policy responded to pragmatic, immediate socio-political needs. However, Soviet environmental and land policies should not be understood only as phenomena of historical rupture; they emerged from ideologies that took shape in the intellectual milieu of the 19th-century. As a totalizing ideology, Marxism was particularly susceptible to the free transfer of metaphors between domains of culture and science. Marx's materialist analysis of history, including its influence by Liebig's soil chemistry—would guide the interpretation and transformation of the Eurasian environment for many years to come.

Chapter 3

"The Dialectics of Nature in the Kara Kum": Desert Metabolism in Andrei Platonov's *Dzhan*



And in places where lay the lifeless sands of Kara-Kum, cotton fields will bloom. And in the places where dead cities have been drifted over with sand for thousands of years, new cities, Socialist cities, will arise.

—*USSR in Construction,* February 1934

Our task consists of the complete industrialization and agricultural development of Kara-Kum, the creation of a great Turkmen oasis in one of the saddest places in the world.

—"The Hot Arctic," Andrei Platonov, 1934

Soil science deals with soil considered as a natural body and as a means of production.

—*Soil Science,* A. A. Rode

The Kara Kum (or Black Sand) desert of central Turkmenistan became, briefly, a Soviet cultural obsession when, in July 1933, a team of 23 cars from the Gor'kii and Stalin auto plants embarked on the Moscow-Kara Kum-Moscow motor rally. The front pages of *Pravda* and *Izvestiia* followed the team led by geochemist Aleksandr Fersman over the course of nearly three months and 5,800 miles as they forded streams, climbed sand dunes, and traversed the roadless "white spots" on the map of Turkmenistan. Aside from promoting the new Soviet automobile and inaugurating exploration of a largely unstudied environment, the expedition had the effect of fixing the remote Kara Kum desert of Turkmenistan in a Soviet cultural geography and installing it in the public imagination.[1] Over the course of the following year, Kara Kum was the site of several high-profile expeditions, both scientific and cultural. The insuperable Kara Kum, "the largest sandy desert in the world," came to represent, for readers of *Pravda* and *Izvestiia*, not

[1] Among the many works published on the motor expedition were poet Mikhail Loskutov's *The Thirteenth Caravan* (1933), S. Urnis' children's book *Kara-Kum: The Story of the Race* (1934), and El-Registan and L. Brontman's *Moscow-Kara-Kum-Moscow* (1934).

only a test of Soviet technology, but an ecological, economic, and cultural challenge to Soviet civilization.[2]

Visiting Turkmenistan in 1934 and 1935, at the height of Kara Kum's visibility, writer Andrei Platonov described it as an environment that fundamentally challenged socialism, writing that the Sary-Kamysh depression of Kara Kum was "the hell of all the world" and declaring that the desert "no longer has to exist, it is not necessary under socialism."[3] Platonov's journey into this socialist Inferno had been occasioned by his participation in a writers' brigade commissioned by Maksim Gor'kii to produce a volume to commemorate the tenth anniversary of the Turkmen SSR. The resulting volume, *Aiding-Giunler*, contained Platonov's short story "Takyr," a chronicle two generations of women making the transition from slavery to socialism in Turkmenistan.[4] But, Platonov's more sustained and enduring meditation on the desert was the 1935 novel *Dzhan*, which follows the Moscow-educated Nazar Chagataev as he returns to his homeland in the Sary-Kamysh depression at the edge of the Kara Kum in a mission to bring socialism to his native *narod*, the Dzhan—a riddle of a "nation," comprised of "Turkmens, Karakalpaks, some Uzbeks, Kazakhs, Persians, Kurds, Balochi..."[5]

The broader Soviet mission to "socialize" the desert and transform "the hell of all the world" into a socialist paradise was not only a political mission, but an environmental one. Unlike his colleagues on the Turkmenistan brigade, Platonov had unique technical experience with arid landscapes and the environmental challenges posed by deserts. From approximately 1922 to 1927, Platonov had worked for the People's Commissariat of Agriculture (Narkomzem) in the capacity of a regional *meliorator,* or land reclamation engineer. While Turkmenistan may have seemed an exotic setting for Platonov's fiction, the *topos* of the desert as a distinct environmental threat to the Soviet project had been a commonplace of Platonov's work from the early 1920s.[6]

This chapter considers the poetics of ecology in *Dzhan* in the context of Platonov's technical career as a *meliorator* and in relation to broader Soviet attitudes to the environment and the project of integrating new "soils" and new nations into a larger Soviet economy through *melioratsiia,* or land reclamation. Platonov's "second profession" as a *meliorator* has been widely acknowledged as a formative influence on his philosophical worldview. For example, Christopher Harwood has methodically catalogued Platonov's treatment of the engineer, while Thomas Seifrid discusses the ontological dimensions of Platonov's "reclamation tales" of 1926-7.[7] However, literary scholarship has paid less attention to historicizing Platonov's technical-scientific knowledge or to the pragmatics of technical knowledge performed in his texts as a crucial aspect of their *poetics*. Platonov's texts support and reward this type of close reading. By considering the convergence of scientific, philosophical and poetic epistemologies in Platonov's

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[2] Of all the Central Asian republics, Turkmenistan was the last to be brought under full Soviet political control; only in early 1933, the year of the Moscow-Kara Kum-Moscow rally, was the Turkmen basmachi leader Dzhunaid Khan driven from the Soviet Union.

[3] Andrei Platonov, "Dzhan," in *Proza* (Moscow: Slovo, 1999), 457; "Goriachaia Arktika," *Volga,* no. 9 (1975), 171.

[4] Andrei Platonov, "Takyr," in *Aiding-Giunler: al'manakh k desiatiletiiu Turkmenistana* (Moscow, 1934), 47-59.

[5] Andrei Platonov, "Dzhan," 452.

[6] Natal'ia Kornienko suggests, on the basis of letters, that Platonov had already traveled to the Kara Kum desert in the 1920s as a land reclamation engineer. See Natal'ia Kornienko, Notes, *Andrei Platonov: Zapisnye knizhki: Materialy k biografii* (Moscow: IMLI-RAN, 2000), 368.

[7] See Christopher Harwood, "Human Soul of an Engineer: Andrei Platonov' s Struggle with Science and Technology" (PhD diss., Columbia University, 2000); Thomas Seifrid, *Andrei Platonov: Uncertainties of Spirit* (Cambridge: Cambridge University Press, 1992), 59-71.

work, we access meanings that would otherwise remain hidden. As well as opening up Platonov's texts internally, reading Platonov's work with an understanding of its place in a larger tradition of Russian and Soviet scientific discourse offers insight into Soviet ecological myths and the cultural project to reform the natural world in the early Soviet period.[8]

In his representation of various socialist landscapes, Platonov advances the claim that *melioratsiia* is the means by which Bolsheviks either succeed or fail in staking out and claiming their own culture. Where transformation of socialist soil is the basis for the transformation of socialist man, unreformable landscapes fundamentally challenge not only socialist economies, but, more importantly, Marxist and Soviet epistemologies. Platonov's literary work on the desert is, among other things, a theoretical testing ground for socialist models of environmental management. In his representation of the desert as a "system," Platonov works within a distinct tradition of discourse and mythology of soil, drawing particularly on a "metabolic" paradigm of soil and social exchange articulated by Marx, Engels, and Lenin, and originating in the work of German chemist Justus Liebig.[9] Within this paradigm, Platonov conceptualizes material exchanges between humans and soil (or sand, in *Dzhan*) in chemical terms, as a metabolic or "material cycle" [*krugovorot veshchestv*].[10] In this molecular vision of exchange, outward forms—human, animal, plant, mineral—are composed of fungibles in a larger mineral economy brokered by socio-economic relations. One conventionalized form of this system in Soviet dogma was the concept of "productive forces," defined as "the system of subjective (human) and material elements engaged in 'metabolism' between man and nature in the process of social production. Productive forces express the active relationships of people with nature, consisting of the material and spiritual exploration and development of its resources."[11]

Platonov's distinct model of the Kara Kum desert internalizes this system of biological-social exchange and extends its structural logic to other natural phenomena, including heat exchange. The resulting ecological model challenges the dominant paradigm of Soviet environmental consciousness—dialectical materialism—and complicates our understanding of Platonov's negotiation of rhetoric and praxis.

Soviet Cultural Myths of the Desert

Having already met with some literary success after the publication of his first book of poetry, *The Blue Depths* (*Golubaia glubina,* 1921), Platonov explained that his decision to devote himself primarily to *melioratsiia* rather than literature was precipitated by the devastating Povolzh'e drought: "The drought of 1921 made an incredibly strong impression on me, and, being a technician, I could no longer occupy myself with the contemplative affair of literature."[12] Platonov had graduated from the Voronezh Polytechnical Institute in 1921 and began working as a regional *meliorator* for Narkomzem in 1922. *Melioratsiia* was the state-sponsored effort to

[8] See Douglas Wiener, *Models of Nature* (Pittsburg: University of Pittsburgh Press, 2000).
[9] For more discussion on Justus Liebig and his influence on Marx, Engels, and Lenin, see Chapter Two.
[10] Platonov, "Voprosy sel'skogo khoziaistva v kitaiskom zemledelii," in *Sochinenie, tom pervyi, 1918-1927* (Moscow: IMLI-RAN, 2004), 2:235.
[11] Iu. A. Vasil'chuk, "Proizvoditel'nye sily," *Bol'shaia sovetskaia entsiklopediia* (Moscow: Sovetskaia entsiklopediia, 1969-1978), 47.
[12] Andrei Platonov, *Vzyskanie pogibshikh: rasskazy i ocherki* (Moscow: EKSMO, 2010), 630.

"improve land" and included such diverse activities as irrigation, drainage, soil improvement, crop experimentation, land re-surfacing, erosion control, and construction.

A Voronezh colleague reports that Platonov was appointed to chair the Provincial Committee on the Artificial Irrigation of Arid Lands in 1922,[13] the same year that he wrote one of his earliest works on irrigation of the desert, the science-fiction sketch, "Report of the Administration of Irrigation Works of Central Asia," which describes the technical design of a vertical pipe that will irrigate over a million *desiatinas* of Asian land.[14] In this piece, drought and desertification are presented as an *Asian* threat, menacing the Russian heartland along its vast southern border. Platonov described this threat in 1925: "Our soil is being eaten away by ravines and deadened by the *sukhovei* (in our region the tongue of the desert has already pushed in from the south-east), acidic bogs are spreading and a fine sand is conquering."[15] Viktor Shklovskii, following his brief encounter with Platonov on an agitational trip through the provinces in the same year, took special note of the young *meliorator*'s concern with buffering southern Russia against desertification: "Here they are cleaning the rivers, straightening them, draining swamps, and sprinkling lime on the fields to control acidity. So that is how they cleaned up Tikhaia Sosna. Comrade Platonov is very busy. The desert is advancing."[16]

Platonov, indeed, wrote a great deal about the desert and its advance in his *publitsistika* from the 1920s to the 1930s, and, frequently, his models for understanding the origins and implications of this environmental phenomenon reached back to the 1891 drought. Vladimir Solov'ev's 1892 essay, "The Enemy from the East," was a response to soil scientist Vasilii Dokuchaev's book on the 1891 drought *Our Steppes Yesterday and Today* (1892). Solov'ev writes:

> Central Asia is drawing nearer to us with the elemental force of its desert; its drying eastern winds blow toward us, and encountering no obstacles in our felled forests, carry whirlwinds of sand all the way to Kiev. This enemy can be fought successfully only by means of a radical and systematic transformation of the national economy, a task of the greatest complexity on which all the state's and society's powers must be concentrated.[17]
>
> На нас надвигается Средняя Азия стихийною силою своей пустыни, дышит на нас иссушающими восточными ветрами, которые, не встречая никакого препятствия в вырубленных лесах, доносят вихри песку до самого Киева. С успехом бороться против этого врага возможно только посредством коренного и систематического преобразования народного хозяйства – задача величайшей сложности, на которой должны

[13] Boris Bobylev in *Nash Platonov,* ed. R. Andreeva et al. (Voronezh: Tsentr dukhovnogo vozrozhdeniia chernozemnogo kraia, 1999), 209.
[14] Platonov, "Doklad upravleniia rabot po gidrifikatsii Tsentral'noi Asii," in *Sochinenie, tom pervyi, 1918-1927* (2004), 1:212-216.
[15] Andrei Platonov, "Strana bedniakov. Ocherki chernozemnoi oblasti," in *Sobranie: fabrika literatury,* ed. N. V. Kornienko (Moscow: Vremia, 2011), 633.
[16] V. Shklovskii. *Tret'ia fabrika* (Moscow: Artel' Pisatelei "Krug," 1926), 125.
[17] Bernice Glatzer Rosenthal and Martha Bohachevsky-Chomiak, *A Revolution of the Spirit: Crisis of Value in Russia, 1890-1924* (New York: Fordham University Press, 1990), 43.

сосредоточиться все государственные и общественные силы.[18]

Platonov draws on Solov'ev's "Enemy from the East" and anarchist-geographer Petr Kropotkin's 1905 essay, "The Desiccation of Eur-Asia," to develop the mythology of desertification as a larger cultural threat from Asia. He writes: "Kropotkin says somewhere, on the basis of scientific research, that the fate of south-eastern Europe (our regions) is the same as the fate of Central Asia: desiccation, starvation, extermination."[19] He further warns, "We mainly have to entrench ourselves against Asia, against the heat and sand of Turkestan. [...] By doing this, south-eastern Europe will be saved from drought, and Russia will be saved from hunger."[20] Elsewhere, Platonov warns again that southern Russia, as a border zone, is threatened by the advance of this Asian desert: an "arid zone is moving farther and farther inland, deep into the province—the desert is overtaking us; from the southeast, the heat of Turkestan and the dry climate of the plateaus of Central Asia is already breathing in our face across the steppe..."[21]

The Russian terror of desertification had a long history, in both literary and scientific works. Soil scientist Vasilii Dokuchaev associated the 1891 famine with the breaking of the virgin soil of the steppes, explaining that the fertile but delicate loess soil of the steppe became vulnerable to erosion when the grasses stabilizing it were cleared for grain cultivation. In Dokuchaev's own view, the *literary* and *material* remains of Gogol's Dikanka, the physical site of his *Taras Bulba,* were vanishing, one particle at a time.[22] This joint environmental and cultural erosion seemed particularly significant given the central place of Russian native soil, or *pochva*, in the 19th-century Russian cultural imagination.[23]

Gor'kii was one crucial bridge between the 19th-century rhetoric of *soil* and the 20th-century rhetoric of Soviet multinational *soils* in Soviet literature and cultural mythology. Gor'kii, like Platonov, drew on the discourse of the 1891 drought. Unlike Platonov, Gor'kii had experienced the 1891 drought first-hand and had been an active participant in charity projects for victims of the drought.[24] Exactly forty years later, in 1931, the father of Soviet literature once re-summoned the specter of Solov'ev:

> What is the war with drought and what does it require? From the east, from the sandy steppes heated by the sun, through the so-called "Kalmyk gate," a hot wind blows in a broad band to the north-west—the "sukhovei." Its sultry breath scorches the grain of the Lower Volga, North Caucasus region, sometimes—Ukraine. This wind even flies into Western Siberia. It brings with it a fine sandy dust, clogging fertile soils with it, reducing their fertility. Back in 1897, Vl. Solov'ev, philosopher and mystic, who had no reason to worry about this phenomenon, published an alarming article, "The Threat from the East [sic]." It goes without saying that Solov'ev's warning remained "a voice in the wilderness."

[18] Solov'ev, 2:480.
[19] Andrei Platonov, "Chernyi spasitel'," in *Sochinenie, tom pervyi, 1918-1927* (2004), 2:156.
[20] Ibid.
[21] Andrei Platonov, "Na fronte znoia" (1922), in *Sochinenie, tom pervyi, 1918-1927* (2004), 2:212.
[22] David Moon (2005), 155.
[23] I discuss the discourse of soil in 19th-century Russia further in Chapter One.
[24] Gor'kii contributed to a charity volume titled *Pomoshch' golodaiushchim: Nauchno-literaturnyi sbornik*, ed. D. N. Anuchin (Moscow: Russkie vedomosti, 1892).

> Что значит и чего требует борьба с засухой? С востока, из песчаных степей, нагретых солнцем, через так называемые «Калмыцкие ворота», дует широкой полосой на северо-запад горячий ветер — «суховей». Его знойное дыхание выжигает хлеба Нижнего Поволжья, Северокавказского края, иногда — Украины; этот ветер залетает и в Западную Сибирь. Он несёт с собою мелкую песчаную пыль, засоряет ею плодородные земли, уменьшает их плодородие. Ещё в 1897 году Вл.Соловьёв, философ-мистик, которого это явление как будто бы и не должно было волновать, напечатал тревожную статью «Гроза с Востока». Само собою разумеется, что тревога Соловьёва осталась «гласом вопиющего в пустыне».[25]

Gor'kii's article, published in *Pravda*, demonstrates the extent to which the 19th-century metaphorics of soil were working their way through 20th-century socio-political discourse.

In the 1930s, the threat of dust and the "conquest of the desert" were major cultural and literary tropes. Dust, of course, would become a global obsession following the American Dust Bowl in the 1930s when great "black blizzards" of eroded topsoil swept across the American plains. On April 14, 1935, two days after "Black Sunday," *Pravda* described the "pyl'nyi shtorm" in the American plains states, reporting that "the air is filled with soil particles" and "farmers, cattlemen, and farm hands by the thousands are fleeing the affected areas."[26] Ironically, this vast desert in the United States had been created by attempts to expand agriculture and make land more productive, and the first Soviet Five-Year Plan was undertaking a similarly aggressive approach to the development of agriculture. On the eve of the catastrophe of the American Dust Bowl, in 1929, the Soviet writer and engineer M. Il'in (whom I will discuss further below) summarized Soviet attitudes to the soil as a productive medium: "Our steppes will truly become ours only when we come with columns of tractors and plows to break the thousand-year old virgin soil."[27] The breaking of the thousand-year-old *tselina* and the violation of the historically-intact soil of the steppe was proclaimed as the means by which Soviet power could *claim* its soil. Unfortunately, as environmental historian David R. Montgomery notes, in the Soviet Union as in the United States, "dust storms blossomed after plows broke up the grassland."[28]

Desert Metabolism

It was at this moment of convergence between Soviet cultural history and global environmental history that Platonov produced his most sustained meditation on the desert as a

[25] Maksim Gor'kii, "O Bor'be s prirodoi," *Pravda* 341, December 12 1931.
[26] "Pyl'nyi shtorm v S.Sh.A," *Pravda* 103, April 14 1935, 5.
[27] M. Il'in, *New Russia's Primer: The Story of the First Five-Year Plan,* trans. George S. Counts and Nucia P. Lodge (Boston, New York: The Riverside Press, 1931), 79.
[28] David R. Montgomery, *Dirt: The Erosion of Civilizations* (Berkeley: University of California Press, 2007), 163. For more on the American Dust Bowl, see Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford UP, 2004).

socialist space. While Platonov had adopted the register of war rhetoric in his 1920s *publitsistika* on desertification, his model for the interaction of humans and nature is considerably more complex in his treatment of the desert landscapes in *Dzhan*. By the early 1930s, Platonov's view of land management appeared to be shifting, for he wrote that "contemporary methods of exploiting the soil [*pochva*], of course, are the reason for the formation of deserts."[29] Narkomzem, the agency for which Platonov worked, oversaw not only *melioratsiia*, but also the industrialization of agriculture in the Soviet Union—goals that were liable to come into conflict. The management of Narkomzem reflected the dominant Soviet environmental paradigm, Engels' dialectics of nature. Rejecting Malthus and what he called the "myth of overpopulation," Engels optimistically proclaimed that "The productivity of the land can be infinitely increased by the application of capital, labour and science."[30] Engels attributes this discovery to agricultural chemistry "and indeed two men alone, Sir Humphry Davy and Justus Liebig […]."[31] But, Platonov observed that the aggressive push to increase agricultural yields was the chief cause of soil degradation and desertification. While land management and agriculture were both concerned with productivity of a sort, one supported a long-term investment in land, while the other sought immediate yields at any cost. If the Russian *pochva* was being turned into desert by agricultural exploitation, then agriculture was, Platonov wrote, not the universal answer to raising the productivity of land, whether it was Russian steppe or Asian desert.

Written concurrently with *Dzhan*, Platonov's essay "On the First Socialist Tragedy" (1934), meditates on the function of dialectics in regulating human exploitation of natural resources:

> The true arrangement of nature corresponds to this consciousness. Nature is not great and is not abundant. More precisely, she is so cruelly designed that she has not yet yielded her greatness and her abundance to anyone. This is a good thing; otherwise — in historical time — we would long ago have stolen, squandered, and drunk nature down to her very bones. There has always been enough appetite. If the physical world had been without a single law, in fact, its most fundamental law — the law of the dialectic — and in a few brief centuries people would have destroyed the world completely and in vain. Moreover, in the absence of this law, nature would have smashed itself to smithereens even without any people. The dialectic is probably an expression of stinginess, of the almost insuperable rigidity of nature's construction — and it is only because of this that human historical development has been possible.
>
> Этому сознанию соответствует действительное устройство природы. Она не велика и не обильна. Точнее говоря—она так жестоко устроена, что свое обилие и величие не отдавала еще никому. Это и хорошо, иначе — в историческом времени — всю природу давно бы разворовали, растратили, упились бы до

[29] Andrei Platonov, "Pervyi Ivan: fragmenty ocherka," 121.
[30] Friedrich Engels, "The Myth of Overpopulation" (1844) in *Marx and Engels on Malthus*, ed. Ronald L. Meek, trans. Dorothea L. Meek and Ronald L. Meek (London: Lawrence and Wishart, 1953), 58.
[31] Ibid., 63.

> самых ее костей: аппетита всегда хватило бы. Достаточно, чтобы физический мир не имел одного своего закона, правда, основного закона — диалектики, и в самые немногие века мир был бы уничтожен людьми начисто и впустую. Больше того, и без людей в таком случае природа истребилась бы сама по себе вдребезги. Диалектика наверно есть выражение скупости, труднооборимой жесткости конструкции природы, и лишь благодаря этому стало возможно историческое воспитание человечества.[32]

It is, perhaps, in this context that an ambivalent fragment in Platonov's notebooks mentioning "the dialectics of nature in Kara-Kum" should be understood.[33] Platonov questions the prevailing wisdom that nature is irrational and obstructive, subject to the rational human will. Here, nature is presented as a conscious force protecting itself against a spontaneous and destructive human appetites. Finally, Platonov notes that human technology can overcome the resistance of nature, but only at a terrible cost:

> The relationship between technology and nature is essentially tragic. Technology's aim is "Give me a fulcrum and I shall overturn the world" [sic]. But nature is designed in such a way that she does not like being outsmarted. With the right moment of force it is possible to overturn the world, but so much will be lost along the way and in the travel time of the lever that in practical terms the victory will be useless.
>
> Между техникой и природой принципиально трагическая ситуация. […] Цель техники — «дайте точку опоры, я переверну мир». А конструкция природы такова, что она не допускает, когда ее обыгрывают: мир перевернуть можно, подобрав нужные моменты рычага, однако надо проиграть в пути и во времени, когда длинного плеча рычага столько, что практически победа будет бесполезной.[34]

Platonov suggests that technological development is not always worth the cost and remarks that even the contemporary crisis of production does not justify zero-sum exploitation. While Platonov considers the law of the dialectic to be a positive force, it is only insofar as it has served to protect nature from rapacious destruction. Platonov's novel *Dzhan* represents an ecological thought-experiment, in which Platonov investigates an alternative models for understanding the relationship between humans and nature. As we have seen, the model of society as a metabolic organism plays an important role in Marx, Engels, and Lenin's conceptions of socio-economic and ecological relations. Lenin's policy of the *smychka,* discussed in the previous chapter, depended on mineral exchange between urban and rural zones: raw materials and food entering the cities were exchanged for waste and chemical fertilizer for

[32] Andrei Platonov, "O Pervoi sotsialisticheskoi tragedii," in *Sobranie: fabrika literatury* (2011), 641.
[33] Platonov, *Zapisnye knizhki*, 135.
[34] Platonov, "O Pervoi sotsialisticheskoi tragedii," 641.

the countryside. The fungibility of the minerals in consumables and raw materials in this model of metabolic exchange gave rise to a literary *topos* in which mineral consumption is reified as a physiological process. Machines, as exemplary urbanites, consume and metabolize the mineral products of the rural sphere and humans consume "raw minerals." The work of M. Il'in (the pseudonym of Il'ia Marshak), a chemical engineer and the author of widely-published children's books, abounds with this vision of interpenetration between inorganic and organic economies.[35] In *The Story of the First Five-Year Plan* (1930), Il'in writes that "great iron beasts eat up a huge mountain," workers bake "pies of coal and ore" and roll iron "like noodles," and, finally, this mineral nourishment is fed into "the flaming bowels of blast furnaces."[36]

Just as machines eat, human food is reduced to its mineral or energy value. Grain, regarded as an abstraction of the mineral economy, is "mined."[37] Bread is "yet one more coal," and "iron is bread."[38] Echoing Liebig's chemical *smychka*, Il'in even explains that the waste of one phase of the metabolic cycle will be metabolized as food in the next phase:

> In a grain factory, as in any other factory, everything must be used. The waste from one department—straw—should go to another and be turned into meat and milk. The waste from the second department—manure—should go back to the first and fertilize the fields.[39]

Finally, Il'in carries the mineral economy to the grave, provocatively asserting that "we shall force the dead to work."[40] He refers not to human remains, but to prehistoric animal and plant matter transformed into oil and coal: "The remains of the swamp grass, the ferns, the horsetails rotted under layers of sand and clay, became black and turned into coal. And to this cemetery we intend to go, drag the dead out of their tombs, and force them to work for us."[41]

Il'in does not neglect the return phase of the metabolic cycle, in which the city sends processed minerals back to the soil. Apatite, mined from the Khibiny mountains and processed in factories, "will give us superphosphates—fertilizer for our fields."[42] In this mineral economy, land is the basis of all development, and, as the manifestation of an imperfect, irrational nature, it must be "socialized" through human intervention and industrialization. Il'in cites Kara Kum as one landscape whose riches must be coaxed by man, noting that where previous generations saw only bare sand, socialist visionaries see a wealth of sulphur.[43] Il'in suggests that *melioratsiia* can

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[35] Like Platonov, Il'in had polytechnical training—although Platonov's training would have seemed provincial in comparison with Il'in's. (Il'in had studied chemistry at the Leningrad Technological Institute.) In addition to their popularity in the Soviet Union, Il'in's children's books were showcased in foreign publication and were translated into over 30 languages.
[36] Il'in, 79, 80, 80, 79.
[37] Ibid., 103-124.
[38] Ibid., 103, 80.
[39] Ibid., 118. This concept of total use of waste materials relates to Soviet geochemist Aleksandr Fersman's concept of "complex utilization," which involved research into practical applications for "waste" minerals left over from ore extraction.
[40] Ibid., 45.
[41] Ibid., 47.
[42] Ibid., 21. Translation emended.
[43] Ibid., 21.

even transform the desert into a socialist breadbasket: "We can irrigate deserts, dry swamps, plough steppes, and force even the sands to give bread."[44]

The Kara Kum desert of Platonov's *Dzhan* does not give bread; in Liebig's agricultural chemistry, it is a space of metabolic imbalance, taking substances from human and animal matter, but returning little. In the absence of agriculture, the first stage of the metabolic economy in the desert of *Dzhan* is represented by the eating of sand. Sheep and people chew on sand or even, desperate to obtain water from it, "swallow moist sand all at once."[45] Inhabitants of the desert even seek nourishment from sand: "Suf'ian dug with his hands down to a horizon of moisture and began to chew the sand in his thirst. Some saw what Suf'ian was doing, went up to him and shared with him a supper of sand and water."[46] The dirt or silt that precipitates out of river water is mixed back in to make it more nourishing: "Suf'ian stirred up the water by the shore so that it would become more turbid, thicker and more nutritious."[47] The inversion of the natural metabolic exchange between land and the life it supports is distilled in Platonov's robust word-play as he describes how thirsty sheep chew sand for water, but spit out more fluid than they absorb: *Pesok ne poil, a sam ispival ikh sok*.[48] *Pesok* [sand] contains within it *sok* [juice], extracted from living animals and stored for future use.

In *Dzhan*, the most important way in which the desert digests and stores the substances of biological and social metabolism is in the ritual of burial. Chapter Nine of *Dzhan* is structured by Chagataev's experience at a burial *kurgan* on his way, by foot, to and from the city of Chimgai, 150 kilometers away from the Dzhan's temporary settlement. Chagataev observes growing among the ruins of dry clay walls "enormous grasses with thick greasy stems."[49] Being inedible, these plants grow only "for their own pleasure," reaching freakish proportions by extracting and withholding substances from the earth. Chagataev looks upon this hoarding of minerals and water with "hatred."[50] Scattered around these plants on the ground are bones—either animal bones "to thicken the fat on soup" or human bones.[51] The ambiguous use of pronouns creates the impression that the oily plants scattered among the ruins digest bones and human remains that pass into the soil, growing fat on substances while withholding mineral wealth and water from the metabolic cycle.

If people consume sand in Platonov's metabolic vision of the desert, then it follows that they also excrete sand. Indeed, Platonov writes elsewhere that "the Sahara, Gobi, and sandy rivers of Asia are the excrement of irrational cultures that lay in sandy graves they have prepared for themselves."[52] Platonov elsewhere writes that "nature is the shadow of history, its waste, its excrement."[53] While this may appear a harsh indictment of both nature and failed civilizations, it is not entirely unhopeful. But, in order to understand Platonov's evaluation of desert metabolism, it is necessary to consider Platonov's conception of biological and physical energy and the symbolic function of "waste" in Platonov's poetics.

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[44] Ibid., 119.
[45] Platonov, "Dzhan," 484-485.
[46] Ibid., 494.
[47] Ibid., 461.
[48] Ibid., 500.
[49] Ibid., 472-3.
[50] Ibid., 473.
[51] Ibid., 473.
[52] Andrei Platonov, "Bor'ba s pustynei," in *Sochinenie, tom pervyi, 1918-1927* (2004), 1:276.
[53] Andrei Platonov, "Simfoniia soznaniia," in *Sochinenie, tom pervyi, 1918-1927* (2004), 1:224.

The Desert as Waste-land

As discussed previously, Liebig asserts that the failure to return excrement and dead bodies to the soil as part of a metabolic agricultural cycle is a wasteful practice. Liebig writes, "It is quite impossible for us in Europe to form an adequate conception of the great care which is bestowed in China upon the collection of human excrements. In the eyes of the Chinese these constitute the true sustenance of the soil […] and it is principally to this most energetic agent that they ascribe the activity and fertility of the earth."[54]

In his *publitsistika* on land improvement from the 1920s, Platonov frequently discusses how human organic waste should be used to transform waste-land (*pustyr'*). Platonov echoes Liebig in a 1922 article on Chinese agriculture, which refers to the cycling of matter—*krugovorot veshchestv*—as a model for Soviet agriculture and suggests that nutrients be recycled by returning human urine and "excrement" to fields. Platonov writes that "Chinese agriculture consists of the constant, correct and plentiful fertilization of the soil using human and animal dung. This is very cheap and necessary for plants, since human excrement contains in ready form all the substances which the plant needs for its nourishment and growth. [...] Urine is also particularly useful, containing much nitrogen, adding it to cattle feed raises milk yields."[55]

Platonov's focus on human waste as fertilizer was very much in step with the cultural discourse of the mid-1920s. Just as the "soil crisis" was a major trope of 19th-century Russian discourse, the "phosphorus crisis" was its counterpart in the 1920s, when the Soviet Union's limited phosphorus supply was hindering the growth of agriculture.[56] In the summer of 1926, when superphosphate fertilizer was still being imported from France at great cost, *Izvestiia* advocated a distributed system for the production of phosphate fertilizers, with individuals throughout the country producing their own fertilizer with bone meal and basic phosphates.[57] In the next year, the front page of *Pravda* ran a feature on the agropropaganda activities of Narkomzem, Platonov's employer, in promoting the use of alternative fertilizers and ways of coping with the phosphorus shortage.[58]

Platonov's work internalizes the phosphorus crisis and even extends its poetics to Soviet political consciousness. The eponymous hero of Platonov's story "Pervyi Ivan" makes the extraordinary statement that "the mind feeds on phosphorus" [*um kormitsia fosforom*] and suggests a novel source of phosphorus fertilizer: the enemies of the state. Pervoivanov suggests that "it would be better if we cracked open their heads and got phosphorus out of them to use for fertilizer."[59] The suggestion that the brain would make a rich source of fertilizer draws on a materialist view of cognition termed the "phosphorus fallacy" by William James. An influential purveyor of this idea into the Soviet period was the geochemist (and leader of the Moscow-Kara Kum-Moscow expedition) Aleksandr Fersman who, in his popular science works, called phosphorus the "element of life and thought."[60] Fersman, moreover, gave lengthy discussion to

[54] Platonov, "Voprosy sel'skokhoziastva v kitaiskom zemledelii," 2:236.
[55] **Platonov, "Voprosy sel'skokhoziastva v kitaiskom zemledelii," 2:235.**
[56] For more on the phosphorus crisis, see James W. Heinzen, *Inventing a Soviet Countryside: State Power and the Transformation of Rural Russia, 1917-1929* (Pittsburg, Pa: University of Pittsburgh Press, 2004).
[57] "Ekonomischeskoe stroitel'stvo. Melioratsiia. Mineral'nye udobreniia," *Izvestiia* 153, July 7 1926.
[58] S. Gaister, "Mineral'nye udobreniia v sel'skom khoziastve" *Pravda* 93, April 27 1927.
[59] Andrei Platonov, "Pervyi Ivan," 121.
[60] A. E. Fersman, *Zanimatel'naia geokhimia: Khimiia zemli* (Moscow: Akademiia nauk, 1959), 96.

Liebig's contribution to agriculture in his amateur chemistry reader.[61] Maksim Gor'kii also contributed to bringing this materialist tradition into the 20th century, recounting the Liebigian catechism of a Solovki agronomist in 1929:

> You cannot imagine how desperately the peasant is depleting the soil with his pathetic methods; you know, it's a loss to the government! Altogether horrible! They don't use the waste of the cities at all, hundreds of thousands of tons of phosphorus—such enormous wealth!—uselessly perishes in our sewer pits—you understand? hundreds of thousands of tons of phosphorus, eh? After all, it comes from the earth and it is necessary to return it—understand?
>
> Вы представить себе не можете, как отчаянно истощает почву крестьянин убожеством своей обработки, это, знаете, - государственное бедствие! И вообще - ужас! Совершенно не утилизируются отбросы городов, сотни тысяч тони окиси фосфора - огромнейшее богатство! - бесплодно погибает в помойных ямах, - вы понимаете? - сотни тысяч тонн фосфора, а? А ведь он взят у земли и его необходимо возвращать ей, - понимаете?[62]

He further firms up his materialist understanding of cognition, "Thought is nothing but a reflection in the human brain of an objective, real world of matter," urging writers to write about the "miraculous" transformations in chemistry.[63]

Platonov further totalizes the logic of human "waste" by reducing excrement and human remains into a single substance, as for example, in his comment that Asia's deserts are both the "excrement" and "grave" of past civilizations.[64] Platonov's evocation of Liebig's plan to recycle human waste and human remains into fertilizer is even more explicit as he moves on from condemnation of wastefulness to a modest proposal:

> In the future, as we gather the resources, we will build a factory near Voronezh for the processing of excrement into a special powder "poudret" (abroad they have this), and we will bring to this factory, as well as the eliminations of the entire town, the corpses of fallen animals and people. [...] Chinese agriculture is the future prosperity of the Russian peasantry. Its significance is no less than that of electrification. We need to dissolve, absorb this idea in our consciousness and organism and not read it superficially.[65]

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[61] Ibid., 96-101.
[62] Maksim Gor'kii, "Po soiuzu sovetov: Solovki," *Nashi dostizheniia* 5-6 (1929).
[63] Maksim Gor'kii, "O Temakh," *Pravda* 287, October 17 1933.
[64] Platonov, "Bor'ba s pustynei," 276. In his notebooks, Platonov sketches a rather darkly humorous plan for a story, marked by his own distinctive bathroom humor, combining all of these elements: "A story about two brothers—Maliuchenok—food, Chinese agriculture, a skull in the outhouse." Andrei Platonov, *Zapisnye knizhki* (Moscow: IMLI-RAN, 2000), 177.
[65] "Voprosy sel'skokhoziastva v kitaiskom zemledelii," 236.

Platonov advocates for the return of human remains to the energy economy as powdered fertilizer, and further extends the phosphorus fallacy: as human bones should be metabolized by soil, so must the idea be "dissolved" and "absorbed" in our consciousness.[66]

Although they lack the socio-political consciousness to build a rational metabolic economy (due to physical and mental inanition), the people in Platonov's deserts do attempt to recover lost nutrients. Coprophagia in Platonov's texts can be understood as a manifestation of this mineral cycling and Liebigian exchange.[67] In the story that Platonov published after his trip to Turkmenistan, "Takyr," Platonov describes how the young heroine, Dzhumal', weans herself from the maternal breast:

> She started to enjoy being alive, and she ate clay, grass, sheep dung, coal, sucked the delicate bones of animals that had died in the sand, although she had enough breast milk. Her little body swelled up from the substances [*veshchestva*] that all went into her and were used in growth […].
>
> Ей стало нравиться жить, и она ела глину, траву, овечий помет, уголь, сосала тонкие кости животных, павших в песке, хотя ей достаточно было материнского молока. Ее маленкое тело опухло от веществ, которые все пошли ей в пользу и в рост […].[68]

Within her body, Dzhumal' transforms excrement into food and waste substances into growth. This alchemical act prefigures her destiny in the new socialist economy: the story closes with the adult Dzhumal' returning to the barren wasteland of her childhood as a land reclamation engineer. Socialism transforms waste-land into productive land, and Dzhumal' enacts this transformation—not through struggle, but through metabolic assimilation.[69]

In *Dzhan*, the ingestion and elimination of earth is completed in the terminal stage of the metabolic cycle: the return to earth of human bodies. The Dzhan balance on the verge of extinction as a nation, and their failure to reach replacement fertility illustrates the reluctance of the desert to return as much life as it takes. When Nazar Chagataev arrives in the Sary-Kamysh desert and finds his people, he learns that a representative of the district executive committee, Nur-Mohammed, has been working with the Dzhan for some time, although his "labor" consists solely of digging graves out in remote areas of the sandy desert for the rapidly declining "nation." Nur-Mohammed could be read as a cynical embodiment of the *meliorator*—one who invests labor in land by enriching it with the bodies of its own inhabitants. The main burial "pit" of the story, though, is the Sary-Kamysh depression (*vpadina Sary-Kamysh*), which the Dzhan have inhabited for several generations. It serves not only as the burial ground of their dead, atomized ancestors, but it is also the graveyard of the "undead" (*ne umershie*), as Nur-Mohammed calls the Dzhan.[70]

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[66] Ibid.
[67] Although there is a literary tradition of representing coprophagia, of which Rabelais is the most prominent example, the "swelling" here is naturalized by its chemical context.
[68] Andrei Platonov, "Takyr," 51.
[69] Platonov depicts another female land reclamation engineer in the story "The Schoolteacher of the Sands" (1927).
[70] Platonov, "Dzhan," 472.

The two scenes at a burial mound, or *kurgan,* offer the final expression in *Dzhan* of soil metabolism. The central pivot of the text, Chapter Nine, is entirely concerned with human interment. Not only does Chagataev discuss the burial of dead members of the Dzhan nation with the grave-digging party-worker Nur-Mohammed, he also learns that his wife in Moscow has died in childbirth together with a baby girl fathered by her previous husband.[71] Although he does not have the solace of burying them, in their stead, he buries a dead tortoise—a rather important character— that he encounters after hearing the news.[72] Among the ruins of the *kurgan*, in addition to the anthropophagic plants discussed above, Chagataev also discovers a human skull and ribs, those of a Red Army soldier, apparently named Oraz Golomanov. The hero performs a symbolic "burial" of Golomanov: "Chagataev sprinkled grass and soil on Golomonov's skeleton so that eagles or lone animals would not carry off his bones, and left in the direction of Chimgai."[73] Chagataev's action of sprinkling grass and earth on Golomanov's skeleton is intended not to preserve his ancestor, but to sooner return his remains to the metabolic cycle of soil. Chagataev rejects Zoroastrian aerial burial by golden eagles in favor of a gesture towards the direct, unmediated return to the chemical cycle of soil and sand.

On his return from Chimgai, Chagataev passes the *kurgan* again, this time encountering Nur-Mohammed leading the "barely existing" Dzhan back to the Sary-Kamysh depression, so that they may die in their birthplace:

> The road passed around a small burial mound [*kurgan*], which Chagataev had just been on. He looked with a new thought at that earthen mound, under which also lay some small nation, having mixed their bones together, lost their name and body, so as to no longer draw torment upon themselves.
>
> Дорога окружала небольшой курган, на котором только что был Чагатаев. Он с новой мыслью поглядел на этот земляной холм, под которым тоже лежал какой-нибудь небольшой народ, перемешав свои кости, потеряв свое имя и тело, чтобы не привлекать больше к себе никаких мучителей.[74]

The cultural legacy left by the Dzhan resides exclusively in the soil, the "excrement" and "remains" of their bones mingling together in the earthen mound. Although this is a true "socialist tragedy" in Platonov's sense, the desert landscape—and people—cannot be hastened towards premature development. This waste, in fact, acquires positive value in Platonov's work, because it is placed within a larger system of metabolic exchange in which matter is never destroyed, but is transformed. If the Dzhan irrigate the sand with their *sok* and fertilize the earth with their bodies, then the desert stores up this reserve of vital energy, in the form of nutrients—and even heat. This human and environmental "waste" is preserved for future use, for the desert functions as a "battery" that accumulates physical energy (solar energy or heat) and biological

[71] Ibid., 474.
[72] Ibid., 474. Natal'ia Kornienko asserts that the tortoise is the site of a polemic between Platonov and his brigade colleague, Petr Pavlenko. See N. V. Kornienko, "Andrei Platonov: 'Turkmeniia—strana ironii,'" *Natsiia. Lichnost'. Literatura. Vypusk 1* (Moscow: Nasledie, 1996), 108-109.
[73] Ibid., 473.
[74] Ibid., 476-7.

energy (the waste and remains of desert people and animals), which future generations will rationally manage and use.[75] While the Dzhan do not arrive at socialism by the end of the tale, their literary relation, Dzhumal', the heroine of "Takyr," presents a vision of triumph through the cycling of material [*krugovorot veschestv*], in which the vast stores of energy in the desert wasteland can be finally accessed, used, and transformed through socialist labor.

"The Dialectics of Nature in Kara Kum"

In his speech at the First All-Union Conference of Soviet Writers, 22 August 1934, M. Il'in proposed the Kara Kum as a new *topos* for literature: "Many times, people have spoken of the desert, or of the Amu-Darya river. […] The river is now unstable. It is ready to break through the barriers on its path to the Caspian Sea, rush into it and irrigate Turkmeniia. […] This is one of those examples of the type of story that can be seized by the author of artistic scientific [*nauchno-khudozhestvennye*] books, for the fate of rivers, the fate of nature, the fate of things is tied here to the fate of mankind, the fate of socialism."[76]

Il'in's plot could have been called "The Amu Flows to the Caspian," for it referred to a proposed hydroengineering project to alter the course of the Amu-Darya, which flowed from the Pamir Mountains down into the arid plains of Central Asia. Peter the Great first conceived the plan to shift the course of the river from the Aral Sea to the Caspian Sea, however, his exploratory commission in 1717 failed disastrously and the project was never realized.[77] In the early 1930s, Soviet engineers began to reconsider the project for economic reasons, and, nearly coincidental with Il'in's speech and Platonov's first trip to Turkmenistan in 1934, the Soviet Academy of Sciences undertook its own expedition to Kara Kum to consider the feasibility of redirecting the river. The dry Sary-Kamysh depression inhabited by Platonov's fictional Dzhan was widely believed to have once been a vast inland lake fed by the Amu Darya, which spilled over into the Caspian Sea through a channel (a dry bed by the 20th century) called the Uzboi. Before the Amu-Darya shifted away from Sary-Kamysh and the Caspian (sometime before the 16th century), it was thought that the watershed region around the Sary-Kamysh Lake had

[75] Platonov writes elsewhere about the harvesting of solar energy from the desert and his analogy between heat exchange and metabolic exchange demonstrates a kind of structural approach to natural systems that had precedents in 19th-century attempts to reconcile biological and physical models of energy and was revived by figures like Vladimir Vernadskii. See Jacques Grinevald, "Introduction," in Vladimir I. Vernadsky, *The Biosphere* (New York: Copernicus, 1998), 28-9.

[76] *Pervyi vsesoiuznyi s''ezd sovetskikh pisatelei* (Moscow, 1934), 214-5. The term *nauchno-khudozhestvennyi* is used by Maksim Gor'kii in his description of possible genres and topics for children's literature, in which he states that "In our literature, there should not be a sharp division between literary [*khudozhestvennye*] and popular-science books." See M. Gor'kii (1933).

[77] All 3,500 troops were slaughtered, including Prince Bekovich-Cherkaskii, by the Khivans. Russia did not attempt to invade Central Asia again for 150 years. See Edward Allworth, *Central Asia, 130 Years of Russian Dominance: A Historical Overview* (Durham: Duke University Press, 1994), 9, 13; P. A. Letunov, I.P. Gerasimov, and Viktor A. Kovda, *Glavnyi Turkmenskii Kanal: Prirodnye Usloviia i perspektivy orosheniia i obvodneniia zemel' iuzhnykh raionov prikaspiiskoi ravniny zapadnoi Turkmenii, Nizov'ev Amu-Dar'i i zapadnoi chasti pustyni Kara-Kumy* (Moscow: Izd-vo Akademii nauk SSSR, 1952), 7.

supported a settled agricultural society.[78] Although *Pravda* touted the plan as a restoration of the "original" course of the Amu-Darya, the plan was driven by the immediate economic imperative to irrigate new lands for cotton and to integrate Turkmenistan into the metabolic system of the Soviet all-Union division of labor. Writing for *Pravda*, one scientist asserted that "release of the waters of the Amu-Darya into western Turkmenistan fundamentally resolves the whole problem of irrigation of the most remote parts of the Kara-Kum."[79] The glossy illustrated journal *USSR in Construction* reported that if the Kara-Kum were irrigated "it would become the granary of the world." Moreover, it concluded with a commandment of Biblical proportions: "The Bolsheviks have said: 'Kara-Kum must have water!' And that means that Kara-Kum will get water."[80]

The geographic setting of *Dzhan* is crucial to the encoding of ecological meaning in the tale. There are hints in *Dzhan* of the "artistic scientific" work (as proposed by Il'in) that it fails to become, hints of the utopian project to make the Amu-Darya flow to the Caspian.[81] We are told that Chagataev walks "deep into the desolate [Sary-Kamysh] depression, along the bottom of an ancient sea."[82] Platonov even asserts that the mouth of the Amu-Darya is located in Sary-Kamysh basin, not (as in actual geography), the Aral Sea: "The inhabitants of the Sary-Kamysh Depression wandered in the reeds and bushes at the mouth of the Amu-Darya."[83] In short, Platonov places the action of his novel *precisely* at the site of the proposed monumental hydroengineering project, but rejects the project entirely as a topic for his novel.

There are two reasons for the conspicuous absence of the Amu-Darya hydroengineering project in *Dzhan*. The first is an ethical objection, which I will treat in the following chapter on the political and cultural myth of the Asiatic mode of production. The second is a shift in Platonov's attitude towards the reclamation and exploitation of the desert. Platonov's 1934 article "Goriachaia Arktika," written after his first trip to Turkmenistan, proposes that the Kara Kum succeed the Arctic (the recent site of the sensational Cheliuskin expedition) as the next *topos* of Soviet exploration and *osvoenie* [assimilation].[84] But, he warns that the Kara Kum is not ready for large-scale industrialization: how, he asks rhetorically, can Neftedag develop oil resources or sulphur be extracted in Darvaza when they do not even have fresh drinking water? Rejecting monumental projects, Platonov suggests "simple" and "accessible" goals—firstly, the repair of ancient "takyr" wells and the organization of a cadre of technicians to maintain them.[85]

In *Dzhan*, it is only small wells and natural takyr basins—clay flats that collect rain—that supply fresh water to the desert dwellers. While the wells are not maintained and are too few to fully support the nomadic Dzhan, they are favorably contrasted with the irrigation works of tyrannical local rulers, *bais*. The reader learns that the Dzhan dug "entire rivers for the bais," and worked "instead of donkeys, using their bodies to turn the wooden wheel that raised water into the irrigation channel," but the ruins of these grand projects are completely defunct, while the

[78] See V. V. Bartol'd, *Istoriia kul'turnoi zhizni Turkestana* (Leningrad: Izd-vo akademii nauk SSSR, 1927); Sovet po izucheniiu proizvoditel'nykh sil, *Problemy Turkmenii: trudy pervoi Konferentsii po izucheniiu proizvoditel'nykh sil Turkmenskoi SSR* (Leningrad: Izd. Akademii nauk SSSR, 1934).
[79] A. Miretskii, "Segodnia i zavtra v Karakumskii pustyni," *Pravda*, May 23 1934.
[80] *USSR in Construction* 2 (1934), 84.
[81] Ibid., 458.
[82] Ibid., 456.
[83] Ibid., 461.
[84] For more on the polar theme in socialist realism, see Katerina Clark, *The Soviet Novel: History as Ritual* (Bloomington and Indianapolis: Indiana U. Press, 2000); 101-2.
[85] A takyr is a type of clayey flat characterized by a distinct cracking pattern that is found in Central Asia.

small wells, although in disrepair, continue to supply water and support life.[86] Platonov suggests that the hubris and environmental mismanagement of Asiatic despots consigned their own nations to oblivion: "Wouldn't his [Chagataev's] people, the Dzhan, soon lay down somewhere nearby and let the wind cover them with earth, their memory forgotten, because their nation had never succeeded in erecting anything from stone or iron, had never invented anything of eternal beauty—they had only dug earth in the canals, but the muddy current had just clogged it up with new silt, and once again swept away their work without a trace."[87] This monumental style and scale of construction is ironically swept away by the current of history. Although the desiccation of the old Sary-Kamysh Lake is presented as an ecological catastrophe with the power to destroy civilization, driving a formerly settled nation "backwards" into nomadism, Platonov asserts in his notes from the brigade that "it is not nature at all, but people who are responsible for the death of previous civilizations."[88] In *Dzhan*, nature is not a self-enclosed system, but is in dynamic exchange with human culture, and autogenic climate change is not to blame for the ecological catastrophe of the desert, but rather the disappearance of effective traditional technologies and the failure of rulers to manage soil and social metabolism rationally.[89] In the end, rather than supporting Soviet monumentalist engineering, or its pre-Soviet equivalent, Platonov rejects the monumental hydroengineering plot and proposes the revival of small-scale pre-modern irrigation technology pre-dating the Islamic period.[90]

Platonov's attitude to the project of bringing civilization to Kara Kum and socialism to Turkmenistan, as exemplified by Chagataev's mission to the Dzhan, looks very different in light of his rejection of monumental land works for a sustainable network of wells maintained by a non-hierarchical corps of technicians. Although the text is mistrustful of the grand narrative of technological utopianism, it is not anti-utopian. The phantom geography of the "Sary-Kamysh Sea" becomes visible to Chagataev when, staring at the dry Sary-Kamysh depression, he sees a mirage: "Above the surface of the reed bed, on the silver horizon, some sort of impossible mirage was visible—a sea or a lake with ships sailing and the white, shining colonnade of a distant city on the shore."[91] Nazar Chagataev's mirage is, apparently, the "Sary-Kamysh Sea," into which the Amu-Darya formerly flowed. Nazar, whose name means "vision," sees not the past in the mirage, however, but a utopian future in which the "sea" will be restored and a socialist city founded on its shore.[92] Contrary to Il'in's proposal, however, Platonov's novel locates the restoration in a distant chronotope—one that cannot be accessed within the generic conventions of the production novel or through Gor'kii's standard plot of the struggle with nature.

While Platonov's environmental attitudes cannot be diagnosed from a single moment in his

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[86] Platonov, "Dzhan," 490, 452.
[87] Ibid., 476-7. See the following chapter for more on the critique of Soviet irrigation projects as a restoration of the Asiatic mode of production.
[88] Platonov (2000), 150.
[89] Marx writes that the soil "has no 'original' powers […] since the land is in no way 'original,' but rather the product of an historical and natural process." Karl Marx, *Theories of Surplus Value* (Moscow: Progress Publishers, 1968), 2:245.
[90] In the 1960s, the Soviets began to experiment with traditional takyr wells, finding them extremely effective. See L. Fleskens, A. Ataev, B. Mamedov, and W. P. Spaan, "Desert water harvesting from takyr surfaces: assessing the potential of traditional and experimental technologies in the Karakum," in *Land Degradation & Development* 18 (2007), 17–39.
[91] Ibid., 465.
[92] "Nazar" also connotes spiritual or mystical vision in Sufi tradition. For more on Sufi meanings in Dzhan, see Hamid Ismailov, "Dzhan as a Sufi Treatise," *Essays in Poetics* 26 (2001), 72-82.

literary career, *Dzhan* presents a total ecological vision which is irreducible to the dialectical struggle with nature. *Dzhan*'s model for the relationship between humans and nature follows the logic of metabolism, or the cycling of material—a system of exchanges between organic and inorganic matter that results from and produces socio-economic formations. Platonov's text *performs* this epistemology, with the "model" desert providing grounds for the unified, total construction of cultural, philosophical, and environmental meaning in his text.

In the end, even if he rejects monumental hydroengineering as a plot for the Soviet Asian desert or the Soviet Asian novel, Platonov does suggest that water carries the promise of new life in Kara Kum. In one telling instance, this renewing property distills into the silt of the Amu-Darya, of which Platonov writes, "This yellow earth travelling down the river *anticipatorily* resembled grain, flowers, and cotton, and even the human body."[93] This protean, fertile silt anticipates the various forms of life into which it will be assimilated and promises a future "garden of socialism" in which water feeds soil, soil feeds grain, and grain feeds human bodies. Soil, even desert waste-land—the "excrement of irrational civilizations"— is actually the source of fertility when used rationally. Platonov even writes that "the silt of the Amu is more fertile than chernozem: it is the dust of the past. The cleansed fabric of history is a better raw material for the future than the freshness of virgin humus."[94] Platonov conflates the properties of real soil with a historical metaphor, offering simultaneously that Central Asian civilization—compared to Russia's much less ancient civilization—is a rich medium for future growth and that the soil of Central Asia is more fertile than Russia's "virgin humus" (presumably the steppe, whose shallow virgin topsoil is so easily eroded). Moreover, the grain which is immanent in Platonov's river recalls the Mosaic bread formed from dew. Like the Biblical bread, it transcends the limits of materiality—not through spirit, but through the endless cycling of matter [*krugovorot veshchestv*], a prospect that is not strictly threatening, but offers the possibility of transcendence—and, arguably, meaning—to material embodiment. Thomas Seifrid has written that "Platonov's characters are forever trying to erect some sort of barrier to hold at bay the invading forces of nature."[95] Yet, *Dzhan* offers a new—even ecstatic—vision of materiality and exchange with nature and the hope of a future in which exchange and assimilation, rather than struggle, are the dominant modes of interaction between humans and nature. In "The First Socialist Tragedy," Platonov writes that "it is necessary to stand in the ranks of the ordinary people doing patient socialist work — that is all we can do."[96] Platonov rejects the dialectical struggle against nature exemplified by large hydroengineering projects, as well as their depiction in the socialist realist novel, but he expresses hope for a future for the desert and for the Dzhan, ordinary people, agents within a distinct biotope, who participate in "a complete and laboring world, busy with its destiny."[97]

[93] Platonov, "Dzhan," 454. Emphasis mine.
[94] Platonov (2000), 137.
[95] Seifrid, 68.
[96] Platonov, "O pervoi sotsialisticheskoi tragedii," 640.
[97] Platonov, "Dzhan," 467.

Chapter 4

Soviet Land Works and the Asiatic Mode of Production in Literature of the 1930s

> "In changing nature, a person changes himself."
>
> —*The History of the Construction of the Belomorsko-Baltiiskogo Kanala im. Stalina*[1]

> "I was repelled by this Asiatic version of Socialism."
>
> —Bruno Jasienski, *Man Changes His Skin*[2]

> The present distribution of mountains and rivers, of fields, of meadows and steppes, of forests, and of seashores, cannot be considered final. Man has already made changes in the map of nature that are not few nor insignificant. But they are mere pupils' practice in comparison with what is coming. Faith merely promises to move mountains; but technology, which takes nothing "on faith," is actually able to cut down mountains and move them . . . in the future this will be done on an immeasurably larger scale, according to a general industrial and artistic plan. Man will occupy himself with re-registering mountains and rivers, and will earnestly and repeatedly make improvements in nature. In the end, he will have rebuilt the earth, if not in his own image, at least according to his own taste. We have not the slightest fear that this taste will be bad.
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> —Trotskii, *Literature and Revolution*[3]

In 1931, construction began on one of the most infamous and symbolic of Stalinist land works projects—the Belomor Canal. For two years, thousands of prisoners worked in brigades under the supervision of the Unified State Political Directorate (OGPU), digging earth, felling timber, and building wooden railroads and other infrastructure, temporary and permanent, for the nearly 150-mile canal linking the Baltic and White Seas.[4] In August 1933, a brigade of 120 writers, carefully selected by Maksim Gor'kii, traveled to the newly completed canal and the penal colony at Medvezh'ia Gora where its builders had lived.[5] The resulting document, the

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[1] Karl Marx, quoted in the preface to Chapter Eight of Maksim Gor'kii, L. L. Averbakh, and S. G. Firin, eds., *Belomorsko-Baltiiskii kanal im. Stalina: Istoriia stroitel'stva* (Moscow: Istoriia fabrik i zavodov, 1934), 318.
[2] Bruno Jasienski, Man Changes His Skin, trans. H. G. Scott (New York: International Publishers, 1936), 229.
[3] L. D. Trotskii, *Literatura i revoliutsiia* (Moscow: Izd. polit. lit., 1991), 193-194.
[4] Cynthia A. Ruder, *Making History for Stalin: The Story of the Belomor Canal* (Gainesville: University Press of Florida, 1998); Ioakhim Klein, "Belomorkanal: Literatura i propaganda v stalinskoe vremia," *Novoe literaturnoe obozrenie* 71 (2005), 231–62; Ivan Chukhin, *Kanaloarmeitsy: istoriia stroitel'stva Belomorkanala v dokumentakh, tsifrakh, faktakh, fotografiiakh, svidetel'stvakh, uchastnikov i ochevidtsev* (Petrozavodsk: Kareliia, 1990); Paul R. Gregory and Valery Lazarev, eds. *The Economics of Forced Labor: The Soviet Gulag* (Stanford, California: Hoover Institution Press, 2003); Michael Jakobson, *Origins of the Gulag: The Soviet Prison Camp System*, *1917-1934* (Lexington: University Press of Kentucky, 1993); Oleg Khlevniuk, *The History of the Gulag: From Collectivization to the Great Terror*, trans. Vadim Staklo (New Haven and London: Yale University Press, 2004).
[5] There is some dispute about the total number of writers on the brigade, as only a small number were credited in the History. Cynthia Ruder estimates that there were 120. See Ruder, 47.

History of the Construction of the Belomor Canal **(***History*) was an avant-garde work of collective authorship, intended to propagandize a new Soviet penal institution it claimed would reform political and criminal convicts through state labor projects—a process the *History* called *perekovka*, or reforging.

By the early 1930s, following the OGPU's success in completing the Belomor Canal, all Soviet hydroengineering projects were excusively entrusted to Soviet security agencies: the OGPU, the People's Commissariat of Internal Affairs (NKVD), and the Ministry of Internal Affairs (MVD).[6] These agencies came to manage a crucial sector of the Soviet economy. In the early 1930s, the agency Gidroproekt emerged under the direction of the NKVD and would later become "the head organization of all-Union significance in hydroelectric, hydrotechnical, and water-resource construction" for decades, leading even such high-profile projects as the Aswan High Dam in the 1960s.[7] After the Belomor Canal, the OGPU was contracted to build the Moscow-Volga Canal (now the Moscow Canal), to extract oil and coal in Pechora, and to build the Baikal-Amur Railroad (BAM).[8] These projects were declared to not only discipline nature, but to reform workers as psychological and political subjects.

As we know today, untold numbers of prisoners perished in the labor camps during this process of "reforging." This chapter examines how, on the one hand, official discourse of the 1920s and 1930s sought to rationalize human sacrifice and suffering by appeal to Marxist social science, and, on the other hand, how the ideological apparatus of the state gave *perekovka* value in the Soviet symbolic economy by recruiting writers to mythologize *perekovka*, a dictate they carried out by attaching it to the Biblical *topos* of suffering.

If the authors of the *History* use this Biblical mythology to construct a "utopian" fantasy of moral transformation, other writers of the early Soviet period appropriated many of the same symbolic meanings, tropes, and discursive strategies for dissent and critique. One of the ways that Soviet writers of the 1930s resisted the "utopian" telling of *perekovka* was by attaching this Biblical *topos* to the "concept-metaphor" of the Asiatic mode of production (AMP), a stage of historical development hypothesized by Marx and hotly debated by the Soviet theorists up to the early 1930s, after which debate on the question was closed for twenty years. This chapter discusses the AMP in relation to literary representations of *perekovka* (political and psychological reform) and *melioratsiia* (land reform and improvement), interpreted by the writers considered here as a single *topos* of transformation. I begin with the novel *Man Changes His Skin* (*Chelovek meniaet kozhu,* 1932-3) by the Polish-born writer Bruno Jasienski, which introduces tropes of the AMP at the Soviet Eastern periphery in its plot on the construction of a canal in Tajikistan. Moving inward from the periphery, I next demonstrate that the paradigm of the AMP is transferred to the center in Boris Pil'niak's construction novel, *The Volga Falls to the Caspian* (*Volga vpadaet v kaspiiskoe more*). Finally, I close with Andrei Platonov's anti-production tale, *Dzhan,* and his other literary works on irrigation, which reflect on the Asiatic mode and, ultimately, reject not only the plot of monumental Soviet construction, but also the conventions of socialist realist prose.

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[6] Oleg Khlevnyuk, "The Economy of the OGPU, NKVD, and MVD of the USSR, 1930-1953," in Gregory and Lazarev, 44. "Spetspereselentsy" or "special settlers" (alleged kulaks) frequently worked in agriculture or forest industries, one prong of the internal colonization of Soviet lands. For more on this special sector of the camps, see Lynne Viola, *The Unknown Gulag: The Lost World of Stalin's Special Settlements* (Oxford; New York: Oxford University Press, 2007).

[7] G.G. Lapin, "70 Years of Gidroproekt and Hydroelectric Power in Russia," *Hydrotechnical Construction* 34:8/9 (2000), 374.

[8] Khlevnyuk, in Gregory and Lazarev, 46-47.

I. THE ASIATIC MODE OF PRODUCTION

From the time that Karl Marx first introduced the concept into political theory, the Asiatic mode of production (AMP) has presented an interpretive problem for students of Marx's historical materialism, from Soviet political strategists to contemporary postcolonial scholars. Marx's earliest discussion of a "special 'Eastern' social order in his pieces on "The History of British Rule of India" for the *New York Daily Mail* and in his *Grundrisse* was never fully integrated into his teleology of historical development, leaving Soviet ideologues to interpret or "inscribe" meaning in his texts.[9]

Marx's concept of the AMP evolved within a tradition of Western conceptions of the East, including that Asian peoples were "slaves by nature" (Aristotle), that the Asian climate produced "weak" nations (Montesquieu), and that Asian states were stagnant (Herder and Hegel).[10] Economic theories of Oriental despotism also influenced Marx's formulation of the AMP, including the work of political economists such as Adam Smith and John Stuart Mill. Marx's distinct model of the AMP proposed that thirsty Asian landscapes created conditions in which a strong state power consolidated around massive forced-labor irrigation projects. In *The British Rule in India*, Marx wrote of Asia that:

> Climate and territorial conditions, especially the vast tracts of desert, extending from the Sahara, through Arabia, Persia, India, and Tartary, to the most elevated Asiatic highlands, constituted [sic] artificial irrigation by canals and water-works the basis of Oriental agriculture. […] Hence an economical function devolved upon all Asiatic Governments, the function of providing public works. This artificial fertilization of the soil, dependent on a Central Government, and immediately decaying with the neglect of irrigation and drainage, explains the otherwise strange fact that we now find whole territories barren and desert that were once brilliantly cultivated […]; it also explains how a single war of devastation has been able to depopulate a country for centuries, and to strip it of all its civilization.[11]

Other features associated with the AMP were state ownership of property, state management of water and natural resources, and a ruling "class" of bureaucrats. This original conception of a distinct "Eastern" social order was rejected by the Stalinist regime, in part, because its

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[9] The ambiguities of Marx and Engels' shifting conceptions of the AMP are delineated carefully in G. Lichtheim, "Marx and the 'Asiatic Mode of Production,'" in *Karl Marx's Social and Political Thought*, eds. Bob Jessop and Russell Wheatley (London: Routledge, 1999), 35-58.

[10] For a historical perspective on Oriental despotism and the AMP, see Marian Sawer, *Marxism and the Question of the Asiatic Mode of Production* (The Hague: Nijhoff, 1977); Anne M. Bailey and Josep R. Llobera, *The Asiatic Mode of Production: Science and Politics* (London; Boston: Routledge & Kegan Paul, 1981).

[11] Karl Marx, "The British Rule in India," *Karl Marx, Frederick Engels: Collected Works*, trans. Richard Dixon et al. (London: Lawrence & Wishart, 1975-2004), 12:125. The "war of devastation" referred to is the Mongol conquest, which historians of the time viewed as a calamity that precipitated centuries of Islamic decline.

geographically and environmentally-specific model suggested a distinct political path for the arid lands of Asia, including Soviet Central Asia.[12]

But more threatening were the questions the AMP raised about *Russia's* development and the legitimacy of Soviet governance in the context of Russia's "Asiatic" past. As early as the 16th century, Muscovy had been characterized as an Oriental despotism by political philosophers such as Jean Bodin.[13] Montesquieu had claimed that large land empires tended to despotism because of the difficulties of communication and control over vast spaces. Ivan Peresvetov, an advisor to Catherine the Great, formulated a plan, in response to Montesquieu's theory, for the iron control of the Russian peripheries.[14] Russia was not only regarded abroad as an Oriental despotism by Western observers. Catherine, who personally considered herself the center of the Russian Enlightenment, may not have regarded Russia as an Oriental despotism, but she did recognize in Russia the characteristics Montesquieu had identified with Oriental despotism, and planned her colonization policy and governance of the provinces around his theory.

On the eve of the Bolshevik Revolution, Georgii Plekhanov offered the most pointed warnings of a potential "restoration of our [Russia's] old 'semi-Asiatic' order." In his extensive analysis of Russian history, especially his *History of Russian Social Thought*, he wrote that "old Muscovite Russia was distinguished by its completely Asiatic character. Its social life, its administration, the psychology of its people—everything in it was alien to Europe and very closely related to China, Persia, and ancient Egypt."[15] Plekhanov wrote that Russia's leaders were either Oriental despots, like Ivan the Terrible, or they paradoxically used "despotic means to advance 'Westernization,'" as in the case of Peter the Great.[16] At the Stockholm Congress, Plekhanov singled out Lenin's proposed land policies as particularly dangerous, warning that, "It will be all the more easy for our restoration to return to that nationalisation because you yourselves demand the nationalisation of the land, because you leave that legacy of our old semi-Asiatic order intact."[17] While Lenin agreed that Russia had historically been "Asiatic," he rejected Plekhanov's fears that a premature revolution might lead to a restoration of Oriental despotism and asserted that the plan to nationalize land qualitatively differed from Russia's old Asiatic order.

After the revolution, the theoretical debate concerning the AMP was increasingly shaped by Soviet realpolitik, particularly questions about the role the Soviets should play in advancing "less developed" nations, both *outside* and *inside* Soviet borders. Chinese politics exerted the most overt influence on the Soviet discussion of the AMP in the 1920s and very early 1930s.[18] But while China was the ostensible and immediate subject of this debate, the conclusions drawn had serious implications for the Soviet position, leading to dual meanings and an encoding of internal political issues in external, specifically Asian, political debates. By the early 1930s,

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[12] Although it would later be proposed that the geographically-specific qualifier "Asiatic" was limiting and misleading, the problem of local specificity continued to present an intellectual problem to Soviet Marxists and a challenge to the unilinear, five-stage paradigm of development that became known as the piatichlenka. The five stages were primitive-communal, slaveholding, feudal, capitalist, and socialist. Supporters of the AMP were known as the aziatchiki.

[13] Sawer, 8.

[14] Ibid.

[15] Georgii Plekhanov, *Sochineniia* (Moscow: Gosudarstvennoe izd., 1923-1927), 10:154.

[16] Samuel H. Baron, *Plekhanov in Russian History and Soviet Historiography* (Pittsburgh: University of Pittsburgh Press, 1995), 54–55.

[17] Quoted in Lenin, (1961), 16:308-309.

[18] Bailey and Llobera, 51.

however, the vigorous debate surrounding the AMP resolved itself into an ideological shift to the unilinear historical model of the *piatichlenka* (the five-stage model of development) formulated by the Russian Orientalist V. V. Struve.[19] This model became the new Stalinist orthodoxy, resolving the confusion of Marx's vague theory by arguing that the AMP was, in fact, an Asian variant of feudalism, not a distinct (and closed) historical stage of development. For the next 30 years, Soviet political theorists simply "read the concept out of the Marxist canon."[20] This rejection of the Asiatic mode of production was, among other things, an attempt to bring Asian subjects into Soviet-Marxist history and to make them available to Soviet-style development. The theoretical paradigm of the *piatichlenka* had broad implications for the historiographical understanding of Asian peoples living within the borders of the Soviet Union.[21]

Despite the defeat of the Soviet *aziatchiki* in the 1930s, however, the AMP has proved a durable (and divisive) concept whose controversies today echo the Soviet debate and remind us of how sophisticated the Soviets could be on the subject of colonialism. One prominent postcolonial theorist, Gayatri Spivak, observes that the "concept-metaphor of the AMP makes visible the site-specific limits of Modes of Production as an explanatory category."[22] Indeed, it was the very question of site-specific limits—and the possibility of Marx's universality—that concerned Soviet theorists in the 1920s as they debated whether Marx's Eurocentric model could accomodate local conditions or allow for multilinear paths of development.

If deliberate limits were placed on the AMP in the political domain, this did not hinder its diffusion as a cultural and literary metaphor. The famous charge by Karl Wittfogel in 1957 that the Soviet Union was a "hydraulic despotism" in the Asiatic mode had already been aesthetically elaborated in works of Soviet literature dating from the first Five-Year Plan. While critiques of Russia as an Oriental despotism *before the revolution* were standard, this argument took on particular force when leveled against the *Soviet* state—and, particularly, the increasingly despotic Stalinist regime—using Marx's own theory of the AMP. Soviet culture in the early 1930s provided rich materials for the elaboration of this *topos* of discipline, despotism, and the genesis of a "second nature" through land works.

II. SECOND NATURE: *Perekovka* and *Melioratsiia*

Just a few months after the Belomor Canal expedition, Maksim Gor'kii made an influential recommendation on literary themes to writers. He urged writers to show "the enormous value of physical labor, as it changes not only the form but also the quality of matter, as it masters elemental forces, creates a "second nature."[23] Gor'kii defines this second nature as "socialist culture," and identifies physical labor as its catalyst.

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[19] The five stages of socio-economic development in the piatichlenka were: primitive-communal, slaveholding, feudal, capitalist, and socialist. Those who believed the AMP was a legitimate political formation were known as the *aziatchiki*.

[20] Sawer, 52. The Asiatic mode of production was "revived" in 1964.

[21] These historiographical shifts are traced in Lowell Tillett, *The Great Friendship: Soviet Historians on the Non-Russian Nationalities* (Chapel Hill: University of North Carolina Press, 1969).

[22] Gayatri Chakravorty Spivak. *A Critique of Postcolonial Reason: Toward a History of the Vanishing Present* (Cambridge, Mass.: Harvard University Press, 1999), 93.

[23] Maksim Gor'kii (1933)**.** Ironically, "second nature" is also evoked in a completely different branch of Marxist discourse: the critique of commodity fetishism. Lukacs refers to this "second nature" in "Reification and the

As discussed in previous chapters, 19th-century mythologies of soil—drawing on both scientific and cultural discourses—played an important role in shaping Soviet mythologies. The theory of environmental determinism, for example, would be taken as scientific corroboration of the seamless identity of *narod* and *pochva*, and Marx's attitudes towards soil fertility, social metabolism, and productive forces were fundamentally shaped by his readings of agricultural chemistry and soil sciences, particularly the work of Justus Liebig. Nineteenth-century materialists attempted to replace the Biblical origin story of *Adam* (from the Hebrew *adamah*—ground or earth), with the birth of scientific man: *human* or *Homo* (from the Latin *humus*, soil). The *topoi* are remarkably continuous, however, and the trope of melioratsiia offers some understanding of the intersections of human reforging, transformation of landscapes, the conflict with material, and the assimilation of national cultures in the Soviet project.

Scholars have examined the metaphorics of *perekovka* (particularly as deployed within the *History*) in relation to the trope of the metallic man of early Soviet culture.[24] Yet, the actual subject and means of labor at the Belomor Canal was of an entirely different sort than the metallic metaphor would suggest. The laborers at the nearly 150-mile Belomor Canal did not use machines and forges, but hands and shovels, "wheelbarrows, pickaxes, horses, wooden pulleys"; and their materials were not steel and metal, but "wood, granite, peat, and dirt," with only minimal concrete in the final stages of construction.[25] This disjuncture between the industrial rhetoric of reforging and the primitive means and subjects of labor is not merely ironic. Its symbolization of human suffering suggests another line of association for *perekovka:* the Biblical *topos* of moral reform expressed in the command *perekovyvat' mechi na orala* (to forge or beat swords into plowshares).[26] In the Soviet imagination, the process of transforming enemies of the state into tillers of the soil drew as heavily on the Biblical *topos* of soil as on the metallic tropes of Soviet industrialization. *Perekovka,* as a Soviet retelling of Genesis, centers on the reform of soil; the material from which Biblical Adam had emerged and to which he would return was conceived as the medium of Soviet Adam's transformation: before there was metal, there was soil.[27] If environmental determinism was received as scientific truth, then the Soviet penal system endeavored to determine the environment, correcting the defects, atavisms, and irrationality of "blind" nature. The reform of land and people was articulated through two related *topoi*: *perekovka* and *melioratsiia*. Gor'kii emphasized this connection, stating, "We have educated in the camps thousands of worker-hydrotechnicians, an army of people who are capable of taking part in the grandiose works to improve our vast country, to build canals for its countless rivers, the irrigation of the steppes, etc."[28]

As discussed in the previous chapter, these Soviet concepts evolved from the 19th-century Russian rhetoric of the soil, particularly as it was influenced by the soil scientist Justus Liebig. Marx's concept of labor as an agent of "social metabolism" originated in his reading of

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Consciousness of the Proletariat" (1923). Lukacs' work was suppressed, however, and he recanted its contents. It was, nonetheless, deeply influential on Walter Benjamin, who possibly drew on it in formulating his own concept of "second nature" in relation to film. The concept of "second nature" has been explored by a number of thinkers. Rousseau discusses the "first" and "second states of nature" in the *Discourse on the Origin of Inequality*.

[24] See Julie Draskoczy, "The Put' of Perekovka: Transforming Lives at Stalin's White Sea-Baltic Canal," *The Russian Review* 71 (2012), 30–48; Rolf Hellebust, *Flesh to Metal: Soviet Literature and the Alchemy of the Revolution* (Ithaca: Cornell University Press, 2003).

[25] Ruder, 21.

[26] Isaiah, 2:4.

[27] Genesis, 2:23.

[28] Maksim Gor'kii, "Ot 'vragov obshchestva'—k geroiam truda," *Pravda* 25, January 26 1936.

Liebig's work on *soil* metabolism. Marx's epigraph from Chapter Eight of the *History*, cited above, was selected from a longer passage on Marx's theory of soil and social metabolism:

> Labor is, in the first place, a process in which both man and Nature participate, and in which man of his own accord starts, regulates, and controls the material re-actions [*Stoffwechsel*, "metabolism"] between himself and nature. He opposes himself to Nature as one of her own forces, setting in motion arms and legs, head and hands, the natural forces of his body, in order to appropriate Nature's productions in a form adapted to his own wants. *By thus acting on the external world and changing it, he at the same time changes his own nature*."[29]

Improvement of soil was perceived not only as a physical act, but as a social and cultural act with the power to reform human nature and the human psyche, and Marx's proposal to rationally regulate human "interchange [Stoffwecshel] with Nature, bringing it under […] common control, instead of being ruled by it as by the blind forces of Nature" provided a foundation for far-reaching ideological and symbolic meanings of the Soviet concepts of *melioratsiia* and *perekovka*.[30]

In a series of sketches for *Our Accomplishments* in 1929, "All Across the Union of Soviets," Gor'kii had already introduced the public to the project of reforming criminals at the earliest experimental Soviet labor camps. Discussing the Bolshevo show camp outside Moscow, Gor'kii wrote of "the profound social and pedagogical value" of "reorganizing the criminal psyche."[31] He described the Solovetskii Camp of Special Significance [*Solovetskii Lager' Osobogo Naznacheniia*] or SLON, as a "preparatory school" for admission to the "university" of Bolshevo.[32] Gor'kii stresses the pedagogical nature of the camp:

> The "Solovki Special Purpose Camp" is not Dostoevsky's "House of the Dead," because here, everyone is taught to live, to read and to work. […] Here the life of workers is led by working people who not so long ago were outcasts themselves in the bourgeois-autocratic state. A worker is not capable of relating to "offenders" as severely and mercilessly as he must relate to his instinctive class enemy, whom, he knows, cannot be rehabilitated. His enemies very earnestly assure him of this. "Offenders," if they are people of his class—workers, peasants—he can easily re-educate.[33]

Gor'kii's defense of Solovki was a restatement of Marxist criminological theory and was in step with Soviet social science in the late-1920s, which maintained that Soviet penal institutions were fundamentally different from Western institutions, regardless of methods

[29] Marx (1967), 1:177. Italics mine.
[30] Ibid., 3:820.
[31] Gor'kii (1929).
[32] Ibid.
[33] Ibid.

employed, because they emerged from a classless society.[34] Exploitation was thought to be a coefficient of class society, a phenomenon that should not exist in the Soviet labor camp; the camp administrator was supposed to function primarily a pedagogue and mentor, sharing class affinity and sympathy with the offender.

Economic structure, it was claimed, also differentiated Soviet camps from Western prisons. In 1925, Evsei Shirvindt, chief of the Main Administration of Places of Confinement (GUMZ), which was absorbed by the NKVD in 1922,[35] wrote that:

> The exploitation of prison labor, the system of squeezing "golden sweat" from them, the organization of production in places of confinement, which while profitable from a commercial point of view is fundamentally lacking in corrective significance—these are entirely inadmissable in Soviet places of confinement.[36]

Shirvindt's rejection of the use of Soviet correctional institutions as sites of "production," was a rhetorical move that masked a bureaucratic fight between the justice system and the police organs, which expected the labor camps to pay for themselves. By the first Five-Year Plan, the NKVD, in a saga of legal conflicts and maneuvers, had wrested control of the penal system from the Commissariat of Justice (NKID) and retained its monopoly until 1930, when its functions were overtaken by the OGPU.[37] The GULAG henceforth became a crucial site of production, even to the extent that it sapped labor from other sectors of the economy, with the "hiring" of this vast labor force managed by the NKVD.[38]

It was a Politburo resolution "On the Use of the Labor of Convicted Criminals" of June 27, 1929 that officially transformed the GULAG from a pedagogical institution to an economic institution.[39] The resolution mandated the construction of new camps in underdeveloped areas with the goal of "*colonizing* these regions and exploiting their natural resources with the use of prisoners' labor."[40] The GULAG was an arm of Soviet "colonization," understood as "the process of settlement and economic development of outlying vacant land in one's own country ('internal colonization'), as well as the foundation of settlements (mostly associated with agricultural activities) outside the country ('external colonization')."[41] Soviet understandings of *kolonizatsiia* have been much discussed in recent years in relation both to nationalities policy and the internal politics of Russia.[42] Francine Hirsch discusses the semantics of *kolonizatsiia* in economic and political discourse and the use of the term *kolonizatorstvo* to distinguish Soviet

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[34] Dallin and Nicolaevsky, 153.
[35] Jakobson (1993), 69. Jakobson presents the history of Soviet penal institutions through a complex series of bureaucratic transformations and battles. This history is too complex for me to discuss here, and I confine myself to working with programmatic statements and public perceptions of the various penal agencies.
[36] E. G. Shirvindt and Dmitrii Ivanovich Kurskii, *Nashe Ispravitel'no-trudovoe zakonodatel'stvo* (Moscow: IUrid. izd-vo NKIU RSFSR, 1925), 78. Quoted in Dallin and Nicolaevsky, 153.
[37] See Jakobson (1993), especially 53-90.
[38] Dallin and Nicolaevsky, 192.
[39] Khlevnyuk, 45.
[40] Quoted in Galina Mikhailovna Ivanova, *Labor Camp Socialism: The Gulag in the Soviet Totalitarian System* (Armonk, N.Y.: M.E. Sharpe, 2000), 186-187. Italics mine.
[41] "Kolonizatsiia," *Bol'shaia sovetskaia entsiklopediia* (Moscow: Sovetskaia entsiklopediia, 1969-1978), 446.
[42] I will discuss Aleksandr Etkind's work on internal colonization later in this chapter.

civilizing and development goals from those of imperialist countries, particularly those of their predecessors in the Russian Empire.[43]

In one of his earliest statements on the importance of irrigation, Lenin compares pre-Revolutionary Russia with Turkestan, considering both to be colonies of the state and a continuous space of socio-political and environmental mismanagement:

> These millions of *desiatinas* in Turkestan and in many other places in Russia "await" not just irrigation and reclamation [*melioratsiia*], they likewise "await" the liberation of the Russian agricultural population from the traces of serfdom, from the oppression of noble estates, from the Black-Hundred dictatorship in the country. It is useless to guess how much land in Russia could be turned from "unusable" to usable. But we must clearly bear in mind this fact, which proves the entire economic history of Russia and which is a major feature of the Russian bourgeois revolution. Russia has a vast *endowment for colonization*, which will become available to the public and to culture, not only with every step forward in agricultural technology generally, but with every step forward in the emancipation of the Russian peasantry from feudal oppression.[44]

Lenin asserts that irrigation and *melioratsiia* are crucial to political liberation as enterprises that facilitate the full colonization of Soviet lands. Even before a workers' revolution, or any significant Bolshevik activity in Turkestan, Soviet leaders were making plans to irrigate the former colonial possession. On May 17, 1918, Lenin signed a decree allocating 50 million roubles for irrigation work in what was still called Turkestan.[45]

Gor'kii also implicitly links the economic activity of internal colonization with a larger cultural program of creating "second nature." He says of the workers of Solovki: "On the mainland they work in large numbers clearing forests for logging, draining swamps, and creating conditions for the colonization of this desolate, but incredibly rich region."[46] In his description of the role of forced labor in the internal colonization of Soviet lands, Gor'kii demonstrates how *perekovka* and *melioratsiia* were crucial to a larger cultural-economic endeavor of making nature fundamentally Bolshevik in the vast lands controlled by the Soviet Union.

If the goals of prisoner reform and land reform often battled for priority, the rhetoric that presented them as a single process also articulated an aesthetic vision that appears most clearly in a variation of the production novel: what I call the land-works novel. An examination of a popular and influential example of this form, Bruno Jasienski's *Man Changes His Skin*, will allow for a fuller view of the symbiosis of *melioratsiia* and *perekovka.*

Bruno Jasienski was a Polish Futurist-turned-Socialist Realist, who participated in forging "second nature" as a writer and a police informer.[47] Jasienski traveled to the Belomor

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[43] Francine Hirsch, *Empire of Nations: Ethnographic Knowledge & the Making of the Soviet Union* (Ithaca, N.Y: Cornell University Press, 2005), 87–96.
[44] Lenin (1961), 16:230. Italics mine.
[45] This is discussed in nearly every Soviet scientific work on irrigation in Central Asia. See especially A. Abdunabiev, *Po Dekretu vozhdia* (Tashkent: Izd. Uzbekistan, 1970), 3, et passim.
[46] Gor'kii (1929).
[47] Jasienski was responsible for denouncing Isaak Babel.

Canal in 1934 and was among the 36 writers who ultimately contributed to the *History*.[48] Just one year earlier, he had published a novel depicting a similar construction project: a canal along the Vakhsh River in Tajikistan. The novel, *Man Changes His Skin,* presents the sympathetic portrait of a Chekist who reforms human material—changing its skin, in his chosen metaphor—as his colleagues on the construction site re-shape, re-surface, and reform "the skin of the earth"—the soil that proves so crucial to the success of the canal construction. The gripping, dishy novel is both a "Red Pinkerton" and a production novel, *Man Changes His Skin* was published serially in *Novyi mir* between 1932 and 1933 to immense popular and critical acclaim; between 1934 and 1935, it went through nine full print editions in Russian and at least two in English.[49]

The novel resulted from two trips Jasienski made to Tajikistan. The first was in 1930, when Jasienski served as a member of the Delimitation Committee that drew borders between the newly created Soviet republics of Uzbekistan and Tajikistan. This redrawing of borders in Soviet Central Asia was land reclamation by another name, as it transformed Central Asia into Soviet ethno-linguistic nations, which could then be sutured into the all-union Soviet economy. Jasienski's second trip to Tajikistan in 1931 was as a member of a writers' brigade.[50]

Jasienski's plot contains many of the standard tropes of the production novel, including a sabotage plot by wreckers in "the planning agencies and the Central Asian unit of the People's Commissariat of Land [Narkomzem], which had a branch in the agricultural irrigation division." Aside from deliberate wrecking, the site managers also confront the threat of underdeveloped consciousness in the workers on the site. One engineer explains:

> These imperfections are inevitable in all Asian development. If I started letting workers go for that, we'd no soon have nobody left. You have to be satisfied with the labor power you have. No good worker would come to work in these conditions.[51]

The Party must make use of the material it has in the context of Asian "development." A young Party official further explains to the visiting American engineer, Clark, that given the human material [*chelovecheskii material*] that they have, if the Party didn't train [*vospityvat'*] the workers, they would "probably not be able to complete even one construction work."[52] "Nationality" and the failed evolution of consciousness it implies, appears to be a sort of "original sin," whose correction entails the same process of forging that is applied to wreckers and class enemies.

The need to reform Biblical Adam, to change his skin, as the title suggests, requires intervention beyond the surface in *Man Changes His Skin*. Jasienski writes: "The old skin has grown on him so that sometimes it has to be ripped off together with the flesh...fragments of the old skin that have not been torn off are beginning to rot, thereby infecting the whole organism."[53]

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[48] Jasienski may have, ultimately, had more influence on the form and substance of the History than has yet been discussed.

[49] See Bruno Iasenskii, *Chelovek meniaet kozhu*, published in *Novyi mir*, nos. 10-12 (1932); nos. 5-10 (1933); Nina Kolesnikoff, *Bruno Jasienski: His Evolution from Futurism to Socialist Realism* (Waterloo: Wilfrid Laurier University Press, 1983), 8. The English editions were published by the Co-operative Publishing Society of Foreign Workers in the U.S.S.R, Moscow (1935) and International Publishers, New York (1936).

[50] Kolesnikoff, 97.

[51] Jasienski (1936), 126. [Bruno Iasenskii, *Chelovek meniaet kozhu* (Moscow: Sov. lit., 1934), 89.]

[52] Jasienski (1936), 410.

[53] Ibid., 163.

This skin is compared to Biblical earth in the metaphoric and poetic structure of the novel, suggesting that a new Genesis is being written in the socialist desert of Central Asia. Jasienski compares the arid soil itself of Tajikistan to *skin*: in an apocryphal folktale, a thirsty camel perishes and its skin expands to cover the entire Vakhsh plain. No vegetation can thrust through this desiccated skin and the entire plain becomes a desert.[54] After a suicide in the novel, it is remarked that "'The earth gave [...] and the earth has taken away,'" [*Zemlia dala [...] zemlia vziala*], a materialist variation of *Gospod' dal, Gospod' i vzial* (Job 1:21), in which soil, a generative proto-material, replaces the immaterial deity as creator and first cause.[55] These Biblical associations suggest the pedagogical project of turning enemies of the Soviet state into allies, and further secure soil as a *topos* of moral transformation.

The novel depicts actors at various levels of transformation within the penal structure: at one end of the disciplinary spectrum are the Basmachi rebels and the Western engineers who secretly wreck the construction project, and at the other end is the Chekist Komarenko. The middle terms are the primitive "human material" on the worksite (the "national" workforce which must be reformed through labor), and the newly-appointed chief engineer, Kirsh—a repentant sinner and a successful example of reforging:

> There was a sensation around the arrival of the new chief engineer, Kirsh, who many of the engineers remembered from the newspapers, when, five years ago, he had been convicted of sabotage in connection with some "Panama" on one of the largest Central Asian constructions, where he served as Deputy Chief Engineer. The construction project was utopian, pre-doomed to failure, and did not justify the enormous contributions that were spent on it. Kirsh was sentenced to eight years and, apparently, had only recently finished serving a reduced term of imprisonment. The appointment of a former villain, just released into freedom, as head of one of the biggest construction projects was so sensational that no one talked of anything else.[56]

Kirsh has liberated himself by submitting to the discipline of the OGPU and proves himself to be both a responsible worker and a supernaturally sensitive judge of human character. Jasienski smuggles subversive political dissent into the novel when Kirsh confesses to the wrecker Nemirovskii that he once harbored dangerous political ideas himself:

> I was outraged by the wasteful inefficiency of the Revolution: I saw how today they would meaninglessly destroy what tomorrow would have to be rebuilt. I saw how valid and good ideas turned in practice into a caricature due to the clumsiness of the hands that implemented them. I was repelled by this Asiatic version of socialism. I told myself that this country must first get ordinary Western culture and then we could venture a conversation about socialism.[57]

[54] Ibid., 281-282.
[55] Ibid., 541-542.
[56] Ibid., 222-223. Translation emended. "Panama" is meant to signify a fraudulent public works project.
[57] Ibid., 229-230.

Kirsh appears to have been an *aziatchik*—a partisan of the AMP, who, like Plekhanov, believed that the Revolution had established an"Asiatic version of Socialism." His apostasy is corrected with the "human assistance" he receives from the OGPU:

> I found this help, and found it where you'll find it—where you least expect it – among the people whose very name seems hateful and fearful to you because its so frequently repeated that it is almost a myth for us, and our vulgar imagination provides it with all the accessories of the Grand Guignol. I'm talking about the GPU. I met people there who treated me not as an enemy treats an enemy, but rather as a doctor relates to the mentally ill: with great patience and attention.[58]

While Kirsh and Komarenko work to shore up the human material on the construction site, "old material"—the ruins of previous irrigation works—haunts the project. Clark's Russian translator explains: "You may have noted that the plain bears traces of ancient irrigation. According to legend, this whole valley was irrigated and thickly populated in the time of Alexander the Great."[59] The soil itself on which the canal is being built is a threat to the project. The canal bed is referred to as a coffin [*grob*], and its shifting soil is composed of "grave ash." Morozov, the chief engineer says:

> "Well then, the problem of Kata-Tag is really a question of the soil. In order that the water may not seep through and wash away the dike, we want a firm soil. But just at this point we encounter a sort of grey soil. The local inhabitants call it 'grave ash.' In its colour and its shifting character it really does resemble ashes.[...] On its summit there is a small graveyard, or mazawr, where the ashes of certain Mohammedan saints have been resting from ancient times. [...] The geological structure of the mountain is highly unreliable. The grey soil is easily washed away by water!"[60]

The local Tajik engineer, Urtabaev, replies to Morozov that the gray soil undermining the construction is actually the slime or silt [*il*] of the ancient canal bed, composed of the ash of dead ancestors. It appears that the only way to Bolshevize the site is to replace the dust of dead ancestors with the dust of Soviet workers—Soviet "national" workers. Immediately before a fatal rock slide, construction managers proudly exhibit the multinational Soviet construction site to a foreign correspondent:

> —Persian immigrants! - exclaimed the writer. —How interesting!

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[58] Ibid., 230-231.
[59] Ibid., 60.
[60] Ibid., 688-689. It is not clear if this is a typographical error and Jasienski is referring to the mountain "Kara-Tag" ["Black Mountain" in Turkic languages] (a mountain in the Ferghana Valley), or if he indeed means "Kata-Tag" ["Big Mountain"], a plausible name, but not a place I have been able to locate. The name is consistent throughout all the editions I have seen.

> You've got a real International here.
> —Yes, we almost have the *Tower of Babel*. Andrew Savelievich, how many nationalities do we have on the construction site?
> —Counting the construction commission- sixteen.- Wait, let's see: Tajiks - one, Uzbeks – two Kazakhs - three, Kirghiz – four, Russian – five, Ukrainians - six, Lezgins - seven, Ossetians - eight, Persians – nine, Indians -ten - yes, yes, there are Indians, too, immigrants. Afghans - eleven – We have several Afghan brigades here and on the third site. Twenty percent of the drivers' brigades are made up of Tatars – that makes twelve. In the mechanical workshops we have Germans and Poles – that's fourteen. Among the engineering and technical staff we have Georgians, Armenians, and Jews - that's seventeen. There are two American engineers, one's the chief of this site – that's eighteen. Who have I forgotten?
> —There are Turks, Comrade.
> —Yes, there are Turks and Turkmens. Twenty nationalities.[61]

The Soviet construction site is a "Tower of Babel," whose national hierarchy reproduces a system of class exploitation. Asian and other "less developed" nationalities perform much of the hard labor, Tatars occupy an intermediary position (as was the case in many pre-Soviet Central Asian contexts), high-status engineering jobs are filled by Georgians, Armenians, and Jews, and finally management jobs go to the most technologically-advanced nationality—Americans. The critique implicit in this discussion is underscored by its juxtaposition with a terrible accident on the construction site, which kills or maims several Persian workers:

> Below, on the bottom of the cleft, along the steep rock walls, the Persians crushed rock fragments with measured blows. Suddenly, a piece came off the wall in this place, and a huge block silently slid down over the men. No scream was heard. A few workers managed to jump away and froze in a stupor. From under the breakaway plate, writhing like fish, two men tried in vain to extricate themselves. […] Morozov was the first to notice the incident: "Oh, hell! A man is crushed! And not just one ..."[62]

The body of one of the Persian workers, a "bloody flattened mass" is carried up from the canal bed on the conveyor that lifts soil from the canal bed. This dubious sacrifice to construction of socialism is summed up by the wife of one the engineers, the same one who will later commit suicide: "So, is it really true what Gor'kii says: that we are living for a better man? But, how do I know that man will be better in the future?" The doubt that the ends justify the means, or that *perekovka* and *melioratsiia* may reform either nature or human nature is reinforced at the conclusion of the novel. After all, man may be changing his skin and the face of the earth, but without penetrating through to the material beneath.

[61] Ibid., 674-675. Italics mine.
[62] Ibid., 675.

III: ASIATIC RESTORATION

If Jasienski's novel ties land-works to reeducation, it still raises the specter of the AMP in the violence on the construction (or reconstruction) site. Even under the Chekist's watch, the relationship between human bodies and soil, and the improvement of each through the other, is governed here by the state and its violent, monumentalist projects. Evgeny Dobrenko writes, "The discourse of violence against nature grew into the discourse of violence against the human masses. Actually, Gor'kii's favorite phrases—'the transformation of nature' and 'reforging [*perekovka*] of human material'—are synonymous [...]."[63] Ernst Gellner notes the paradox of persistent state violence in the Soviet context and links it to the theoretical questions posed by the Asiatic mode of production: "By allowing coercion to be, in this manner, an independent agent in history, it destroys the optimistic theory that coercion is only a by-product of economic exploitation and can be finally eliminated when such exploitation ends. It thus encourages what Soviet anthropologists have called the 'idealist theory of violence.'" [64] In 1923, Osip Mandel'shtam warned of the "monumentality of the forms in the social architecture that is approaching," noting that "there are epochs which contend that they care nothing for man, that he is to be used like brick or cement, that he is to be built with, not for."[65] Mandel'shtam's description of the new social architecture of the Soviet state makes clear the threat of a restoration of Oriental despotism with its monumental forms. He writes:

> The mountain cannot yet be seen, but already it casts its shadow upon us and we—unacustomed to monumental forms of social life, trained in the governmental and legal flatness of the XIXth century—we move about in this shadow with fear and bewilderment.[66]

Mandel'shtam notes that this monumentalism was a feature of the Assyrians, the Babylonians, and the "Egyptians and Egyptian builders treat the human mass as a material of which there must be a sufficiency and which must be delivered in any desired quantity."[67] And he concludes, "If the social architecture of the future does not have as its basis a genuinely humanistic justification, it will crush man as Assyria and Babylonia crushed him."[68] As Jasienski's Asian laborer is transformed not into an enlightened citizen but a "flattened mass," and ultimately the literal material of the construction project, the 1920s' vision of Asiatic restoration discussed by Mandel'shtam is carried with its essential features into socialist realist literature.

The fullest interpretation of Stalinist Soviet space as the site of an Asiatic restoration can be found in Boris Pil'niak's works of the early 1930s. The central plot of Pil'niak's construction

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[63] Evgeny Dobrenko, "Nadzirat'—nakazyvat'—nadzirat': Sotsrealizm kak pribavochnyi produkt nasiliia," *Revue des études slaves* 73:4 (2001), 671.
[64] Ernest Gellner, foreword to *Nomads and the Outside World,* by Anatoly M. Khazanov (Madison: University of Wisconsin Press, 1994), xi.
[65] Osip Mandel'shtam, "Gumanizm i sovremmenost," translated and reprinted in Clarence Brown, *Mandelshtam* (Cambridge: Cambridge University Press, 1973), 103. For the original, see Osip Mandel'shtam, *Sochineniia v dvukh tomakh* (Moscow, 1990), 2:205.
[66] Ibid., 102.
[67] Ibid., 102.
[68] Ibid., 103.

novel, *The Volga Falls to the Caspian Sea* (*Volga vpadaet v Kaspiiskoe more,* 1930) concerns a plan to construct a dam in the ancient "Asiatic" city of Kolomna to reverse the course of the Moscow River according to the "science of Engels the sociologist and Engels the hydrologist."[69] (Perhaps we are to understand that Engels' sociology is equal to hydrology, fused in a hydraulic despotism.) At the time of the novel's publication, Soviet and anti-Soviet critics bitterly contested its ideological orientation. Subsequent scholarship has largely ignored or dismissed the novel, probably because of its formal, as well as ideological, awkwardness.

While *Volga* expresses ambivalent values, juxtaposing it with Pil'niak's sketches from Tajikistan, *The Seventh Soviet* (*Sed'maia sovetskaia*, 1931), provides some additional leverage for interpretation. Although scholarship has never treated them together, these two works can be read as a nearly-continuous text, whose concern with *starina*, Asiatic heritage, and the transformation of nature collapses the geographic and historical spaces of the Russian center and the Asian periphery into a continuous narrative. In *The Volga Falls,* Pil'niak creates a dense structure of associations between a familiar *topos* in his work—the Asiatic past of Russia—and the *topos* of the AMP and the Asiatic restoration, with the flow of the river connecting the *topoi* in time.

While Pil'niak has been almost universally critiqued, on both aesthetic and ideological grounds, for working the plot of his previous, condemned novel *Mahogany* into *The Volga Falls*, the confluence of *topoi* in the two novels takes on surprising new resonances in relation to the AMP. The antique dealers Pavel and Stepan Bezdetov actually specialize in "Asiatic restoration": in their rooms on "a typical Asiatic Moscow street," Zhivoderka, the Bezdetovs collect and restore mahogany furniture which reflects the styles under a succession of Asiatic despots. "Political epochs" are "overlaid" on the mahogany while never fundamentally altering the nature of the material.[70] These restorers "construct nothing now. They merely restore antiques; but they have preserved the habits and traditions of their uncles."[71] The superficial refashioning of antiques echoes the plan to reverse the course of rivers, for "rivers are the highroads of antiquities."[72] When Pil'niak writes that "again the Oka will flow from man's will, not nature" it seems that the metaphorical river of history has been turned back to the primitive socio-political order of Asiatic despotism.[73] Throughout the novel, Pil'niak flamboyantly refers to the dam that will reverse the river's flow as a "monolith."[74] The associations between the monolith of the future and the ruins of the past are further emphasized in the subplot of Liubov Pimenova, an archeologist and the daughter of the chief engineer of the monolith, who examines antiquities as they are excavated from the canal bed. The construction site and the archeological site are the same, collapsing past and future planes and suggesting the eventual ruin of the "monolith."

Liubov's father, the engineer Pimen Poletika is motivated by his fear of the advancing deserts and he attributes famine in the Russian heartland to winds from Asia, including the *sukhovei* and the *afganets*. Poletika's technocratic solution to this "Asiatic" threat is irrigation and monumental waterworks. However, his discussion of the fall of past civilizations raises the disturbing paradox that irrigation itself might restore Asiatic despotism in the Soviet Union. This

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[69] Boris Pilnyak, *The Volga Falls to the Caspian*, trans. Charles Malamuth (New York: Cosmopolitan, 1931), 193. [B. A. Pil'niak, *Sobranie sochinenii v shesti tomakh* (Moscow: Terra, 2003), 4:362.]
[70] Ibid., 4:50.
[71] Ibid.
[72] Ibid., 4:188.
[73] Ibid., 4:202.
[74] Ibid., 4:3, 27, 32, 38, 88, 117, 141, 181, 202, 222, 339.

Asian threat plausibly encodes a political threat from within "Asiatic" Russia, not a climatic threat from without as Solov'ev had warned of. It is not only desert, drought, and hot winds that are Asiatic; the waterworks that combat them also resemble the monuments of Oriental despots. Poletika dreams of past civilizations that have fallen to the "ominous advance of aridity":[75]

> The Arabian desert of bygone times had been a very rich and flourishing country of culture, science, religion; the red sands of Egypt had flourished once. And the Tatars? Five centuries ago, within the memory of Russian history there were exceedingly prosperous Tatar cities on the lower Volga […]. Now even the very traces of these cities are lost in the sands—the waterless heat of the sands has come on to the Volga region, as far as Nizhnyi Novgorod to the Donets Basin, to the Kuban—sands, scorching heat, death, which made the faces of the Tatars as yellow and dry as the sands.[76]

Pil'niak associates Atlantis, the ultimate technological utopia, with the fallen Oriental despotisms of Assyria, Babylonia, and Mesopotamia in Poletika's speech about his next hydroengineering project:

> All we are now building is, strictly speaking, a trifle, compared with what we hydrotechnicians can achieve. Remember the globe. Nothing of Atlantis has remained to humanity; it was burned out by the sun and buried under the sand. In the memory of mankind flourishing countries have disappeared—Assyria, Babylonia, Mesopotamia. The Tigris and Euphrates were once an earthly paradise, an enormous garden; now sands are there and scorching heat and desert.[77]

Probing the text, we could argue that Pil'niak makes the hydrotechnician the common term between technological utopia and Oriental despotism. Pil'niak also implicates hydroengineers in despotism in his travel sketches of Tajikistan. In 1931, soon after the publication of *The Volga Falls*, Pil'niak had travelled to the new autonomous Soviet republic that had been carved out of the Bukharan Emirate, and the material of his unfinished novel was published the same year under the title *Seventh Soviet*. In this work, Pil'niak describes local irrigation canals:

> The apparatus which is known as the canal head and which, in antiquity, was built over decades with thousands of people under the direction of half-divine *mirabs,* […] now is done by engineers and workers with mathematical calculations […].[78]

Pil'niak's equivalencies between the "half-divine mirabs" and Soviet engineeers hardly does credit to Soviet works projects; he sets up so many equivalencies between "feudal" systems and

[75] Ibid., 4:14.
[76] Ibid., 4:24.
[77] Ibid., 4:283.
[78] Boris Pil'niak, *Sed'maia sovetskaia* (Leningrad: Izd. pisatelei, 1931), 26.

Soviet irrigation that the reader doubts that the change is a matter of expertise and not terminology. These engineers are the middlemen between the will of the despot and the labor needed to carry it out.

Reading Poletika's speech about the fall of Atlantis more conservatively, we could discern the standard theme of nature as a constant enemy of human civilization. In this case, Poletika fails to see the hubris of Soviet hydroengineering, and, by analogy with the technological utopia of Atlantis, that Soviet civilization, too, will fall. The failure of self-recognition is a recurrent theme of the novel. As Kenneth Brostrom notes, the chief engineer of the project, Pimen, is the namesake of several Eastern saints, although he lacks the self-awareness to identify their character traits in himself. Pil'niak also refers to Plato's cave allegory with *asphalt* serving as the surface for the projections.[79] Further, the novel abounds with phastasmagoria and camerae obscura, suggesting an epistemological shadow world.[80] One character even notes that they are "living in allegories."[81]

Traces of the disciplinary *topos* appear as evidence of that allegory's content in *The Volga Falls*: Moscow, the Asiatic center from which all the bureaucratic and planning activity of the hydroengineering projects emanates, is punned as being *perekovany i perekopany* (reforged and re-dug), evoking the broader *topos* of disciplinary reforging through land work.[82] A GPU agent visits the site to investigate saboteurs.[83] Major construction works using forced labor such as Dnieprostroi, Turksib, and Magnitogorsk are discussed.[84] Finally, the engineer Edgar Laszlo is writing an article on the psychological transformation of workers, gathering "material for an interesting theoretical article; he observed the transformation in the psychology of the workers and the psychology of the transformation."[85] All of this, however, is circumstantial and Pilniak places the only unambiguous critique of Soviet waterworks as a despotism in the mouth of the madman, Ozhogov:

> Not only are the Bolsheviks letting Moscow River run backward, but also Russia. […] It is permissible to kill; human life is as cheap as the dust of the roads. We have no men; we have organizations.[86]

Ozhogov's powerful statement goes unanswered in the text, mitigated only by the reader's acceptance of his "madness." Pil'niak apparently offered *Volga Falls* to Stalin as one of "my bricks that are in our construction," however his contribution to the Soviet production novel is so unstable that it subverts the genre and challenges the Soviet hydroengineering plot from the inside.[87]

Andrei Platonov struggled through his career to appropriately place the *meliorator* in the Soviet story. His ambivalent depictions of land reclamation provide an engineer's vision of the Asiatic restoration that Mandel'shtam and Pil'niak imagined from a distance.

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[79] Pilnyak (2003), 4:148.
[80] Ibid., 4:164; 209, 213, 219, 262, 294, 300, 317.
[81] Ibid., 4:230.
[82] Ibid., 4:100.
[83] Ibid., 4:271.
[84] Ibid., 4:332-333.
[85] Ibid., 4:238.
[86] Ibid., 4:81.
[87] Boris Pil'niak, *Mne vypala gor'kaia slava: Pis'ma 1915-1937* (Moscow: Agraf, 2002), 345.

In a story that marked a crucial turning point in Platonov's professional life as a writer and engineer, "The Locks of Epifan" (1927), Platonov describes a hydroengineering project commissioned by Peter the Great to "rally the rivers of our empire into a single body of water."[88] The English engineer Bertrand Perry is invited by his brother, William, also an engineer who has served the tsar for several years, to come to Russia for the purposes of designing and building a "complete waterway between the Baltic, Black, and Caspian Seas in order to overcome the vast expanses of the continent to India, the Mediterranean, and Europe."[89]

Platonov wrote the story during an intense period of personal crisis in 1926, while working as a land improvement engineer in Tambov. His disillusioned letters complain of "squabbling and terrrible intrigues" within Narkomzem, a lack of expertise among staff, and resistance from the local laborers. Platonov wrote to his wife, Mariia, that "the land reclamation staff is undisciplined, they are uniformed cretins and informers. The good specialists are helpless and their hands are tied."[90] Aside from his difficulties with both bureaucrats and laborers in Tambov, Platonov was shocked by the bleakness of life in the provinces: "Wandering through these backwaters, I've seen such sad things that you wouldn't believe that there could exist in the world any such luxurious place as Moscow, or such things as art and prose."[91] He referred to his rented room as a "prison cell" and wrote that "Tambov is penal servitude" [*Tambov—katorga*].[92] His letters to his wife reveal not only professional troubles, but major financial troubles and the suggestion of actual hunger.[93]

Platonov devoted his free hours in Tambov to "The Locks of Epifan." As he wrote to Mariia: "I'll close here, my work on Peter's Volga-Don Canal awaits. Very little historical material, again I'm obliged to rely on my 'muse' [...]."[94] As Platonov "worked on" Peter's canal, his muse filled in for the lack of historical material, and his tale endures as an allegory of Soviet power rather than a work of historical fiction. Not only does Bertrand Perry's story resemble Platonov's experience in Tambov, but Peter's grand project to build a canal between the Oka and the Don evokes the massive engineering projects of the Soviet "hydraulic dystopia."

Given the stated lack of historical material, a comparison between historical sources and Platonov's invention is illuminating. Platonov is likely to have based Bertrand Perry on the minor historical figure, Captain John Perry, whose account of his time in Russia, *The State of Russia under the Present Czar*, was translated into Russian in 1871.[95] Elena Antonova argues that Platonov more likely read a historical text by a Russian engineer, Anton Iosifovich Legun, based on Perry's account of working on the Voronezh-Rostov waterway.[96] Captain John Perry returned home safely to England and there is no historical record of anything resembling the Lake Ivan project that Platonov depicts in his story, however. Paola Ferreti suggests another possible inspiration for Perry: Samuel Bentham, the brother of Jeremy Bentham, who worked as an engineer and shipbuilder for Catherine the Great and constructed the first panopticon in

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[88] Andrei Platonov, "Epifanskie shliuzi," in *Sobranie: efirnyi trakt* (2009), 101.
[89] Ibid., 96.
[90] Rossiiskii gosudarstvennyi arkhiv literatury i iskusstva, *Arkhiv A.P. Platonova* (Moscow: IMLI-RAN, 2009), 446.
[91] Ibid., 446.
[92] Ibid., 449.
[93] Ibid., 453.
[94] Ibid., 459.
[95] Vladimir Vasil'ev, "Prozhekty i deistvitel'nost,'" in *Andrei Platonov: ocherk zhizni i tvorchestva* (Moscow: Sovremennik, 1982), 79-81.
[96] E. Antonova, "O nekotorykh istochnikakh prozy A. Platonova 1926-1927 gg.," in *Strana filosofov: Andreia Platonova: problemy tvorchestva* (Moscow, 2000), 4:460-485.

Russia.[97] Samuel and Jeremy collaborated closely (the panopticon was originally Samuel's invention), and Jeremy visited Samuel in Russia for an extended period, during which time he formulated his *Defence of Usury*, a political work written in the form of letters from Russia.[98] Jeremy Bentham's work "Panopticon; or The Inspection House" was written as letters to a friend in England from the city of Krichev, Belorus. The Bentham connection remains intriguing as a nexus of associations between engineering and the *topos* of punishment, colonization, and state violence.[99]

Petrine Russia, as focalized through the experience of the the English characters, is an Oriental despotism nearly continuous with the Mongol yoke. Bertrand's brother, William, tells him that Russia lies in the "depths of the Asian continent" and describes the Russians as "obedient and tolerant in their long and hard labors, but wild and gloomy in their ignorance."[100] Bertrand confesses that back in Newcastle, he admired Peter and secretly nursed the desire to collaborate with the tsar in "civilizing the wild and mysterious nation."[101] As presented to the reader, Peter's plan is a topological catalogue of imperial ambition; he hopes to extend his land empire to "India, the Mediterranean and Europe," and "from Persia to St. Petersburg and from Athens to Moscow, and also the Urals, Ladoga, the Kalmyk Steppe and beyond."[102] This disorderly collection of toponyms from east to west reflects Peter's ambition to conquer and colonize the entire Eurasian subcontinent right up to the borders of Europe.

As a foreign specialist, Perry facilitates the tsar's project of colonization. In letters, the engineer's fiancee, Mary, compares Perry repeatedly to Tamerlane, Attila, and Alexander the Great, and Perry's middle name is "Ramsey" [*Ramsei*], evoking Ramses [*Ramses*].[103] Perry plans to bring the "age of construction" to India when he completes his contract in Russia.[104] Finally, when Mary finally breaks off the engagement with Perry, she writes that he can "take [his] colonies!" just as she will take a new husband.[105] As many scholars have discussed, ideology is visibly inscribed upon the body in Platonov's works; in this case, colonialism is, somewhat predictably, compared to erotic possession.[106] Perry, however, is not only an agent of colonization, he is a subject, and if we have come to believe, like Mary, that Perry the hydroengineer is a colonizer, then it is all the more shocking when we learn that Peter's executioner has taken brutal sexual and political "possession" of Perry's body at the conclusion of the story.[107]

Perry's troubles begin when he realizes that the construction plans he drew up in Petersburg "had not taken into account local conditions, and especially the droughts […]."[108] Perry has based his calculations of rainfall on data from an anomalous year, 1682, which

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[97] Paola Ferretti, "Platonov and Paustovskii: Unexpected Affinities and Predictable Differences between Two Povesti," in *Europa Orientalis* 23:2 (2004), 112.
[98] See Ian R Christie, *The Benthams in Russia, 1780-1791* (Oxford; Providence: Berg, 1993).
[99] Jeremy Bentham vigorously attacked the institution of penal colonies.
[100] Andrei Platonov, "Epifanskie shliuzy," 95.
[101] Ibid.
[102] Ibid., 96-97.
[103] Ibid., 98.
[104] Ibid., 100.
[105] Ibid., 104.
[106] For more on the embodiment of ideology in Platonov's work, see Keith Livers, *Constructing the Stalinist Body: Fictional Representations of Corporeality in the Stalinist 1930s* (Lanham: Lexington Books, 2004).
[107] See Eric Naiman, "V zhopu prorubit okno: Seksualnaia patologiia kak ideologicheskii kalambur u Andreia Platonova" *Novoe literaturnoe obozrenie* 32 (1998).
[108] Platonov, "Epifanskie shliuzi," 118.

happens to be the year that Peter was appointed co-ruler of Russia. This misleading data means that Perry's project was doomed from the beginning, for there is simply too little water to fill the canal. Peter's entire civilizing project, headed up by Perry, fails altogether to take account of local conditions: the laborers, who, like slaves, have no stake in the project, die or flee in vast numbers and Perry's team of engineers—Balts, Germans and Muscovites—are unaccustomed to local malarial conditions and succumb to fever.

IV. THE AMU DOES NOT FLOW TO THE CASPIAN

Through the discourse of colonization, Russia's great destiny in the East had the power to transform it into a despotism of large-scale land works. Between "The Locks of Epifan" and *Dzhan*, the Belomor Canal *History* was published, becoming an important subtext of Platonov's later work and a milestone of Soviet construction literature.[109] A brief return to Belomor, then, will inform a final reading of the roles of land and labor in *Dzhan*.

Andrei Platonov had applied, unsuccessfully, to Maksim Gor'kii and Leopold Averbakh to join the Belomor Canal brigade, noting on his application that his training as an engineer and his work in land reclamation made him uniquely fitted to documenting the canal project, for "interest in these developments wasn't born in me 'two weeks ago,' but much earlier. Moreover, a few years back I myself initiated and oversaw similar work (similar not in scale or in a pedagogical relation, of course)."[110] Platonov stressed continuity between his former work for Narkomzem as a regional land reclamation engineer and the construction projects at the Belomor and Moscow-Volga canals. In the end, although Platonov did not join the Belomor brigade, he transplanted the mythology and tropes of the Belomor Canal to the desert of Central Asia in *Dzhan*, responding to the literary *topos* of Soviet hydroengineering.

Other scholars have noted the shadow cast on Platonov's work by the Belomor Canal.[111] The legacy of the Belomor Canal lingers over Medvez'ia gora in Platonov's story "Among Animals and Plants," written for the series *People of the Railway Kingdom* after Platonov visited the penal colony in 1936. Platonov scholar Natalia Kornienko also reports that Platonov's personal library contained a copy of the *History*, inscribed: "To my son Totik—to a small bandit about big bandits."[112]

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[109] The History was written, edited, and printed in just five months, presumably in time for the First All-Union Congress of Soviet Socialist Writers in 1934, a coincidence that has far-reaching implications for understanding the importance of the first Writers' Congress in a larger cultural program. Gor'kii, Averbakh, and Firin (1934).

[110] Quoted in Natal'ia Kornienko, "Istoriia teksta i biografiia A. P. Platonova (1926-1946)," in *Zdes' i teper'* 1 (1993), 218.

[111] Robert Chandler discusses the White Sea-Baltic Canal theme in Platonov's story "Among Animals and Plants." See his Introduction, Andrei Platonov, *Soul*, tr. Robert Chandler (New York: NYRB, 2008), xxii-xxiii.

[112] Natal'ia Korienko cites the year of this inscription differently in two articles—one claims the date to be February 19, 1935, the other 1936. If the inscription was written in 1935, then it was less than a month after Platonov had taken his second trip to Turkmenistan and while he was immersed in the writing of *Dzhan*. Natal'ia Kornienko, "Soveshchanie v soiuze pisatelei. Chtenie i obsuzhdenie rasskaza A. Platonova 'Sredi zhivotnykh i rastenii' dlia zhurnala 'Liudi zheleznodorozhnoi derzhavy,'" in eds. Natal'ia Kornienko and E. D. Shubina, *Andrei Platonov: Vospominaniia sovremennikov; Materialy k biografii* (Moscow: Sovremennii pisatel', 1994), 327; Kornienko (1993), 316. Just four years later, Platonov's 15-year old son Platon would be arrested by the OGPU and sent to the camps at Solovki. For a detailed account of the events surrounding Platon's arrests and efforts by Platonov and

There is a marked resemblance between the sandy basin [*kotlovina*] of *Dzhan* and the earthen pit [*kotlovan*] of Platonov's *The Foundation Pit.* An equivalence between the bai's waterworks and Soviet construction is further suggested by the the erasure of labor, a despotic bureaucracy, and the failure to progress according to the official paradigm of development. The narrator of Andrei Platonov's tale *Dzhan* informs the reader that the only labor the Dzhan have ever performed was on the waterworks [*chigiri*] of the big cities of Khiva, Khojayli, and Urganch (in current-day Uzbekistan) and Dashoguz (in current-day Turkmenistan).[113] They are said to have been used to turn the waterwheels instead of donkeys: "At the pumps, this people [*narod*] worked instead of donkeys, using their bodies to move the wooden wheel to bring water up into the canal."[114] The hero of *Dzhan*, Nazar Chagataev, observes that the tribe is unfit for socialism because "it has wasted it body on the works projects [*na khosharakh*] and the hardships of the desert."[115] Having been broken by the Asiatic despot's forced irrigation projects, the Dzhan have no more energy left for socialism.[116] The narrrator remarks that, "Slave labor, exhaustion, and exploitation never just use up a man's physical strength, never just his hands and arms."[117] This labor uses up not only the body, but also the soul: "No, what they appropriate is the entire mind and heart; first the soul gets eaten away, then the body fades and, then a man hides away in death, slipping into the earth as if into some fortress and refuge […]."[118]

In *Dzhan*, slave labor cannot re-educate, it can only crush the spirit, making the construction site a grave. While the *kotlovan* is a burial ground for workers in the industrial center, the sandy *kotlovina* is a burial pit for *natsmeny*. The party organizer in *Dzhan*, Nur-Mohammed, cynically enhances the fertility of the desert by filling it with bodies. He gives a chilling "census" of the dwindling nation:

> When I came here, there were a hundred and ten people, now there are fewer. I dig the graves of the dead—I can't bury them in the marshes or there would be an outbreak, so I carry the dead far into the sand. I'll go on burying them until they are all gone, then I'll leave here, I'll say: mission completed [*kommandirovka vypolnena*].[119]

Nur-Mohammad's organizational work consists solely of burying the Dzhan; he explains that he considers the Dzhan *already* dead.[120] Nur-Mohammed's funereal "kommandirovka" is an implicit indictment of Platonov's fellow brigade and Soviet development, which eagerly "buries" the Turkmens rather than bringing them into a locally-authentic socialism.[121]

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others to attain his release, see L. Surovovoi, "Semeinaia tragediia Andreia Platonova" in *Arkhiv A. P. Platonova* (2009), 620-659.

[113] Platonov, "Dzhan," 452.

[114] Ibid., 452.

[115] Ibid., 505.

[116] Ibid., 509. *Na khosharakh* also, suggestively, became the standard Uzbek term for the Russian *subbotnik*.

[117] Ibid., 476.

[118] Ibid., 476.

[119] Ibid., 472.

[120] Ibid., 472.

[121] Natal'ia Kornienko argues that Platonov polemicizes in Dzhan with the members of the first Turkmenistan brigade of 1930, including such major writers as Nikolai Tikhonov and Vsevolod Ivanov. See Natal'ia Kornienko, "Andrei Platonov: 'Turkmeniia—Strana ironii,'" in *Natsiia. Lichnost'. Literatura* (Moscow: Nasledie, 1996), 98-122. For more background on the Turkmenistan brigade of 1930, with a focus on Tikhonov, see V. A. Shoshin,

Platonov endeavors to depict the process of transforming consciousness, rather than just transforming matter; at the meeting of the Turkmenistan almanac committee, Platonov expressed the desire to write "about the transformation of the desert slave into a progressive, contemporary person […]."[122] *Dzhan* presents two portraits of reformers: Nur-Mohammad, who works only with human material, and Chagataev, who attempts to reclaim human souls—for Socialism. Chagataev's "consciousness-raising" mission reflects Platonov's choice to push the boundaries of dialectical materialism in *Dzhan*, establishing a more nuanced model of materialism.

Finally, Chagataev observes that this labor of the Dzhan is historically illegible:

> Was it really true that his own nation the Dzhan would soon lie down somewhere nearby and that it would be covered with earth by the wind and fogotten by memory, because the nation had never managed to build anything in stone or metal […] all it had done was dig earth from the canals, but the flow of water had clogged them up again, and the nation once again dug out the canals and threw the silt out of the water, and then a turbid current deposited new silt and again covered their labor without a trace.[123]

Although the Dzhan "once dug entire rivers for the bais," these rivers inevitably dry up, stopping the flow of history. Chagataev observes a river turned to sand, the result of ancient desertification, as he stares out at the "dry river Kuniadaria."

As discussed in the previous chapter, Platonov sets the action of *Dzhan* precisely at the location of a major hydroengineering project under consideration by the Academy of Sciences in the early 1930s: the site of a plan to alter the course of the Amu-Darya river from the Aral Sea to the Caspian Sea, thereby irrigating the Kara-Kum desert. If Platonov wishes to depict transformation of consciousness through labor, why, can we pose counter-factually, does *Dzhan* fail to become a novel of *perekovka* and hydroengineering? Many models of this genre were available and Platonov was distinctly qualified to write this novel as an engineer who had applied to Gor'kii to use his technical experience of irrigation to document the labor process at the Belomor Canal. The material for an exemplary socialist realist novel was in his hands; in fact, the plot to turn the Amu to the Caspian was written by one of Platonov's colleagues on the Turkmenistan brigade: Petr Pavlenko, in his novel *The Desert.*[124]

In the previous chapter, I suggested one reason for Platonov's resistance to the plot in his increasingly complex vision of the desert environment and the ecosystems within it. Platonov supports a revival of localized, pre-modern irrigation technology, including networks of natural takyr basins and small wells, arguing that these are more appropriate to local conditions than large irrigation works.[125]

Platonov also objected to the depiction of the hydroengineering project in *Dzhan* for ethical reasons, arguing that hydraulic socialism does not suit local environmental *or* socio-political conditions. Were such a project undertaken, the Dzhan would become an exploited

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"Sovetsii vostok v tvorchestve N. Tikhonova v tridtsatye gody," in *Istoriko-literaturnyi sbornik*, ed. V. G. Bazanov, V. E. Gusev, V. A. Kovalev (Moscow-Leningrad: Izd-vo Akademii nauk SSSR, 1957), 308-361.

[122] Quoted in Natal'ia Kornienko (1993), 224.

[123] Ibid., 476-7.

[124] Petr Pavlenko, *Pustynia* (Leningrad: Izd. pisatelei, 1931). The novel was first published in *Krasnaia nov'* 1-2 (1931).

[125] See previous chapter for a fuller discussion of environmental conditions in the Kara-Kum desert.

class, just as they were exploited on the bai's waterworks. The paradox of the Dzhan as a multinational nation—a *narod* of heterogenous national origin can be resolved if read as a critique of Soviet imperialism—a topic that will be treated in the next chapter. The Dzhan, despite their ethnic diversity, function as a coherent class in relation to their Soviet "colonizers," as Lenin warned in *Imperialism, the Highest Stage of Capitalism*. Whether this colonization is "internal" or "external," Platonov alludes to the exploitation of the Dzhan by the bais of old, but the warning against potential exploitation by the technocrats and bureaucrats from the Soviet center remains, exemplified by the Party *kommandirovka* of Nur-Mohammad.

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Platonov, Jasienski and Pil'niak offer multivalent, sometimes competing, understandings of Soviet development, as they attempt to work through contradictions within Soviet Marxism using the discordant discourse, metaphors, and models available to them. Jasienski's novel, set at the extreme Soviet periphery, subverts the *topos* of reform of land, people, and nations. After the Vaksh canal is wrecked by local Basmachi agitators, the managers are forced to hide the damage from a foreign delegation that has come to observe the great Socialist construction project. The foreign visitors are convinced by this theatrical deception and delighted by the Potemkin canal, while the reader is left to conclude, with Evgeny Dobrenko, that Socialist Realism *was* the product of Socialism.[126] The novel's Chekist hero, Komarenko, has failed size up the "old Adam" in a wrecker or to perceive that local *natsmeny* are plotting against Soviet power, making the entire novel an exercise in failed *melioratsiia, perekovka,* and colonization. The "Asiatic socialism" that Jasienski alludes to in *Man Changes His Skin* is likewise expressed in Pil'niak's *The Volga Falls to the Caspian*. Pil'niak never allows his text a totalizing ideology, but this polyphonic novel contains serious critiques of Soviet waterworks projects and the Soviet state, critiques that simply could not have been published in a less ideologically ambiguous work. While Jasienski and Pil'niak both spent time on the construction sites they would depict in their novels, Platonov was the only one among them to have experience with irrigation works—and the only one who chose not to depict a hydroengineering plot in his novel set on the site of a major Soviet water project. Platonov rejects the conventional hydroengineering plot of socialist realism—as he had rejected the conventions of the construction novel in *The Foundation Pit*, and seeks a new way of understanding local conditions of socialism in the Soviet Eastern periphery.

In official discourse, high-profile hydroengineering projects, beginning with Belomor, focused on the association suggested by Marx between reform of nature, *melioratsiia*, and reform of human nature, *perekovka*. The creation of "second nature," as Gor'kii termed this *topos*, was likewise connected in official rhetoric to the project of colonization. Altogether, these associations suggested that the process of reform through the construction of large works projects constituted a revival of Marx's Asiatic mode of production and the Oriental despotism associated with it. Jasienski, Pil'niak and Platonov remind us that although the Soviets were attempting to restore Eden, their ambitions restored the state despotism that had historically ruled those regions in centuries past. While the hydroengineering and land-works plot became a standard sub-genre of socialist realism, important examples of the genre reveal cultural and ideological ambivalence to the very project to reform land, people, and nations. Large-scale

[126] Evgeny Dobrenko, *The Political Economy of Socialist Realism*, trans. Jesse M. Savage (New Haven: Yale University Press, 2007).

public works, the novels tell us, construct not socialism, but the state—a self-reflexive project that reveals the "monoliths" of Soviet construction as an empty fetish of state power. When viewed through the lens of the AMP, the pedagogical project of *perekovka* is no longer a project of improving human souls. Bodies are simply raw material—bricks and cement as Mandel'shtam suggested—for the vast monuments of "social architecture." It was an architecture built not to the measure of man, but *of* man, demonstrating that Soviet Adam was as fragile as Biblical Adam, culled from soil and dust, returning to them.

Chapter 5
Cultures and Monocultures: Early Soviet Film on the *Smychka*

Emma Widdis identifies the creation of a new "imaginary geography" of Soviet space as one of the chief goals of Soviet cinema in its first two decades.[1] The new Soviet nation required a new geographical imagination, not least because its physical borders largely coincided with the imperial borders left by its predecessor, its territory encompassing diverse nationalities and landforms, stretching from the Arctic Circle to the southern border with Afghanistan and China. This territorial inheritance had been consolidated by the Russia Empire through centuries of economic, military, and political conquest, but the Soviets argued that their mission there was emancipatory, not colonial.[2] Visual culture had a special role to play in animating the fossil of imperial space with new socialist economic, political, and ethnic possibilities. If Russian Imperial photographer Sergei Prokudin-Gorskii had presented the tsar with a slideshow of the Empire's nationalities and their wares at the turn of the century, the early Soviet cinema attempted not only to present mass audiences with an image of the nationalities of the Soviet Union, but even to visualize their roles in a unified economic geography.

The former tsar's dominion was brought into a modern paradigm of nation and nationality, and new nations were, in theory, recognized as autonomous political actors with new rights and responsibilities vis-à-vis the Soviet state. In Central Asia, new nations were created along ethnolinguistic lines on the territories of the Turkestan Governor-Generalship, Bukharan Emirate and Khivan Khanate. The vast Siberian territory of the Russian Empire sharpened into a new focus as a number of distinct economic and ethnic regions with a historically continuous indigenous population and diverse natural resources.[3] This renaming and reconceptualizing of the former Empire was ideologically grounded in Lenin's acceptance of the *forms* of imperialism, but with *socialist content*.[4] If the physical geography of Soviet space did not differ in *form* from the Russian Empire, it was imagined to differ fundamentally in *content*.

As the Soviets worked through territorial and ethnic questions involved in building this new multinational state, the Russian mythology of a homogenous "native soil" gave way to a new mythology of multiple native *soils* in the Soviet Union—the recognition of distinct primordial homelands and cultures of national minorities that had historically occupied the territory now called Soviet, peoples whose development, economy, and lifeways differed substantially from Russia's. Soviet understandings of the historical development of these peoples and the relationship between nationality and natural environment drew heavily on the 19th-century Russian discourse of soil discussed in previous chapters.

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[1] Emma Widdis, *Visions of a New Land: Soviet Film from the Revolution to the Second World War* (New Haven: Yale University Press, 2003).

[2] See Yuri Slezkine, *Arctic Mirrors: Russia and the Small Peoples of the North* (Ithaca: Cornell University Press, 1994); Allworth (1994); Terry Martin, *The Affirmative Action Empire: Nations and Nationalism in the Soviet Union, 1923-1939* (Ithaca: Cornell University Press, 2001).

[3] See Chapter One, for more on internal colonization.

[4] V. I. Lenin, *Imperialism as the Highest Stage of Capitalism* (New York: International Publishers, 1939). I discuss this work further below.

One function of the geographic imaginary was the assimiliation of these "underdeveloped" [*otstalye*] nationalities into the "proletarian" Soviet state. Soviet film accomplished this by visually animating the system of cultural, economic, and material exchanges that tied together town and country, center and periphery. This model of exchange was understood through the organic paradigm of metabolism and represented the Soviet Union as a corporate body composed of functionally differentiated organs. As the Soviet Union became a closed autarkic system under the policy of "socialism in one country," Soviet nations came to function *economically* and *culturally* as "organs" in this larger interdependent body politic. As discussed in Chapter One, primordialist conceptions of nationality relied on the cognitive metaphor of "native soil" to account for differentiation of national groups. As discussed in Chapter One, primordialist conceptions of nationality relied on the cognitive metaphor of "native soil" to account for differentiation of national groups. The revival of primordial nationalism in the early Soviet period coincided with an economic geography of monocultures, that also essentialized national soil as a homogenous site of production. This differentiation of Soviet peoples and new national soils were were attached to economic regions and attributed with unique productive characteristics and functions in the Soviet economy of exchange. This strategy of essentializing national identity by associating it with the distinct properties of "native soil" had deep roots in the 19th-century Romantic conception of nationality. National soils and national cultures took on specific "work" in the "all-union division of labor," emblematized by commodities that acquired cultural significance.

By the end of the 1930s, Soviet economic geography had specialized into a system of monocultures—regions which grew a single crop or produced a single commodity. From a production standpoint, this resulted from the collectivization of Soviet agriculture, the concentration of manufacturing, and the "rationalization" of economic geography. Cotton, for example, became the monoculture of Uzbekistan, crucial to the Soviet political economy and to the symbolic economy that shored up national identities. The campaign to convince Uzbeks to devote their fields exclusively to cotton (with no subsistence crops for themselves) was a hard sell and required an intense cultural campaign, as the films discussed here will show. As one character in a Central Asian novel remarks, "In new zones, it's just a new catchword: cotton, grain, pig iron."[5] From a cultural standpoint, the system of monocultures offered a way of thinking about how to contain national difference within an interdependent "friendship of nations."

The material substance represented by the map was also changing: fertilizers and land reclamation enabled new land to be cultivated; hydroelectric stations, dams, and canals were changing the morphology of the Soviet landscape. When the chemical engineer and author Mikhail Il'in wrote in his children's book on the five-year plan that, "We will remake the map of the USSR," he meant not only the symbolic map, but also the physical surface of Soviet land. "In a few years," he continued, "all the maps of the USSR will have to be redrawn. In one place, there will be a new river—the Volga-Don. In another place—a new lake."[6] The promethean project to transform Soviet land by means of *melioratsiia*, or land reclamation, and *stroiki*, construction projects, was an important part of making the tsar's lands into what writer Andrei Platonov called "Bolshevik soil."[7] Soviet cinema showed viewers this process in films on the Turksib railroad, the White-Sea Canal, the Dnieper Dam, and Magnitogorsk—highlighting the

[5] Jasienski (English), 444.
[6] Il'in, 141.
[7] Platonov, "Pervyi Ivan," 121. For further discussion of Soviet technological prometheanism, see Weiner (2000).

way that these construction works would serve to connect city and country, the sources of raw materials and manufactured goods.[8] The Soviet drive to reform, improve, and manipulate land and water resources—to recreate the morphology of land, the chemistry of soil, and the "physics" of Soviet space—created a new map of the USSR, one whose transparencies contained congruent economic, political, and cultural topographies.

In this chapter, I will discuss how Soviet films of the 1920s and 1930s visualized the corporate space of the Soviet Union, not only creating animated maps, but also depicting the physical transformation of the Soviet "sixth part of the world," drawing on the *topoi* of soil discussed in previous chapters. I open with a discussion of the *smychka*, Lenin's formulation for the "link between the urban proletariat and the rural peasantry," its origin in models of chemical economy, and its meanings in the Soviet 1920s.[9] From there, I connect Dziga Vertov's 1926 film *A Sixth Part of the World* to Viktor Turin's *Turksib* (1929), discussing how the two films expand on the concept of the *smychka* and its model of metabolic exchange in order to visually compass the multinational Soviet space. Finally, I pair Mikhail Kalatozov's *Salt for Svanetia* (1930) and Kamil' Iarmatov's *Friends Meet Again* (1939) in a discussion of the ways that national bodies and national soils come to participate in the metabolic exchange of the union-wide *smychka*.

The Union between City and Countryside

One specific trope of the new Soviet imaginary geography was the *smychka,* a major slogan in Soviet political discourse of the 1920s. The cultural task of assimilating Russia's own "Other"—the peasantry—had much in common with the task of assimilating national Others. Approximately 80% of the Russian population were peasants at the time of the October revolution, and the backward rural masses were perceived by the Bolsheviks as a living symbol of Russia's contravention of Marxist laws of development and as an endemic threat to the revolution. Lenin intended the *smychka* to shore up Russia's unstable revolution by creating a policy and discourse of cooperation between city and country until peasant political consciousness evolved and the workers' movement triumphed worldwide.[10]

The *smychka* was also an important part of Lenin's New Economic Policy (NEP), introduced in 1921. Forced grain requisitions under "War Communism" had disincentivized agricultural production and driven small peasants into subsistence farming. The economic link between city and country was brittle: peasants did not generate surpluses, while the cities were starving for grain and overproducing manufactured goods. NEP introduced a series of concessions to the beleaguered countryside, allowing peasants to sell surplus goods on the market after paying a tax in kind to the state.[11] Manufacturers in the cities, meanwhile, were

[8] See Matthew Payne, "Viktor Turin's *Turksib* (1929) and Soviet Orientalism," *Historical Journal of Film, Radio and Television* 21:1 (2001), 58. For film treatments of the Dnieper Dam, see Vertov's *The Eleventh Year* (*Odinnatsatyi*, 1928) and Mikhail Slutskii's *In the Name of Lenin* (*Imeni Lenina*, 1932). For treatment of Magnitogorsk in film, see Joris Ivens, *A Song About Heroes* (*Pesn' o geroiahk*, 1932).
[9] I have chosen not to translate *smychka* because of its nearly idiomatic usage.
[10] At the time of the October Revolution, 80% of Russia's population were peasants. Sheila Fitzpatrick, *The Russian Revolution* (Oxford: Oxford University Press, 2008), 15.
[11] For a concise overview of NEP, see Carr (1979), 30-49.

expected to cater to this newly-invigorated peasant market. This economic union was expected to foster social and political unity.

Lenin's vision of the *smychka* evolved not only from pragmatic considerations, but also from his reading of Marx's concept of "social metabolism," which proposed that equivalent *material* and *commodity* exchanges between city and country were the basis for the healthy social and political "body" of the state. As discussed in previous chapters, Marx's model had been directly inspired by the 19th-century chemist Justus Liebig's model of *soil metabolism* and the cycling of minerals between the country and city.[12] Lenin's *smychka* took the same literal interpretation of material-economic-social exchange, blurring increasingly complex natural and social ecologies. This logic would culminate in the metaphoric linkage of Soviet material exchange with the "friendship of nations" as the Soviet Union moved towards the autarkic policy of "socialism in one country." As I will discuss, the regional/national *smychka* by the 1930s produced a self-sufficient Soviet civilization comprised of mutually-dependent "monocultures."

Lenin's original formulation of the *smychka* was as a political and economic contract between urban workers and rural peasants. However, the *smychka* came to stand in for a broader union of political and economic actors. During the scissors crisis of 1923-4, Grigorii Sokolnikov, then People's Commissar of Finance, suggested that the cycle between industry and agriculture would need to be temporarily routed through the international economy in order to succeed. He explained that in the case of cotton,

> […] until Turkestan's cotton production is restored, we must export grain and use the currency to purchase cotton abroad. Thus we will ensure the production of the textile industry and these products will return to the peasant. To be sure this is a […] complex cycle. But, in my view, even though the cycle between industry and agriculture must pass through the world market it does not constitute a *smychka* between the peasant and Western European or American capital. […]

Sokolnikov found it important to stress that the purity of the socialist economy and the peasant-worker *smychka* was not compromised by entering the larger international cycle of exchange, but, in fact, preserved by it. After all, he continued, the idea that the Soviet Union might entirely reject participation in the world market was a "reactionary utopia."[13] The utopia that Sokolnikov referred to was the Marxist desire to do away with currency altogether and rely on a system of "moneyless settlements." Leon Trotskii would later explain his similar stance in favor of international *smychka*: "The question of the interrelation between the different tempos of development remains an open question for the future. It depends not only upon our capacity to really achieve the *smychka*… but also upon the fate of world capitalism, upon its stagnation, upsurge, or collapse, that is to say, upon the course of world economy and world revolution."[14] Ultimately, Sokolnikov and Trotskii would lose this debate: their position on the necessity of routing the *smychka* through the world market was rejected in favor of Stalin and Bukharin's policy of socialism in one country.

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[12] See Chapter Two.

[13] Cited in Richard B. Day, *Leon Trotsky and the Politics of Economic Isolation* (Cambridge: Cambridge University Press, 1973), 85.

[14] Leon Trotsky, Max Shachtman, and John G. Wright, *The Third International After Lenin* (New York: Pioneer publishers, 1936), 51.

The metaphor of the *smychka* was, in any case, growing increasingly complex and freighted, and Sokolnikov's attempt to reconcile his economic proposal with the ideology of the *smychka* showed how many factors—economic and other—were putting pressure on the concept. Lenin's *smychka* had been highly specific in the alignment of its meanings: in a chemical sense, the exchange of minerals and materials between city and country should be equal; this material foundation ensured, in an economic sense, that the exchange values between raw and manufactured goods would be equivalent; finally, social and political cooperation between the peasantry and the workers would stabilize.

Yet in 1923, an economic crisis demonstrated that various meanings of the *smychka* as policy and metaphor had fallen out of alignment with each other. The so-called "scissors crisis," resulting from NEP's de-regulation of the market, led to a widening gap between the price of agricultural goods and manufactured goods. At the height of the crisis, prices for manufactured goods were nearly three times as high as pre-war prices, while agricultural prices had not yet risen to pre-war levels. Trotskii coined the term for the crisis, illustrating the diverging price trends as the opening blades of a pair of scissors. Economically and politically, each premise of the *smychka* had failed: the cities had become extractive, throwing the economic and material metabolism of the union out of balance, and despite increasing agricultural productivity, peasants were priced out of the modern manufacturing economy. Although Trotskii and Sokolnikov's position on the *smychka* did not prevail in the end, the *smychka* remained an important ideology despite the increasing complexity of the Soviet economy, the failure of world revolution and the resulting dilemma of economic isolation, and the continuing political resistance of the peasantry. As a slogan, the *smychka* receded somewhat from discourse with the end of NEP in 1928, but its logic of exchange remained a powerful undercurrent in Soviet economic, political, and social thought, persistently visible in the Soviet emblem of the hammer and sickle.

The Filmic Colonization of Russia

"The filmic colonization of Russia has misfired."[15] This was the surprising conclusion Walter Benjamin drew after viewing Soviet director Dziga Vertov's 1926 feature film, *A Sixth Part of the World*. Benjamin remarked on a new tendency in Soviet cinema to set films in

> […] the far eastern sections of Russia. This is as much to say, "For us, there is no exoticism." "Exoticism" is thought of as a component of the counterrevolutionary ideology of a colonial nation. Russia has no use for the Romantic concept of the "Far East." Russia is close to the East and economically tied to it. Its second message is: we are not dependent on foreign countries and natures—Russia is, after all, a sixth of the world! Everything in the world is here on our own soil.[16]

Benjamin identified in Vertov's film the confluence of several important cultural and political questions: the Soviets were fascinated with their own "East," yet rejected its exotic and Romantic image; the East was "close to" and "tied to" Russia, yet distinct from it (the reason it is

[15] Walter Benjamin, "On the Present Situation in Russian Film," *Walter Benjamin: Selected Writings. 1931-1934*, ed. Michael William Jennings (Cambridge: Harvard University Press, 2004-2006), 2:13.
[16] Ibid.

a privileged site of early Soviet film); finally, he identifies in the film an emerging politics of self-sufficiency ("our soil contains everything"). Contemporary scholars have found something particularly at stake in understanding Vertov's presentation of Soviet *natsmeny* [national minorities]—notably Asian ethnic minorities—at the peripheries of Soviet development and Soviet space in the late 1920s and early 1930s.[17] The diversity of opinions on the success of Vertov's "filmic colonization of Russia" is staggering today. Film scholar Oksana Sarkisova concludes that despite the film's gestures towards inclusion, it nonetheless "occasionally reproduc[es] the dominant and hierarchizing rhetorical devices of colonialism."[18] Michael Kunichika comes to the opposite conclusion, arguing that Vertov "flouts" cultural hierarchies, using the avant-garde technique of juxtaposition to produce horizontal terms of equivalence. He suggests that Vertov's film inhabits old forms, but inscribes new content within them.[19] Cultural historian Irina Sandomirskaja judges Vertov's work to be "political philosophy," which ultimately offers a plurality of visions of socialism.[20]

Here, I hope to expand the discussion of the "national problem" posed by *A Sixth Part* by reading it in the tradition of Russian and Soviet discourses of national soil, economic geography, and the *smychka*. The working argument that Vertov's film holds multiple socialisms in suspension allows us a reading that is more nearly adequate to the complexity of the text, which expresses the vision of multiple authors: numbers of cameramen who inscribed the original images, and the director (Vertov) and editor (Elizaveta Svilova, Vertov's wife) who selected, compiled and and structured the units of meaning. It is also important to consider the historical moment in which the film emerged: 1926 was a moment in which the multiple potentialities of the Revolution were still engaged in free play before the firm establishment of a Party line for the arts. As Vertov scholar Annette Michelson has written, "The history of Cinema is like that of Revolution in our time, a chronicle of hopes and expectations, aroused and suspended, tested and deceived."[21]

Given the political explosiveness of the film, one of the strangest facts about *A Sixth Part of the World* is that it was commissioned as an advertising film for the State Trading Organization (Gostorg). Vertov had publicly expressed his attitude to the cruel necessity of advertising films in 1923: "For five years, there was no motion picture production in the Soviet Union. There's none now. There is no money for it. Film advertising is the gateway to work, to production, to prosperity. We must make this 'compromise': we have to."[22] Vertov's attitude to the compromise with film advertising aligned with his general mistrust of NEP and the temporary "strategic retreat" from socialism to a market economy. Vertov demonstrated both his distaste for NEP and his disregard for commercial patronage in the 1924 animated film *Soviet*

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[17] The term "natsmen" is an abbreviation of "natsional'nye men'shinstva" [*national minorities*]. While the term was originally intended to be "politically correct," it came to be used pejoratively. Vertov's *Three Songs of Lenin* (1934) incorporates footage he shot in Central Asia, and Part I focuses on the *hujum*, or unveiling of women, in Uzbekistan. See Oksana Sarkisova, "Across One Sixth of the World: Dziga Vertov, Travel Cinema, and Soviet Patriotism," *October* 121 (2007), 19–40.

[18] Sarkisova, 34, 40.

[19] Michael Kunichika, "A Penchant for the Primitive: Archaeology, Ethnography and the Aesthetics of Russian Modernism," (Ph.D. diss., UC-Berkeley, 2007), 209.

[20] Irina Sandomirskaja, "One Sixth of the World: Avant-garde Film, the Revolution of Vision, and the Colonization of the USSR Periphery during the 1920s (Towards a Postcolonial Deconstruction of the Soviet Hegemony)," in *From Orientalism to Postcoloniality*, ed. K. Olofsson (Huddinge: Södertörns högskola, 2008), 30.

[21] Annette Michelson, "Film and the Radical Aspiration," *Film Culture* 42 (1966), 34.

[22] Dziga Vertov, "An Example of Bad Advertising" in *Kino-Eye: The Writings of Dziga Vertov,* ed. Annette Michelson, trans. Kevin O'Brian (Berkeley: University of California Press, 1984), 31.

Toys (*Sovetskie igrushki*). The film was originally intended as an advertisement for toys, but the final product was an attack on NEP, the bourgeois rituals of Christmas, and, arguably—toys. The film opens with a shot of seven dolls standing before a Christmas tree. This cast of *commedia dell-arte* characters includes: a NEP-man, an Orthodox and Catholic priest, a prostitute, a worker, a peasant, and a Red Army soldier. The NEP man sits down to an enormous dinner which he consumes, slaking his thirst with an entire barrel of drink. The prostitute entertains the now-bloated and reclining NEP man, who then consumes (and takes erotic possession of) her when she dives directly into his belly. The film also refers to the "scissors crisis" of 1923: Vertov animates Trotskii's analogy, illustrating a worker who cuts the bloated belly of the NEP-man with a pair of scissors. Unfortunately, the voracious NEP-man begins to grow again, and it is only when the worker and peasant merge chimerically into a *single body* that they defeat the NEP-man. The *smychka* of *Soviet Toys* is literalized as the "union" of peasant and worker in a single body.

A Sixth Part of the World, like *Soviet Toys,* expresses its independence from the ad form. The film's patron, Gostorg, only appears half-way through the film, and not in entirely flattering fashion. Following the release of *A Sixth Part,* Vertov was fired from Sovkino. Although budget overruns were the ostensible cause for his dismissal, one cannot help but imagine that the content of the film was equally responsible.

A Sixth Part of the World consists of six reels and is divided thematically into six sections. The film opens with aerial shots taken from a plane surveying "the land of capital." A disembodied voice speaks to us: "I see." This lyric "I" is the camera itself—what Vertov calls the Cine-Eye[23]—which penetrates through "the golden chain of capital" to "the colonies," unmasking exploitation and imperialism. The juxtaposition between capital and colony is borne out by the grammar of the film, as images of slavery answer shots of a decadent civilization "on the verge of historical extinction": the bourgeois foxtrot echoes an American black vaudeville performance; slaves on a tea plantation are collaged with white Westerners engaged in the bourgeois rituals of tea-drinking. Vertov seems to anticipate Arendt's theory that violence is imported to the center from the colony as the convulsions of black dancers pre-figure the frenetic descent of capital.

This prelude in the land of capital may seem far from the topic of Vertov's advertising film, but the Cine-Eye alights on a subject of significance to Gostorg when the fox-trotting and tea-drinking women array themselves in luxurious fur coats. The Cine-Eye lingers on the scene, twice repeated, of men easing fur coats onto womens' shoulders. I will return to the significance of these shots of fur below.

Following this six-minute prelude, Vertov abruptly shifts from the land of capital to the land of the Soviets, using a new shifter: *you*. The identity of this addressee accrues over the course of the film, culminating in a multinational collective of Tatars, Buriats, Uzbeks, Kalmyks, Komi and others (including the viewers, who see "themselves" watching the film in a crowded theater). In what Sandomirskaia calls a "vocative geography," the Cine-Eye addresses individuals throughout the vast space of the Soviet Union, peoples at varying levels of development, shown performing a staggering array of productive and leisure activities.[24] This human collective and the natural productive forces "in its hands" form, together, the "sixth part of the world."

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[23] For more on Vertov's conception of the augmentary Cine-Eye, see "Cine-Eye: A Revolution" in Vertov (1984), 60-78.
[24] Sandomirskaia, 26.

A series of contrastive topographic pairings further enhance the sense of capaciousness: "From the Kremlin / to the Chinese border" and "From the Matochkin straight / to Bukhara." These linkages forge together Soviet center and periphery, as well as the territorial terminuses of each of the cardinal directions. As Michael Kunichika has observed, this "*from…to…* spatial formulation" is one of several features that place Vertov's self-styled "cine-poem" in the odic tradition.[25] Aside from the ode, this formulation suggests another classical reference point in its cataloguing of lands and peoples: tsarist proclamations.

Part Three further explores the wealth of this dominion, opening with a catalogue of animals: "Your / buffalo /goats /camels/ reindeer /squirrels/ Arctic fox / marten / brown bear/ sable/ karakul sheep." The focus tightens upon animals harvested for fur, showing a Siberian native shooting a marten with a bow and arrow. The Cine-Eye expands its vision again to the diverse wealth of the country: oil, cotton, wool, cooking oil, fish, flax, tobacco, and grain. The production of grain receives special attention, and Vertov reprises the demystification of bread that featured in *Cine-Eye* (*Kino-glaz*), showing peasants plowing, sowing, weeding, and harvesting.[26] Sacks of grain—"*your wealth*"—is then loaded onto a ship for export. Waterways, railways, country roads, mountain passes, camel caravans—all are enlisted in the transportation network that moves these raw goods. The question is, "To where?"

The Cine-Eye shows the destination of these goods: the land of capital. The broker who moves this natural wealth to the land of capital is also finally revealed: Gostorg, whose name appears (nearly 40 minutes into the film) emblazoned on a wooden fruit crate. The crate is imprinted with "Gostorg du Crimee," marking France as the destination for the beautiful Crimean fruit. What follows is one of the most deadpan sequences of the film. With Gostorg's brand prominently displayed, a crate gently "packs itself" with fruits, closes its lid, rolls itself over, and jumps onto a stack of crates. Although this scene delighted Soviet movie-goers, critics singled it out for censure—and rightly, I would argue.[27] The meanings of this animated episode are unstable for several reasons. Although the fruit sequence opens with the title, "There, where they pack fruit into boxes," the pronoun floats—no workers are seen. Significantly, this episode follows upon a recent sequence demystifying the origin of bread by showing workers at every stage of the production and transportation, drawing special attention to the stages of field work in an unusual triple exposure shot. The fruit episode, however, artfully effaces labor and restores the commodity to a fetish with "magical" independence. Vertov's only other use of animation in *A Sixth Part of the World* occurs in the land of capital and depicts a doll and several Chinese laquer vases arranging themselves magically in the bourgeois drawing room—a use of animation which unambiguously evokes Marx's commodity fetishism. Vertov's poetics is structured by fugue-like echos that play across his films and must be held in suspension by the viewer. Although his argument unfolds over a protracted period, the formal resemblance between the magical animation of objects in the land of capital and of the suppressed labor within Gostorg's commodities is marked. As we have seen from *Soviet Toys*, Vertov had proven himself capable of ideological independence within the guidelines of a defensibly orthodox message.

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[25] Kunichika, 202.

[26] In *Cine-Eye,* Vertov actually rolled the film of a bull's slaughter backwards, restoring the animal to life, then returning it to the field.

[27] Vertov's contemporary, Mikhail Bekker titled his extended critique "We See Things, But We Do Not See People," pointing to the troubling absence of labor in the "simple cartoon trick." Reprinted in Yuri Tsivian, *Lines of Resistance: Dziga Vertov and the Twenties* (Gemona, Udine: Le Giornate del cinema muto, 2004), 238.

Following the fruit packing sequence, the Cine-Eye observes other regional centers of Gostorg—UralGostorg (in the Ural Mountains), Amtorg (handling trade with the US), and finally, a remote Gostorg center in the tundra. Siberian natives use reindeer sleds to carry furs over the roadless expanses to this remote collection point "in order to hand over their prey […] for export to the lands of capital [*chtoby sdat' svoiu dobychu dlia vyvoza v strany kapitala*]." The Cine-Eye has finally revealed the origin of the luxurious furs that it displayed at the beginning of the film in the land of capital. Although Soviet labor is fully revealed, its depiction is ambivalent. The Cine-Eye catches the fur trappers recreating an age-old performance of tribute. Fur tribute from Siberian natives was the primary source of wealth in ancient Muscovy and the motor of Russian expansion into Siberia.[28] As Aleksandr Etkind notes, Soviet scholars justified the pre-modern Russian fur economy as "'non-equivalent exchange that was characteristic for the 'initial accumulation of capital.'"[29] Vertov's film titles make roughly the same argument about Gostorg, fur extraction, and the NEP economy, claiming this extraction to be a necessary means of accumulating wealth: "Furs obtained by Tungus, Ostiaks, Samoeds are exchanged for machines for the Soviet nation, machines that produce machines." The *form* of accumulation appears to be historically continuous, but the *content* and *purpose* are Soviet.

The emphatic distinction between imperialist *forms* of resource extraction and Socialist *meanings* evokes an important text for Soviet Marxism, Lenin's 1916 *Imperialism as the Highest Form of Capitalism*. Like Vertov's *A Sixth Part* it is an ambivalent text in its admiration of the imperialist forms whose content Lenin aspires to replace. Lenin describes the monopolies of European capitalism as gradually replacing competition with rational resource management; "production," he writes, "becomes social, but appropriation remains private."[30] Thus, imperialism provides the structures of finance, vertically integrated industry, and resource extraction that Lenin hopes to mobilize not for private use, for the benefit of the toiling masses. Many commentators on the film, following Benjamin, have conflated the "exoticism" of ethnographic depictions with the economic exploitation of the Samoeds by the world market. While this is a legitimate reading, it is only a part of Vertov's vision, which is capable of indicting NEP's routing of the *smychka* through the global economy while still celebrating the Samoeds' integration, albeit through imperialistic means, into history and the new socialist economy. In this sense, as well, Vertov's film is very much of its time, providing a visualization of the turning point between the international cycle of NEP and the closed system of "socialism in one country."

The film proceeds to build a complex *smychka* between the Soviet national minorities and the peasants: "Even the nationalties living in a patriarchy / by the extension of state trade / no matter how far away they live / are building socialism/ together with the medium and small farmers who are bringing their grain to the cooperatives/ together with the farmers who are getting tractors from the cooperative / for the collective cultivation of the soil […]."

As always, the capaciousness of Vertov's vision holds multiple meanings in suspension. Michael Kunichika observes that the national minorities in *A Sixth Part of the World* are "outside of industrial modernity" as *ethnographic* subjects, embedded in specific environments and engaged in traditional economic, social, and religious activities. However, the film's logic of *smychka* justifies the temporary retreat into the forms of economic exploitation by promising to

[28] See Slezkine (1994).
[29] Etkind (2011), 75.
[30] Lenin (1939), 25.

bring the Soviet national minorities—especially "Eastern" minorities—into the teleology of Soviet Marxist history.

The Cine-Eye also shows us what the Soviet state gives the national minorities for their furs and grain: ideology. Some Central Asian women throw off their chadors, while others learn to write; Buriats and Mongols read "Buriat-Mongolian Pravda" and Mongol children join the Young Pioneers, who are "building a completely socialist society." After focusing on the workers of the West and the oppressed peoples of the East, the film concludes with the prophecy that all are "gradually leaving the world of capital" and will pour "into the streams of the united socialist economy."

The emphasis on the need to acquire "machines that produce machines" further echoes the rhetoric of self-sufficiency that was emerging in the mid-1920s. Sandomirskaia writes that *A Sixth Part of the World* "is the story of the cultural revolution in a nutshell, when the USSR was trying to invent itself as a symbolic entity par excellence and pull itself together as a vast symbolic capital—either to be reclaimed by the proletarians or to be invested in the 'construction of socialism in one separate country.'"[31] Indeed, the two episodes of labor described here—the Gostorg fruit episode and the grain production sequence—seem to express the two political worldviews that Sandomirskaia isolates—one turned outward towards the world market, one inwardly focused.

Vertov's poetics draws on cultural and literary *topoi* that pull aspirations away from world revolution and into a glorious vision of natural abundance and self-sufficiency—the sixth part of the world as an autarkic world-unto-itself. In this reading, the metaphor of the *smychka* and the metabolic model informing it expand into the multi-national space of Soviet power and the friendship of nations. Vertov evokes the Biblical and odic poetic traditions as he catalogues the abundant plant, mineral, animal, and *human* resources within the Soviet world. The sixth part of the world is a new Eden, home to the new Soviet Adam, the worker inspired by the good tidings of Lenin (whose voice is heard by Samoeds on a gramophone) and Stalin, whose speeches are ventriloquized by the Cine-Eye in the titles of the final part of the film. This *topos* of a self-contained Edenic space was an important cultural interpretation of the political-economic policy of "socialism in one country," and relates to the resurgence of the odic and pastoral modes in Soviet literature of the 1930s.[32]

Vertov's film contains the instability of multiple historical futures and a worldview on the verge of stochastic decay into new possibilities and configurations. By bringing Samoeds into the world of capital (just as imperialism does), the Soviet Union aligns with Lenin's recognition that the forms of imperialism were (in his appreciative quoting of a "bourgeois" economist) "ripe for expropriation."[33]

The ambivalent depiction of the "international" *smychka* in *A Sixth Part of the World* marks it as one of the final documents of Marxist doctrinal polyphony before the policy of socialism in one country appropriated the forms of imperialism in its own distinct way. The next film I will treat, produced just three years later, shows this new policy at work.

[31] Sandomirskaia, 18.
[32] For more on the relation of the pastoral mode to the Russian discourse of soil, see Chapter One.
[33] Lenin (1939), 19.

Turksib and the Introduction of Monocultures

> When we talk about the *smychka* it is essential to think of it as a material thing. The *smychka* is the endless ribbon of cloth which stretches between the town and the countryside…A *smychka* without cloth has no content. It is merely an empty word.
>
> —Leon Trotskii, 1926[34]

Viktor Turin's film *Turksib* (1929) introduced audiences in the USSR and abroad to the construction of the Turksib railroad that would connect the cottonfields of Central Asia with the wheatfields of Siberia. The film was remarkably successful throughout the USSR, a surprising victory for a *kul'turfil'm* (science or educational film, a loanword from German, *Kulturfilm*). One worker-correspondent is reported to have enthused that, "This film acquainted us, without reading a geography of that place, with rational development; it gave us a panorama."[35] Another worker praised the animation of economic meaning in the film: "A picture like *Turksib* is our Five-Year Plan in action. It speaks from the stage about the colossal scope of the construction among the nomadic tribes, of labor conquering the primitive conditions of the Turkestan deserts."[36] *Turksib* not only provided an education in geography, "rational development," nomadism, and the Five-Year Plan, but it managed to do so in way that Soviet audiences found both entertaining and edifying.

The film was the first production of Vostok-kino (*East-cinema*), a studio created in 1928 with the mandate to provide films to all Soviet "Eastern" regions that were not already served by a regional studio. For its first feature, the studio had hired Viktor Turin, a veteran director of fiction films who had spent ten years in the United States where he received a degree from MIT and worked in Hollywood studios before returning to the USSR in 1923. The scenario for the film was contributed by the formalist writer and critic Viktor Shklovskii, who already had a dozen screenplays under his belt, including the popular success *Bed and Sofa* [*Tret'ia meshchanskaia*]. Although Turin deviated from Shklovskii's original treatment, insisting on unplanned shots on the desert construction site that cost Vostok-kino thousands of rubles in budget overruns, his syntax bears the imprint of Shklovskii's formalist logic.[37] Shklovskii published a book of *Turksib* the following year, 1930, with shots from the film, and its variance from Turin's film text offers some insight into the independent visions of the writer and the director.[38]

Shklovskii's text opens at the reader's breakfast table—tea, bread and butter, and the recent memory of linen sheets. The reader may wonder why this text about "ordinary objects" occupies a page with a photograph of desert sand-dunes, but the juxtaposition comes into logical focus as the text begins to interrogate the origin of household consumer goods, settling its

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[34] Quoted in Chris Ward, *Russia's Cotton Workers and the New Economic Policy*: *Shop-floor Culture and State Policy, 1921-1929* (Cambridge: Cambridge University Press, 1990), 7.
[35] Quoted in Payne (2001), 61.
[36] Ibid.
[37] Payne, 47. Although Turin was criticized for budget overruns, the scandal never reached the proportions of Vertov's scandal over *Sixth Part of the World*.
[38] Viktor Shklovskii, *Turksib* (Moscow-Leningrad: Gos. Izd., 1930). I have not been able to locate Shklovskii's original scenario and cannot verify whether Shklovskii made changes before publication. Hereafter I will refer to page numbers with in-text citations.

attention finally on cotton. The reader is then lead out from the comfort of home to the source of commodities at the Soviet periphery. What follows is a schematic deconstruction of the Soviet cotton shortage and its solution: Turksib.

Shklovskii asserts that uneven distribution of natural resources is the ultimate break on Soviet development, evoking the familiar Soviet theme of the "war with nature." Central Asia has a favorable climate for cotton, Shklovskii's text informs us, but it lacks water; meanwhile, the Pamir Mountains have abundant water, but their soil and climate cannot support cotton. The solution is a radical *smychka*: transportation networks, irrigation channels, and structures of economic exchange can circumvent the natural limitations of local environments by creating a larger ecosystem in which commodities flow freely according to the needs of the *entire Union*. "The road links Siberia, Kazakhstan, Turkestan in the total planned economy. [...] Turksib is just one part of the total plan, it is the only way to tie the separate parts of the economy of the country into one system, one plan" (32).

The war with nature involves not only circumvention, but also direct attack. The "attack against stubborn earth" is later restated as a victory in the "war with the age-old primitive." Shklovskii describes excavators chewing through the earth: "They are iron jaws on steel necks. They have toothed mouths […] The excavator opens its steel mouth, bites into the sand, takes a cubic meter of it, and lifts its neck. Sand pours in thin streams from its steel teeth. The excavator turns its back and lowers its neck and pours the soil into a mound" (23). The next assault is against rock: "They tear down the mountains," (24), blowing up rock which the excavators eat like "lump sugar" (25). Heavy carts full of earth are pushed along planks. "Ten million cubic meters of earthworks are needed to complete the construction" (25). "The railroad will take away the desert" (26). In the film, Turin depicts all of this as an "attack against the stubborn earth! [*V ataku na upriamuiu zemliu*]." The workers use jackhammers, dynamite, earth-moving machines in their multi-pronged assault on the resistant soil. The title states that "Nature is stubborn, but even more stubborn is…man." After explosions of earth, the pace of construction accelerates as though stubborn soil was the brake on development.

In our journey outward from the center, the first index of change is the character of local soils: "Beyond the chernozem of the steppes lie other soils—of a chestnut color" (6). The sandy soil of this semi-desert region cannot retain water, leading to periodic droughts and harvest failures. Beyond the semi-desert, the book takes us to the true desert, the home of nomads who eternally circle, following their herds to new pasturage: "The herd moves. It eats the grass and loosens the soil with its hooves. The wind blows, raising and stirring up the dust, carrying it across the field. The desert is advancing."[39] Turin interprets this visually with shots of "takyr" soil—a clay soil marked by a distinct cracking pattern that is found throughout Central Asia. The titles explain that, "The earth cracks. Nothing grows on the earth except thornbushes that only camels can eat." Shklovsky implies that the local mode of life (nomadism) is geographically determined, specifically by the characteristics of the local soil (sandy and non-arable). Finally, beyond the "terrible sands" of the desert, Shklovskii takes us to "places where people again plow the earth, plow it in their own way" (8). Their inefficient mode of subsistence farming isolates these tillers of the soil from the larger economy, as Shklovskii sarcastically informs us: "He [a Kazakh] buys very little and sells very little. They call this natural economy." Although the land

[39] Shklovskii, 7. Shklovskii digresses further on the advance of the desert, apparently referring to his encounter with Andrei Platonov in 1925: "I knew one village in Lower Povolzh'e. They held a *skhod* [collective work/meeting]. They said it was necessary to plant willows to stop the sand." Shklovskii's poetic interpretation of nomadic lifeways echoes Platonov's depiction of the Dzhan nation in *Dzhan* (1936). For more on this text, see Chapter Three.

is inefficient for food crops, it is ideal for cotton. Shklovskii builds a logical proof: "In Central Asia, they eat bread like we do. But the sky there is bluer. No rain falls from the cloudless blue sky. Grain must be watered. Grain takes water away from the cotton. The cotton lacks water and the whole country lacks cotton."[40] Shklovskii's simple chain of logical statements concludes with the fact that the center needs and must have cotton at all costs—even depriving Central Asia of its own grain production and means of subsistence. Exchange is the key to national development and to breaking out of the isolation that has left the nomads out of history. But by entering into this economic and social contract with the center, Central Asia is contractually bound to a monocultural system of production.[41]

Shklovskii then shows us Central Asia's partner in the union-wide *smychka*—Siberia, where water and lumber are plentiful. "It would be good to send grain from Siberia to Central Asia, to Uzbekistan. Let them plant only cotton." Exchange liberates Central Asia for cotton monoculture. Early in the book, Shklovskii remarks that, "In order to live, we need cotton, flax, and wool."[42] The argument that cotton is as essential to life as food is figured by the transmutation of cotton into bread, through exchange. "Cotton and grain are competitors." [] But, through exchange Uzbek cotton can be *transmuted* into bread. This advocacy for interdependent monocultures expresses a definite discursive and conceptual relation to the new Soviet understanding of nationality that, itself, was developing in relation to the policy of "socialism in one country." Shklovskii closes his book with the assurance that, "Grain and cotton end their quarrel in the fields of Turkestan." Like Siberia and Turkestan, grain and cotton settle into a mutually-dependent friendship, and the result is that the desert that was once "advancing" is now "disappearing" (29). Although Shklovskii claims that under socialism cotton-picking can be replaced by machine labor, in fact, picking was done by hand into the late Soviet period.[43]

The film draws to a close as the mills begin humming back into operation. The final image of *Turksib* visualizes Trotskii's metaphor of the *smychka* as a bolt of cloth connecting town and country. In the film, a roll of cotton dissolves into the tracks of Turksib, unfurling between the Central Asian field and the Russian mill.





[40] Shklovskii, 11.
[41] The difficult transition to a cotton monoculture was a major concern in Russian fiction set in Central Asia. See, for example, Jasienskii (1936), esp. 638-667.
[42] Shklovskii, 4.
[43] See Allworth (1994), 292.

Raw goods and commodities are imagined to connect national soils, with their distinct properties, in this system of exchange. Moreover, specific and local conditions—like the cloudless "blue sky" of Central Asia—are judged productive so long they can be subsumed in a system of exchange. Although *Turksib* apparently offers the promise of decentering trade and communication by connecting peripheries, the conclusion of Shklovskii's book is the "general plan"—a plan which emanates from the center and is carried out by Russian technicians with local labor.

The Central Asian cotton fields became emblematic of the union-wide *smychka* in film, their snowy blossoms as photogenic, and symbolic, as the Uzbek *tiubeteika*.[44] Vertov also depicts Uzbekistan's cotton industry in the balance sheet with Moscow in his most popular film among Soviet audiences, *Three Songs of Lenin* (1934). In *Three Songs,* the body of the deceased leader is represented as a metaphysical site of national communion, and his spirit migrates to the *body politic* of the Soviet state which is shown to extend from the "stone city" of Moscow to the dusty mud-brick village of Uzbekistan. Vertov uses cross-montage within the funeral scene to suggest Lenin's role in the mystical connection of the urban masses streaming past his casket and the young, mourning Uzbek woman thousands of miles away. At a higher level of organization, Lenin's funeral itself constitutes the central episode of the three-part film, suggesting that the leader's spirit continues to motivate the *smychka* between Soviet peoples, and between center and periphery.[45]

Salt for Svanetia **(1930)**

Vertov reifies the metabolic metaphor of national unity by projecting it directly onto Lenin's body, visualizing Lenin's body a metabolic *map* of Soviet civilization. Georgian director Mikhail Kalatozov in his 1930 film *Salt for Svanetia* also visualizes the *smychka* as an extended metaphor of biological metabolism and exchange.

Salt for Svanetia is frequently described as an ethnographic film, although this judgment often passes without elaboration or analysis.[46] The film, which is based on a travel sketch by Sergei Tret'iakov, was shot on location in the Caucasus mountains of Georgia and does depict such activities as shearing, spinning, knitting, and feltmaking. However, Kalatozov's interest in the Ushkul, an historically-isolated tribe in the province of Svanetia, is less ethnographic than mythopoetic. Kalatozov's extensive staging renders the film highly suspect as ethnographic document; apparently Svans protested the film at the time of its release, contending that many of the rituals depicted distorted their lifeways.[47] But, to read Kalatozov's film primarily as an ethnographic work ignores both its poetics and the biological perversity of the director's vision, which exceeds the bounds of what could reasonably be considered "ethnographic" interest: a mother whose infant has died fertilizes the soil with her breast milk; goats lick sweat from

[44] The *tiubeteika* is a squat, cylindrical hat worn throughout Central Asia. It acquired an unusual status in Soviet film and literature of Central Asia as a ubiquitous, ideologically-neutral marker of local color.
[45] For a different take on Lenin's body on film, see Annette Michelson, "The Kinetic Icon in the Work of Mourning: Prolegomena to the Analysis of a Textual System," *October* 52 (1990), 16-39.
[46] Cf. Michelson (1990), 33-34; Farbod Honarpisheh, "The Oriental 'Other' in Soviet Cinema, 1929–34," *Critique: Critical Middle Eastern Studies* 14:2 (2005), 192.
[47] Jay Leyda, *Kino: A History of the Russian and Soviet Film* (Princeton: Princeton University Press, 1983), 293-4.

human skin; cows drink human urine; a dog laps blood and fluid off a newborn baby; dung is a "treasure" to be hoarded. Kalatozov aligns the natural metabolism of the isolated Georgian village with its economic metabolism to poetically embed and extend the main theme of the film—the necessity of the *smychka*.

Svanetia's unbalanced biological and economic metabolism is all about salt. Mountain water, indeed, contains little salt at high elevations, and Kalatozov—trained as an economist—centers a poetic argument about economic isolationism around this fact.[48] The village is so remote that a group of men die trying to bring salt back, the title sarcastically commenting on their death: "Salt of the Earth [*sol' zemli*]." Aside from their physical isolation, the Ushkul have been living in economic isolation by choice for centuries, having fought off feudal lords in a mythological past. They lack roads, communication, and contact with external systems. Their biological need for salt cannot be met because of their economic and cultural isolation.

As mentioned above, the disruption of biological metabolism is visualized by animals consuming human sweat, urine, and blood. The titles inform us that "There is salt in blood," "Urine is salty," "Sweat is salty—there is no salt." The Ushkul "are languishing without salt." The imbalance of biological exchange is further metaphorized in pregnancy, childbirth, and death. A bereaved mother, crouching over the grave of her infant, fertilizes the earth with breast milk. The infant's death, it is implied, resulted from the lack of intercourse between the village and the outside society: "Pregnancy is a curse is Ushkul—and all because there are no roads." The absence of roads and the failed "union" between village and country results in the biological sterility of Svanetia and the perverse misdirection of fertility.





[48] Leyda, 292.





The final scenes of the film, representing the consummation of the union of center and periphery—the *smychka*—are appropriately erotic. Bare-chested men respond to the plea of the women of Svanetia: "We don't want to feed the earth our milk!" Their response is a violent assault on earth: explosions blow up the patriarchal soil of Svanetia, and Kalatozov's rapid montage conveys the hatred and hostility the Communists direct at this primordial substance—the site of *byt* [the banal rituals and objects of quotidian life], patriarchy, primitive rituals, and death. As Kalatozov implies, the "salt of the earth" is no longer a primordial national substance, but now an industrial product supplied by the industrial center in a vast multinational system of economic and material metabolism.

Friends Meet Again **(1939)**

Just as *Salt for Svanetia* focuses on visualizing the place of a particular local economy and ecology in the Soviet system, so too does the final film I will address here, as a postscript. *Friends Meet Again* (*Druz'ia vstrechaiutsia vnov'*, 1939) falls at the extreme end of the early Soviet period, marked indelibly by Hitler's invasion of Soviet territory (to which the film alludes). One scholar of Tajik film writes that *Friends Meet Again* is "dedicated to the defense of the frontiers of the Socialist fatherland."[49] The nature of those frontiers and the "fatherland" are of interest here in the context of the film's treatment of the native soil of the fatherland and the economic and social relations between Soviet nationalities.

The film, produced at the Stalinabad (Dushanbe) Film Studios, was directed by the Tajik Kamil' Iarmatov from a screenplay by Russian writers A. V. Speshnev and A. A. Filimonov. Generically, the film follows many of the conventions of an "Ostern"—a calque from the English "Western," used to describe Romantic, adventure films of the Soviet "East," generally plotted around conflicts with Basmachi rebels, survivals of the old "Asiatic" order.

[49] Ato Akhrorov, "Le cinema tadjik, cinema du Toit du monde," in *Le Cinema d'Asie centrale sovietique,* ed. Jean Radvanyi (Paris: Centre Georges Pompidou, 1991), 85.

The film opens with a skirmish between a team of Soviet military topographers and a Basmachi gang in the desert near the town of Shakhrichan, presumably during the Russian Civil War. Although the Soviet team succeeds in driving off the gang, there are casualities. The team buries four comrades—two Russians, two Central Asians—in the sand with a gravestone taken from a local ruin.

As they prepare for the funeral, two members of the team talk near the recently-dug grave. One is planting trees in the sand, while the other looks on derisively:

> "Do you think it will take?"
> "Absolutely. The soil [*pochva*] here is wonderful, all you need is to give the earth water."
> "Where are you going to get water from?"
> "Up there in the mountains, glaciers are melting in vain. If that water were brought here, everything would bloom. Bloom! Wanna bet?"
> "We'll shake on it! It's decided!"
> "You'll lose! The sand here is only a half-meter deep, but under that is the most fertile of soil."

The optimistic Russian topographer plants saplings in the hope that Soviet power will effectively redistribute resources, suggesting that they irrigate the desert valley with water from the Pamir Mountains—a suggestion also made in *Turksib*.

The team leader delivers a funeral oration concerned with burial soil:

> Comrades, here, to the sands of the frontier, our team of military topographers came to put on the map a yet undeveloped part of the Soviet land. The team met with bandits, and to us fell the honor of defending our land. Whatever kind of land our land is, comrades—mountain rocks, the sand of the desert, ancient northern ice, or the generous soil of Ukraine, we will not give up our land—our Soviet land—to anyone."

The commander emphasizes that Soviet land encompasses diverse Soviet ecologies and land forms—sand, ice, fertile black soil.

The plot resumes several years later, as the topographers return from across the Soviet Union to the desert on the grand occasion of a harvest festival. The optimistic topographer sees his prophecy realized and wins his bet: a new canal and dam have irrigated over a hundred thousand hectares of desert, and the trees planted on the burial mound have bloomed and borne fruit. Crucial to the myth of this garden is the sacrifice of Soviet bodies: the Tajik desert blooms on the corpses of the multinational brigade, echoing Liebig's proposal to use bodies as fertilizer and the elaboration of that idea in Andrei Platonov's Central Asian novel *Dzhan*.[50] The viewer is shocked to recognize the burial site—now commemorated more permanently in stone—surrounded by a magnificent garden of apple trees.

In the garden, the topographers meet a Central Asian whom they rescued from the Basmachi years ago when she was a child. The girl is now grown up into a lovely young woman (played by a Russian actress). The friendship of nations is depicted asymmetrically: the Russians, "first among equals," liberate the "young" Central Asians from Basmachi bandits,

[50] See Chapters Two and Three.

engineer the canals that made the desert blossom, and sacrifice bodies in order to secure Tajik land for the Soviet fatherland.

Although the schematic plot of *Friends Meet Again* does not answer all of our questions about the multinational project of creating a Soviet Eden, it mobilizes prevailing cultural mythologies of the Soviet "topographic" mission. The marvellous apples of the desert signal a return to the pastoral—a world of natural abundance and internal harmony.

Conclusion

As the 1930s drew to a close, the Soviet project of creating a "new map" had largely concluded, and economic and cultural geographies had stabilized. Soviet understandings of the relationship between national character and "native soil" drew on 19th-century discourse, expanding it to compass newly-recognized peoples from the Svans to the Tajiks. The metabolic vision of the corporate Soviet state, a multicultural union of monocultures, balanced these nationally-specific soils and their properties against each other, bringing salt to the Svan, water to the desert, and cotton to the mills. This complex web of economic and cultural exchanges could be traced from Liebig's model of the mineral cycle between city and country to Marx's theory of social metabolism, and to Lenin's *smychka*.

If the original vision of mineral and social metabolism involved the cycling of crops from the countryside to the city, and waste from the city back to the countryside according to a chemical balance-sheet, the economic cycles of the all-union division of labor were considerably more complex. In *Turksib*, Siberia supplies grain to Central Asia, Central Asia provides cotton to the mills of Leningrad, and Leningrad sends finished textiles to the peasants of Siberia. As the films discussed here also demonstrate, a major export of the center to the periphery was Soviet ideology: gramophones and reading halls. Finally, in the "multinational" system of Stalin's socialism in one country, the center sends finished goods to the periphery in exchange for shipments of raw materials, much as in a colonial economy, evoking Terry Martin's description of the Soviet Union as "the highest form of imperialism."[51]

[51] Terry Martin, "An Affirmative Action Empire: The Soviet Union as the Highest Form of Imperialism" in *A State of Nations. Empire and Nation-Making in the Age of Lenin and Stalin,* eds. R. Suny and T. Martin (Oxford: Oxford University Press, 2001), 67.

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